



April 8, 2020

MR MARK DARBY
SUPERIOR REFINING COMPANY INC
2407 STINSON AVE
SUPERIOR WI 54880

KEEP THIS DOCUMENT WITH YOUR PROPERTY RECORDS

SUBJECT: Final Case Closure with Continuing Obligations
Superior Refining – Nemadji Switch Station, 2407 Stinson Avenue, Superior, Wisconsin
DNR BRRTS Activity #02-16-585474
FID #816009590

Dear Mr. Darby:

The Department of Natural Resources (DNR) considers the Superior Refining - Nemadji Switch Station site closed, with continuing obligations. No further investigation or remediation is required at this time. However, you, future property owners and occupants must comply with the continuing obligations as explained in the conditions of closure in this letter. Please read over this letter closely to ensure that you comply with all conditions and other on-going requirements. Provide this letter to anyone who purchases, rents or leases this property from you.

This final closure decision is based on the correspondence and data provided and is issued under Wis. Admin. Code chs. NR 726 and 727. The DNR's Northern Region Closure Committee reviewed the request for closure on April 2, 2020. The Closure Committee reviewed this environmental remediation case for compliance with state laws and standards.

The investigative and remedial activities completed at this site were conducted for the discharge of hazardous substances, environmental pollution, or both (hereinafter referred to as contamination) at this site, which was historically undeveloped and used for storage and laydown activities. Case closure under Wis. Admin. Code chs. NR 726 and NR 727 is granted for the contaminants analyzed during the site investigation, as documented in the DNR case file. Petroleum contamination was found in soil on this site during constructions activities. Response included contaminated soil removal. The conditions of closure and continuing obligations required were based on the property being used for industrial purposes.

Continuing Obligations

The continuing obligations for this site are summarized below. Further details on actions required are found in the section Closure Conditions.

- Residual soil contamination exists that must be properly managed should it be excavated or removed.

The attached DNR fact sheet "Continuing Obligations for Environmental Protection," RR-819, helps to explain a property owner's responsibility for continuing obligations on their property. The fact sheet may be obtained at <http://dnr.wi.gov/files/PDF/pubs/rr/RR819.pdf>.

DNR Database

This site will be included on the Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web (BOTW) at dnr.wi.gov and search “WRRD”, to provide public notice of residual contamination and of any continuing obligations. The site can also be viewed on the Remediation and Redevelopment Sites Map (RRSM), a map view, at dnr.wi.gov and search “RRSM”.

The DNR’s approval prior to well construction or reconstruction is required in accordance with Wis. Admin. Code § NR 812.09 (4) (w). This requirement applies to private drinking water wells and high capacity wells. To obtain approval, complete and submit Form 3300-254 to the DNR Drinking and Groundwater program’s regional water supply specialist. This form can be obtained on-line at dnr.wi.gov and search “3300-254”.

All site information is also on file at the DNR’s Northern Region office, 107 Sutliff Avenue, Rhinelander, Wisconsin. This letter and information that was submitted with your closure request application, including any maps, can be found as a PDF on BOTW.

Closure Conditions

Compliance with the requirements of this letter is a responsibility to which the current property owner, and any subsequent property owners must adhere. DNR staff will conduct periodic prearranged inspections to ensure that the conditions included in this letter are met. If these requirements are not followed, the DNR may take enforcement action under Wisconsin Statutes § 292.11, to ensure compliance with the specified requirements, limitations or other conditions related to the property.

Please send written notifications in accordance with the following requirements to:

Department of Natural Resources
Attn: Remediation and Redevelopment Program Environmental Program Associate
107 Sutliff Avenue
Rhinelander, WI 54501

Residual Soil Contamination (Wis. Admin. Code ch. NR 718, chs. NR 500 to 536, or Wis. Stat. ch. 289)
Soil contamination remains in the area of soil boring SB-6 as indicated on the attached map, Figure B.2.b, Residual Soil Contamination, prepared by Barr Engineering and dated March 27, 2020. If soil in the specific locations described above is excavated in the future, the property owner at the time of excavation must sample and analyze the excavated soil to determine if contamination remains. If sampling confirms that contamination is present, the property owner at the time of excavation will need to determine whether the material is considered solid or hazardous waste and ensure that any storage, treatment or disposal is in compliance with applicable standards and rules. Contaminated soil may be managed in accordance with Wis. Admin. Code ch. NR 718, with prior DNR approval.

In addition, all current and future owners and occupants of the property need to be aware that excavation of the contaminated soil may pose an inhalation or other direct contact hazard and as a result special precautions may need to be taken to prevent a direct contact health threat to humans.

Depending on site-specific conditions, construction over contaminated soils or groundwater may result in vapor migration of contaminants into enclosed structures or migration along newly placed underground utility lines. The potential for vapor inhalation and means of mitigation should be evaluated when planning any future redevelopment, and measures should be taken to ensure the continued protection of public health, safety, welfare and the environment at the site.

In Closing

Please be aware that the case may be reopened pursuant to Wis. Admin. Code § NR 727.13, for any of the following situations:

- if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, or welfare or to the environment,
- if the property owner does not comply with the conditions of closure, with any deed restrictions applied to the property, or with a certificate of completion issued under Wis. Stat. § 292.15, or
- a property owner fails to maintain or comply with a continuing obligation (imposed under this closure approval letter).

The DNR appreciates your efforts to restore the environment at this site. If you have any questions regarding this closure decision or anything outlined in this letter, please contact John Sager at (715) 490-0123, or at john.sager@wisconsin.gov. You can also contact me at (715) 685-2920, or by email at christopher.saari@wisconsin.gov.

Sincerely,



Christopher A. Saari
Northern Region Team Supervisor
Remediation and Redevelopment Program

Attachments:

- Figure B.2.b, Residual Soil Contamination, Barr Engineering, March 27, 2020
- Continuing Obligations for Environmental Protection, DNR Publication RR-819

cc: Lynette Carney – Barr Engineering Company (via email)
John Sager – DNR Superior (via email)

SUBMIT AS UNBOUND PACKAGE IN THE ORDER SHOWN

Notice: Pursuant to ch. 292, Wis. Stats., and chs. NR 726 and 746, Wis. Adm. Code, this form is required to be completed for case closure requests. The closure of a case means that the Department of Natural Resources (DNR) has determined that no further response is required at that time based on the information that has been submitted to the DNR. All sections of this form must be completed unless otherwise directed by the Department. DNR will consider your request administratively complete when the form and all sections are completed, all attachments are included, and the applicable fees required under ch. NR 749, Wis. Adm. Code, are included, and sent to the proper destinations. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31 - 19.39, Wis. Stats.). Incomplete forms will be considered "administratively incomplete" and processing of the request will stop until required information is provided.

Site Information			
BRRTS No.	VPLE No.		
02-16-585474			
Parcel ID No.			
018010333900			
FID No.	WTM Coordinates		
816009590	X 361726	Y 692621	
BRRTS Activity (Site) Name	WTM Coordinates Represent:		
Reported Contamination at Superior Refining	<input checked="" type="checkbox"/> Source Area <input type="checkbox"/> Parcel Center		
Site Address	City	State	ZIP Code
2407 Stinson Avenue	Superior	WI	54880
Acres Ready For Use	5		

Responsible Party (RP) Name			
Superior Refining Company LLC			
Company Name			
Attn: Mark Darby, Environmental Manager			
Mailing Address	City	State	ZIP Code
2407 Stinson Avenue	Superior	WI	54880
Phone Number	Email		
(715) 398-8453	mark.darby@huskyenergy.com		
<input checked="" type="checkbox"/> Check here if the RP is the owner of the source property.			

Environmental Consultant Name			
Lynette Carney			
Consulting Firm			
Barr Engineering Company			
Mailing Address	City	State	ZIP Code
325 South Lake Avenue	Duluth	MN	55802
Phone Number	Email		
(218) 529-7141	lcarney@barr.com		

Fees and Mailing of Closure Request

- Send a copy of page one** of this form and the applicable ch. NR 749, Wis. Adm. Code, fee(s) to the DNR Regional EPA (Environmental Program Associate) at <http://dnr.wi.gov/topic/Brownfields/Contact.html#tabx3>. Check all fees that apply:

<input checked="" type="checkbox"/> \$1,050 Closure Fee	<input checked="" type="checkbox"/> \$300 Database Fee for Soil
<input type="checkbox"/> \$350 Database Fee for Groundwater or Monitoring Wells (Not Abandoned)	Total Amount of Payment \$ <u>\$1,350.00</u>
	<input type="checkbox"/> Resubmittal, Fees Previously Paid
- Send one paper copy and one e-copy on compact disk of the entire closure package** to the Regional Project Manager assigned to your site. Submit as *unbound, separate documents* in the order and with the titles prescribed by this form. For electronic document submittal requirements, see <http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf>.

Site Summary

If any portion of the Site Summary Section is not relevant to the case closure request, you must fully explain the reasons why in the relevant section of the form. All information submitted shall be legible. Providing illegible information will result in a submittal being considered incomplete until corrected.

1. General Site Information and Site History

- A. Site Location: Describe the physical location of the site, both generally and specific to its immediate surroundings.
The site consists of approximately 5 acres located in an area between the operating Husky Refinery and the Enbridge pipeline terminal facility in the NW 1/4 of Section 36 of T49 North, Range 14 West at 2407 Stinson Avenue, Superior, Wisconsin.
- B. Prior and current site usage: Specifically describe the current and historic occupancy and types of use.
Currently the site is under lease by Superior Refining Company LLC (SRC) to Superior Water Light & Power (SWL&P) for construction of an electrical substation (Nemadji Substation). Historically the site has been used as a storage/laydown area associated with the adjacent refinery.
- C. Current zoning (e.g., industrial, commercial, residential) for the site and for neighboring properties, and how verified (Provide documentation in Attachment G).
The City of Superior Planning and Development Department indicated that the Property is zoned M2 (Manufacturing District - Heavy).
- D. Describe how and when site contamination was discovered.
During substation construction earthwork activities in November 2019, SWL&P contractors encountered shallow contaminated soil (described as oily soil with debris) in two separate locations at the site. These areas are shown on Figure B.2.a.
- E. Describe the type(s) and source(s) or suspected source(s) of contamination.
Petroleum hydrocarbons and metals were detected at low levels. The source is likely related to historic site use as a laydown area for refinery activities or related to historical fill materials.
- F. Other relevant site description information (or enter Not Applicable).
Prior to leasing the property to SWL&P, SRC performed a Phase I Environmental Site Assessment and a Phase II Site Investigation to document the pre-lease site conditions. No actionable levels of contamination were found at that time (2018). SWL&P encountered stained soil with a petroleum odor during excavation work related to preparation of the site for substation construction. Contaminated soil was excavated to construction limits, characterized, and transported off-site for landfill disposal by SWL&P. No field screening or analytical confirmation samples were collected from the excavation extents. Approximately 1,000 tons of soil was removed by SWL&P from the two separate areas and transported to Shamrock Landfill. A subsequent Phase II Investigation was performed by SRC in 2020 to evaluate soil conditions near the limits of the SWL&P excavations and to supplement site characterization data. Results from the 2020 investigation indicate that soils remaining at the site do not pose a risk to human health or the environment.
- G. List BRRTS activity/site name and number for BRRTS activities at this source property, including closed cases.
None.
- H. List BRRTS activity/site name(s) and number(s) for all properties immediately adjacent to (abutting) this source property.
216220009 LAKEHEAD PIPELINE - CRUDE OIL TANK 22
216222650 MURPHY OIL - FUEL LOADING AREA
216176579 LAKEHEAD PIPELINE CO L P
216222670 MURPHY OIL - TANK S-1, S-2
216178165 LAKEHEAD PIPELINE - TANK 21 CRUDE OIL
216275100 LAKEHEAD PIPELINE - TANK 24
216242301 MURPHY OIL - VAPOR RECOVERY UNIT 216222638 MURPHY OIL - CRUDE UNIT PROCESS AREA
216558992 ENBRIDGE ENERGY - TANK 20 VALVE
216222628 MURPHY OIL - PROPANE/BUTANE LOADING AREA
216558988 ENBRIDGE ENERGY - OFFICE EXCAVATION
216560841 ENBRIDGE ENERGY TERMINAL - LINE 5 PIG TRAP
216558987 ENBRIDGE ENERGY - TANK 9
216279246 LAKEHEAD PIPELINE CO L P
216183249 LAKEHEAD PIPELINE - MANIFOLD 3
216000522 MURPHY OIL - TANK #34
216000161 MURPHY OIL - LAKEHEAD TANK FAC
216221525 MURPHY OIL - TANK #59
216000507 MURPHY OIL - 24TH
216000523 MURPHY OIL - TANK #67
216000563 MURPHY OIL - TANK #102
216112803 HUSKY OIL LTD TANK 28
216221534 MURPHY OIL - TANK #29 & 30
316000168 LAKEHEAD PIPE LINE CO
216222617 MURPHY OIL - TANK #65 & 66

216246715 MURPHY OIL - SLOP OIL MANIFOLD AREA
 216000508 MURPHY OIL - BARDON AVE (TANK 25)
 216190549 MURPHY OIL - TANK #1 & 2 (FORMER)
 216221920 MURPHY OIL - TANK #47
 216221941 MURPHY OIL - TANK #39
 316000736 MURPHY OIL - WAREHOUSE
 216222701 MURPHY OIL - TANK BASIN #51 & 52
 216558989 ENBRIDGE ENERGY - TANK 23
 216275090 ENBRIDGE SUPERIOR TERMINAL
 216550859 MURPHY OIL - S OF GREEN GAS UNIT
 216226861 MURPHY OIL - CONTAMINATED SOIL UNDER ROADWAY
 216222721 MURPHY OIL - TANK #32 & 33
 216000506 MURPHY OIL - STINSON #3
 216000512 LAKEHEAD PIPELINE - PUMP ST
 216221947 MURPHY OIL - TANK #8
 216221988 MURPHY OIL - TANK #81
 216221908 MURPHY OIL - TANK #79
 216513788 ENBRIDGE ENERGY - NEMADJI RIVER
 216552700 ENBRIDGE ENERGY - TANK 9 PRESSURE LINE
 216221933 MURPHY OIL - TANK #31
 216000027 LAKEHEAD PIPELINE - PLM TOOL SHOP
 216556786 ENBRIDGE ENERGY - TANK 22
 216275130 LAKEHEAD PIPELINE - TANK 23
 216221811 MURPHY OIL - UNDERGROUND PIPELINE
 216000571 MURPHY OIL - TANK #34 & 35
 216118396 MURPHY OIL USA
 216558990 ENBRIDGE ENERGY - TANK 19
 216577548 ENBRIDGE SUPERIOR TERMINAL- LINE 5 VALVE 553
 216579604 ENBRIDGE SUPERIOR - FIELD BOOSTER 23
 216526812 MURPHY OIL - TANK BASIN #68
 216223154 MURPHY OIL - TANK #70
 216222712 MURPHY OIL - TANK #40
 216515749 MURPHY OIL - LOADING DOCK AREA
 216581317 SUPERIOR REFINING COMPANY LLC

2. General Site Conditions

A. Soil/Geology

- i. Describe soil type(s) and relevant physical properties, thickness of soil column across the site, vertical and lateral variations in soil types.
 Surficial geology in the region consists of glacial-lacustrine clay deposits estimated to be over 100 feet thick. This clay unit overlies sandy glacial till interbedded with sand and gravel. Soil boring data collected at the site indicates this homogenous layer of red-brown lean to fat clay till is present across the site overlain by approximately 0 to 4 feet of fill material.
- ii. Describe the composition, location and lateral extent, and depth of fill or waste deposits on the site.
 Fill at the site ranges from 0 to 4 feet deep and consists of silty gravel and/or poorly graded sand. The SWL&P substation development area was excavated to a depth of 3-4 feet in the fall of 2019 and backfilled with engineered fill. Outside of this area, fill soils appear to be reworked with native material.
- iii. Describe the depth to bedrock, bedrock type, competency and whether or not it was encountered during the investigation.
 The regional bedrock geology consists of sandstone of the Precambrian-age Bayfield Formation. Depth to bedrock in the area is greater than 150 feet. Bedrock was not encountered in any boreholes during the investigation.
- iv. Describe the nature and locations of current surface cover(s) across the site (e.g., natural vegetation, landscaped areas, gravel, hard surfaces, and buildings).
 The site is currently being developed for an electrical substation. The new surface cover at the site consists of 2-4 feet of engineered backfill overlain by gravel.

B. Groundwater

- i. Discuss depth to groundwater and piezometric elevations. Describe and explain depth variations, including high and low water table elevation and whether free product affects measurement of water table elevation. Describe the stratigraphic unit(s) where water table was found or which were measured for piezometric levels.
 Based on the Facility-Wide Groundwater Monitoring Reports provided by SRC for the refinery facility, the recent depth to groundwater in nearby monitoring wells (one located in the southeast corner of the Property and one located approximately 50 feet northeast) is between 0.5 and 2.9 feet bgs.

- ii. Discuss groundwater flow direction(s), shallow and deep. Describe and explain flow variations, including fracture flow if present.
Based on groundwater monitoring at the refinery, which includes groundwater monitoring wells located on and near the Property, shallow groundwater flow direction at the Property is expected to the northeast towards Newton Creek, ultimately discharging into Lake Superior approximately 1.7 miles northeast of the Site.
- iii. Discuss groundwater flow characteristics: hydraulic conductivity, flow rate and permeability, or state why this information was not obtained.
Based on facility-wide groundwater monitoring program data provided by SRC for the adjacent refinery, the hydraulic conductivity of the native clay is on the order of 10E-7 centimeters per second. Assuming a horizontal hydraulic gradient of 0.003 and effective porosity of 0.06, the estimated horizontal groundwater flow velocity is approximately 0.4 cm/yr or 0.013 feet per year (ft/yr).
- iv. Identify and describe locations/distance of potable and/or municipal wells within 1200 feet of the site. Include general summary of well construction (geology, depth of casing, depth of screened or open interval).
No potable and/or municipal wells were identified within 1,200 feet of the site.

3. Site Investigation Summary

A. General

- i. Provide a brief summary of the site investigation history. Reference previous submittals by name and date. Describe site investigation activities undertaken since the last submittal for this project and attach the appropriate documentation in Attachment C, if not previously provided.

Phase II Investigation Results - Future ALLETE Substation Site (August 2018) - A soil boring investigation was conducted in June 2018 where five borings (SB-1 through SB-5) were advanced to characterize soil at the site. Soil and groundwater samples were collected. Soil was analyzed for 8 RCRA metals, polycyclic aromatic hydrocarbons (PAHs), and volatile organic compounds (VOCs). Groundwater was analyzed for PAHs and VOCs. Based on comparisons to the WDNR residual contaminant levels (RCLs) and groundwater quality standards the isolated low concentrations or parameters detected in the samples did not pose a risk to human health or the environment.

SWL&P Nemadji Substation Phase III Investigation Results (March 2020) - Following the discovery, excavation, and off-site disposal of impacted soils by SWL&P in 2019, SRC initiated another site investigation. In January 2020, twenty-four soil borings were advanced across the site. Fifteen "remedial action delineation" borings were advanced to evaluate the effectiveness of the remedial excavation efforts performed by SWL&P. Nine additional "site characterization" borings were advanced across the site to further assess baseline conditions at the site.

Site investigation reports that summarize the 2018 and 2020 investigations are included in Attachment C.1.

- ii. Identify whether contamination extends beyond the source property boundary, and if so describe the media affected (e.g., soil, groundwater, vapors and/or sediment, etc.), and the vertical and horizontal extent of impacts.
The 2018 and 2020 investigation results indicate that the impacted soil areas were isolated, contained within the limits of the site and/or have been removed.
- iii. Identify any structural impediments to the completion of site investigation and/or remediation and whether these impediments are on the source property or off the source property. Identify the type and location of any structural impediment (e.g., structure) that also serves as the performance standard barrier for protection of the direct contact or the groundwater pathway.
No structural impediments were present that prevented completion of investigation activities.

B. Soil

- i. Describe degree and extent of soil contamination. Relate this to known or suspected sources and known or potential receptors/migration pathways.
Contaminated soil was removed during response action activities by SWL&P in November 2019. Two areas were excavated to a depth of two to three feet; an area in the northern corner of the Property measuring approximately 50 feet by 150 feet and an area in the western corner of the Property measuring approximately 25 feet by 50 feet. A sample of from the removed soil was collected by SWL&P for disposal characterization and waste profile approval at the Shamrock Landfill.

Other areas of site were also excavated to depths of 3-4 feet during construction for the placement of engineered fill. Soil conditions below and outside of the excavation limits were not documented by SWL&P in 2019. Soil samples collected from borings in 2020 indicate that remaining soils do not pose a risk to human health or the environment.

An ongoing source of contamination has not been identified. Soils were likely impacted by historical fill and/or storage activities.
- ii. Describe the concentration(s) and types of soil contaminants found in the upper four feet of the soil column.
The remedial excavation performed by SWL&P removed the impacted soil from the source area. Soil samples collected in 2020 (post-excavation action) from the site were analyzed for PVOCs+Naphthalene and DRO. Benzene was detected

in one sample of native soil directly beneath fill (observed staining and sample interval from 1.5-2 feet bgs) at a concentration of 0.0399 mg/kg, exceeding the groundwater RCL but less than the RCLs for direct contact. Naphthalene and toluene were detected in the same sample at concentrations less than groundwater RCLs. DRO was detected in eight samples with concentrations ranging from 8.2 to 121 mg/kg. During the initial investigation in 2018 benzo(a)pyrene was detected in one sample at a concentration of 128 ug/kg, exceeding then non-industrial direct contact RCL but did not exceed the industrial RCL or groundwater RC, however, the soil from this area was removed during construction activities. Arsenic was detected in ten samples with concentrations ranging from 2.8 to 5.1 mg/kg. Although the arsenic detections exceed both the groundwater and direct contract RCLs, there are thought to be naturally occurring as they are below the WDNR background threshold values. Several additional metals were detected in samples from 2018 including: barium, lead, selenium and silver. With the exception of a lead detection in one surficial sample, these metal detections were below established WDNR background threshold values (background values have not been established for selenium and silver). The selenium and silver detections were flagged by the laboratory as estimated values. In addition soil from 3-4' was removed by SWL&P through the majority of the substation construction site.

- iii. Identify the ch. NR 720, Wis. Adm. Code, method used to establish the soil cleanup standards for this site. This includes a soil performance standard established in accordance with s. NR 720.08, a Residual Contaminant Level (RCL) established in accordance with s. NR 720.10 that is protective of groundwater quality, or an RCL established in accordance with s. NR 720.12 that is protective of human health from direct contact with contaminated soil. Identify the land use classification that was used to establish cleanup standards. Provide a copy of the supporting calculations/ information in Attachment C.

Soil sample analytical results were compared to the groundwater and direct contact (both industrial and non-industrial) RCLs. With the exception of naturally occurring metals, metals flagged as estimated values, and detections from soil samples collected in 2018 which was removed during construction, only one benzene concentration exceeded the groundwater RCL.

C. Groundwater

- i. Describe degree and extent of groundwater contamination. Relate this to known or suspected sources and known or potential receptors/migration pathways. Specifically address any potential or existing impacts to water supply wells or interception with building foundation drain systems.

Not applicable. A refinery-wide groundwater monitoring program is in place and groundwater contamination has not been identified at this site.

- ii. Describe the presence of free product at the site, including the thickness, depth, and locations. Identify the depth and location of the smear zone.

Not applicable. No evidence of the presence of free product was encountered at the site.

D. Vapor

- i. Describe how the vapor migration pathway was assessed, including locations where vapor, soil gas, or indoor air samples were collected. If the vapor pathway was not assessed, explain reasons why.

Not applicable. A source of potential vapor issues has not been identified.

- ii. Identify the applicable DNR action levels and the land use classification used to establish them. Describe where the DNR action levels were reached or exceeded (e.g., sub slab, indoor air or both).

The site is in an industrial area and has been undeveloped until now. An electrical substation is under construction.

E. Surface Water and Sediment

- i. Identify whether surface water and/or sediment was assessed and describe the impacts found. If this pathway was not assessed, explain why.

Not applicable. Surface water/sediment features are not present at the site.

- ii. Identify any surface water and/or sediment action levels used to assess the impacts for this pathway and how these were derived. Describe where the DNR action levels were reached or exceeded.

Not applicable.

4. Remedial Actions Implemented and Residual Levels at Closure

- A. General; Provide a brief summary of the remedial action history. List previous remedial action report submittals by name and date. Identify remedial actions undertaken since the last submittal for this project and provide the appropriate documentation in Attachment C.

During site development in November 2019 impacted soils were excavated and transported off-site for disposal. Documentation of soil characterization and disposal are provided in Attachment C.2.

- B. Describe any immediate or interim actions taken at the site under ch NR 708, Wis. Adm. Code.
The actions described above were taken as part of an interim action to address the impacted soils encountered during construction. The investigation results provided in this closure request are being used to document the effectiveness of the interim action completed by SWL&P.
- C. Describe the *active* remedial actions taken at the source property, including: type of remedial system(s) used for each media affected; the size and location of any excavation or in-situ treatment; the effectiveness of the systems to address the contaminated media and substances; operational history of the systems; and summarize the performance of the active remedial actions. Provide any system performance documentation in Attachment A.7.
Not applicable.
- D. Describe the alternatives considered during the Green and Sustainable Remediation evaluation in accordance with NR 722.09 and any practices implemented as a result of the evaluation.
Not applicable.
- E. Describe the nature, degree and extent of residual contamination that will remain at the source property or on other affected properties after case closure.
Benzene was detected in one sample exceeding the groundwater RCL at a concentration of 0.0399 mg/kg. Naphthalene (0.166 mg/kg) and toluene (0.0512 mg/kg) were detected in this same sample at concentrations less than the groundwater and direct contact RCLs. DRO was detected in eight samples with concentrations ranging from 8.2 to 121 mg/kg. Other naturally occurring metals (arsenic, barium, lead, selenium, silver) were also detected in the 2018 samples with concentrations either below the WDNR background threshold values or flagged by the laboratory as estimated values.
- F. Describe the residual soil contamination within four feet of ground surface (direct contact zone) that attains or exceeds RCLs established under s. NR 720.12, Wis. Adm. Code, for protection of human health from direct contact.
Naturally occurring arsenic was detected in ten samples with concentrations ranging from 2.8 to 5.1 mg/kg.
- G. Describe the residual soil contamination that is above the observed low water table that attains or exceeds the soil standard(s) for the groundwater pathway.
Benzene was detected in one sample (SB-6, 1.5-2 feet) exceeding the groundwater RCL at a concentration of 0.0399 mg/kg. Additional naturally occurring metals were also detected above the groundwater RCL including: arsenic, barium, lead, selenium and silver but were either below the WDNR background threshold value or were flagged by the laboratory as estimated values.
- H. Describe how the residual contamination will be addressed, including but not limited to details concerning: covers, engineering controls or other barrier features; use of natural attenuation of groundwater; and vapor mitigation systems or measures.
The site is being developed as an electrical substation. The majority of the site has been excavated and covered with new compacted fill material and substation facilities. As a result, residual contamination levels do not require remediation or controls to limit exposure. The clay soil which has been documented across the site along with the compacted and relatively impervious gravel surface designed to divert surface water flow away from the site will limit infiltration and potential of migration of residual soil contamination to groundwater. Additionally, it has been demonstrated through the documented groundwater flow velocities and annual groundwater monitoring completed as part of the SRC facility-wide groundwater monitoring program that petroleum compounds have not been detected in groundwater in the vicinity of this historical release.
- I. If using natural attenuation as a groundwater remedy, describe how the data collected supports the conclusion that natural attenuation is effective in reducing contaminant mass and concentration (e.g., stable or receding groundwater plume).
Not applicable.
- J. Identify how all exposure pathways (soil, groundwater, vapor) were removed and/or adequately addressed by immediate, interim and/or remedial action(s).
Contaminated soils were removed and transported to an off-site disposal facility. The source has been removed and groundwater impacts have not been identified.
- K. Identify any system hardware anticipated to be left in place after site closure, and explain the reasons why it will remain.
Not applicable.
- L. Identify the need for a ch. NR 140, Wis. Adm. Code, groundwater Preventive Action Limit (PAL) or Enforcement Standard (ES) exemption, and identify the affected monitoring points and applicable substances.
Not applicable.
- M. If a DNR action level for vapor intrusion was exceeded (for indoor air, sub slab, or both) describe where it was exceeded and how the pathway was addressed.
Not applicable.

- N. Describe the surface water and/or sediment contaminant concentrations and areas after remediation. If a DNR action level was exceeded, describe where it was exceeded and how the pathway was addressed.

Not applicable.

5. Continuing Obligations: Includes all affected properties and rights-of-way (ROWs). In certain situations, maintenance plans are also required, and must be included in Attachment D.

Directions: For each of the 3 property types below, check all situations that apply to this closure request.

(NOTE: Monitoring wells to be transferred to another site are addressed in Attachment E.)

This situation applies to the following property or Right of Way (ROW):			Case Closure Situation - Continuing Obligation (database fees will apply, ii. - xiv.)	Maintenance Plan Required	
Property Type:					
Source Property	Affected Property (Off-Source)	ROW			
i.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	None of the following situations apply to this case closure request.	NA
ii.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Residual groundwater contamination exceeds ch. NR 140 ESs.	NA
iii.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Residual soil contamination exceeds ch. NR 720 RCLs.	NA
iv.				Monitoring Wells Remain:	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	• Not Abandoned (filled and sealed)	NA
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	• Continued Monitoring (requested or required)	Yes
v.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cover/Barrier/Engineered Cover or Control for (soil) direct contact pathways (includes vapor barriers)	Yes
vi.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cover/Barrier/Engineered Cover or Control for (soil) groundwater infiltration pathway	Yes
vii.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Structural Impediment: impedes completion of investigation or remedial action (not as a performance standard cover)	NA
viii.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Residual soil contamination meets NR 720 industrial soil RCLs, land use is classified as industrial	NA
ix.	<input type="checkbox"/>	<input type="checkbox"/>	NA	Vapor Mitigation System (VMS) required due to exceedances of vapor risk screening levels or other health based concern	Yes
x.	<input type="checkbox"/>	<input type="checkbox"/>	NA	Vapor: Dewatering System needed for VMS to work effectively	Yes
xi.	<input type="checkbox"/>	<input type="checkbox"/>	NA	Vapor: Compounds of Concern in use: full vapor assessment could not be completed	NA
xii.	<input type="checkbox"/>	<input type="checkbox"/>	NA	Vapor: Commercial/industrial exposure assumptions used.	NA
xiii.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vapor: Residual volatile contamination poses future risk of vapor intrusion	NA
xiv.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Site-specific situation: (e. g., fencing, methane monitoring, other) (<i>discuss with project manager before submitting the closure request</i>)	Site specific

6. Underground Storage Tanks

- A. Were any tanks, piping or other associated tank system components removed as part of the investigation or remedial action? Yes No
- B. Do any upgraded tanks meeting the requirements of ch. ATCP 93, Wis. Adm. Code, exist on the property? Yes No
- C. If the answer to question 6.B. is yes, is the leak detection system currently being monitored? Yes No

General Instructions

All information shall be legible. Providing illegible information will result in a submittal being considered incomplete until corrected. For each attachment (A-G), provide a Table of Contents page, listing all 'applicable' and 'not applicable' items by Closure Form titles (e.g., A.1. Groundwater Analytical Table, A.2. Soil Analytical Results Table, etc.). If any item is 'not applicable' to the case closure request, you must fully explain the reasons why.

Data Tables (Attachment A)

Directions for Data Tables:

- Use **bold** and italics font for information of importance on tables and figures. Use **bold** font for ch. NR 140, Wis. Adm. Code ES attainments or exceedances, and *italicized font* for ch. NR 140, Wis. Adm. Code, PAL attainments or exceedances.
- Use **bold** font to identify individual ch. NR 720 Wis. Adm. Code RCL exceedances. Tables should also include the corresponding groundwater pathway and direct contact pathway RCLs for comparison purposes. Cumulative hazard index and cumulative cancer risk exceedances should also be tabulated and identified on Tables A.2 and A.3.
- Do not use shading or highlighting on the analytical tables.
- Include on Data Tables the level of detection for results which are below the detection level (i.e., do not just list as no detect (ND)).
- Include the units on data tables.
- Summaries of all data must include information collected by previous consultants.
- Do not submit lab data sheets unless these have not been submitted in a previous report. Tabulate all data required in s. NR 716.15(3)(c), Wis. Adm. Code, in the format required in s. NR 716.15(4)(e), Wis. Adm. Code.
- Include in Attachment A all of the following tables, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: A.1. Groundwater Analytical Table; A.2. Soil Analytical Results Table, etc.).
- For required documents, each table (e.g., A.1., A.2., etc.) should be a separate Portable Document Format (PDF).

A. Data Tables

- A.1. **Groundwater Analytical Table(s):** Table(s) showing the analytical results and collection dates for all groundwater sampling points (e.g., monitoring wells, temporary wells, sumps, extraction wells, potable wells) for which samples have been collected.
- A.2. **Soil Analytical Results Table(s):** Table(s) showing **all** soil analytical results and collection dates. Indicate if sample was collected above or below the observed low water table (unsaturated versus saturated).
- A.3. **Residual Soil Contamination Table(s):** Table(s) showing the analytical results of only the residual soil contamination at the time of closure. This table shall be a subset of table A.2 and should include only the soil sample locations that exceed an RCL. Indicate if sample was collected above or below the observed low water table (unsaturated versus saturated). Table A.3 is optional only if a total of fewer than 15 soil samples have been collected at the site.
- A.4. **Vapor Analytical Table(s):** Table(s) showing type(s) of samples, sample collection methods, analytical method, sample results, date of sample collection, time period for sample collection, method and results of leak detection, and date, method and results of communication testing.
- A.5. **Other Media of Concern (e.g., sediment or surface water):** Table(s) showing type(s) of sample, sample collection method, analytical method, sample results, date of sample collection, and time period for sample collection.
- A.6. **Water Level Elevations:** Table(s) showing all water level elevation measurements and dates from all monitoring wells. If present, free product should be noted on the table.
- A.7. **Other:** This attachment should include: 1) any available tabulated natural attenuation data; 2) data tables pertaining to engineered remedial systems that document operational history, demonstrate system performance and effectiveness, and display emissions data; and (3) any other data tables relevant to case closure not otherwise noted above. If this section is not applicable, please explain the reasons why.

Maps, Figures and Photos (Attachment B)

Directions for Maps, Figures and Photos:

- Provide on paper no larger than 11 x 17 inches, unless otherwise directed by the Department. Maps and figures may be submitted in a larger electronic size than 11 x 17 inches, in a PDF readable by the Adobe Acrobat Reader. However, those larger-size documents must be legible when printed.
- Prepare visual aids, including maps, plans, drawings, fence diagrams, tables and photographs according to the applicable portions of ss. NR 716.15(4), 726.09(2) and 726.11(3), (5) and (6), Wis. Adm. Code.
- Include all sample locations.
- Contour lines should be clearly labeled and defined.
- Include in Attachment B all of the following maps and figures, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: B.1. Location Map; B.2. Detailed Site Map, etc.).
- For the electronic copies that are required, each map (e.g., B.1.a., B.2.a, etc.) should be a separate PDF.
- Maps, figures and photos should be dated to reflect the most recent revision.

B.1. Location Maps

- B.1.a. **Location Map:** A map outlining all properties within the contaminated site boundaries on a United States Geological Survey (U.S.G.S.) topographic map or plat map in sufficient detail to permit easy location of all affected and/or adjacent parcels. If groundwater standards are exceeded, include the location of all potable wells, including municipal wells, within 1200 feet of the area of contamination.
- B.1.b. **Detailed Site Map:** A map that shows all relevant features (buildings, roads, current ground surface cover, individual property boundaries for all affected properties, contaminant sources, utility lines, monitoring wells and potable wells) within the contaminated area. This map is to show the location of all contaminated public streets, and highway and railroad rights-of-way in relation to the source property and in relation to the boundaries of groundwater contamination attaining or exceeding a ch. NR 140 ES, and/or in relation to the boundaries of soil contamination attaining or exceeding a RCL. Provide parcel identification numbers for all affected properties.
- B.1.c. **RR Sites Map:** From RR Sites Map ([http://dnrmaps.wi.gov/sl/?Viewer=RR Sites](http://dnrmaps.wi.gov/sl/?Viewer=RR%20Sites)) attach a map depicting the source property, and all open and closed BRRTS sites within a half-mile radius or less of the property.

B.2. Soil Figures

- B.2.a. **Soil Contamination:** Figure(s) showing the location of **all** identified unsaturated soil contamination. Use a single contour to show the horizontal extent of each area of contiguous soil contamination that exceeds a soil to groundwater pathway RCL as determined under ch. NR 720.Wis. Adm. Code. A separate contour line should be used to indicate the horizontal extent of each area of contiguous soil contamination that exceeds a direct contact RCL exceedances (0-4 foot depth).
- B.2.b. **Residual Soil Contamination:** Figure(s) showing only the locations of soil samples where unsaturated soil contamination remains at the time of closure (locations represented in Table A.3). Use a single contour to show the horizontal extent of each area of contiguous soil contamination that exceeds a soil to groundwater pathway RCL as determined under ch. NR 720 Wis. Adm. Code. A separate contour line should be used to indicate the horizontal extent of each area of contiguous soil contamination that exceeds a direct contact RCL exceedance (0-4 foot depth).

B.3. Groundwater Figures

- B.3.a. **Geologic Cross-Section Figure(s):** One or more cross-section diagrams showing soil types and correlations across the site, water table and piezometric elevations, and locations and elevations of geologic rock units, if encountered. Display on one or more figures all of the following:
- Source location(s) and vertical extent of residual soil contamination exceeding an RCL. Distinguish between direct contact and the groundwater pathway RCLs.
 - Source location(s) and lateral and vertical extent if groundwater contamination exceeds ch. NR 140 ES.
 - Surface features, including buildings and basements, and show surface elevation changes.
 - Any areas of active remediation within the cross section path, such as excavations or treatment zones.
 - Include a map displaying the cross-section location(s), if they are not displayed on the Detailed Site Map (Map B.1.b.)
- B.3.b. **Groundwater Isoconcentration:** Figure(s) showing the horizontal extent of the post-remedial groundwater contamination exceeding a ch. NR 140, Wis. Adm. Code, PAL and/or an ES. Indicate the date and direction of groundwater flow based on the most recent sampling data.
- B.3.c. **Groundwater Flow Direction:** Figure(s) representing groundwater movement at the site. If the flow direction varies by more than 20° over the history of the site, submit two groundwater flow maps showing the maximum variation in flow direction.
- B.3.d. **Monitoring Wells:** Figure(s) showing all monitoring wells, with well identification number. Clearly designate any wells that: (1) are proposed to be abandoned; (2) cannot be located; (3) are being transferred; (4) will be retained for further sampling, or (5) have been abandoned.

B.4. Vapor Maps and Other Media

- B.4.a. **Vapor Intrusion Map:** Map(s) showing all locations and results for samples taken to investigate the vapor intrusion pathway in relation to residual soil and groundwater contamination, including sub-slab, indoor air, soil vapor, soil gas, ambient air, and communication testing. Show locations and footprints of affected structures and utility corridors, and/or where residual contamination poses a future risk of vapor intrusion.
- B.4.b. **Other media of concern (e.g., sediment or surface water):** Map(s) showing all sampling locations and results for other media investigation. Include the date of sample collection and identify where any standards are exceeded.
- B.4.c. **Other:** Include any other relevant maps and figures not otherwise noted above. (This section may remain blank).

- B.5. **Structural Impediment Photos:** One or more photographs documenting the structural impediment feature(s) which precluded a complete site investigation or remediation at the time of the closure request. The photographs should document the area that could not be investigated or remediated due to a structural impediment. The structural impediment should be indicated on Figures B.2.a and B.2.b.

Documentation of Remedial Action (Attachment C)**Directions for Documentation of Remedial Action:**

- Include in Attachment C all of the following documentation, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: C.1. Site Investigation Documentation; C.2. Investigative Waste, etc.).
- If the documentation requested below has already been submitted to the DNR, please note the title and date of the report for that particular document requested.
 - C.1. **Site investigation documentation**, that has not otherwise been submitted with the Site Investigation Report.
 - C.2. **Investigative waste** disposal documentation.
 - C.3. Provide a **description of the methodology** used along with all supporting documentation if the RCLs are different than those contained in the Department's RCL Spreadsheet available at: <http://dnr.wi.gov/topic/Brownfields/Professionals.html>.
 - C.4. **Construction documentation** or as-built report for any constructed remedial action or portion of, or interim action specified in s. NR 724.02(1), Wis. Adm. Code.
 - C.5. **Decommissioning of Remedial Systems.** Include plans to properly abandon any systems or equipment.
 - C.6. **Other.** Include any other relevant documentation not otherwise noted above (This section may remain blank).

Maintenance Plan(s) and Photographs (Attachment D)**Directions for Maintenance Plans and Photographs:**

Attach a maintenance plan for each affected property (source property, each off-source affected property) with continuing obligations requiring future maintenance (e.g., direct contact, groundwater protection, vapor intrusion). See Site Summary section 5 for all affected property(s) requiring a maintenance plan. Maintenance plan guidance and/or templates for: 1) Cover/barrier systems; 2) Vapor intrusion; and 3) Monitoring wells, can be found at: <http://dnr.wi.gov/topic/Brownfields/Professionals.html#tabx3>

- D.1. **Descriptions of maintenance action(s) required for maximizing effectiveness of the engineered control, vapor mitigation system, feature or other action for which maintenance is required:**
- Provide brief descriptions of the type, depth and location of residual contamination.

- Provide a description of the system/cover/barrier/monitoring well(s) to be maintained.
 - Provide a description of the maintenance actions required for maximizing effectiveness of the engineered control, vapor mitigation system, feature or other action for which maintenance is required.
 - Provide contact information, including the name, address and phone number of the individual or facility who will be conducting the maintenance.
- D.2. **Location map(s) which show(s):** (1) the feature that requires maintenance; (2) the location of the feature(s) that require(s) maintenance - on and off the source property; (3) the extent of the structure or feature(s) to be maintained, in relation to other structures or features on the site; (4) the extent and type of residual contamination; and (5) all property boundaries.
- D.3. **Photographs** for site or facilities with a cover or other performance standard, a structural impediment or a vapor mitigation system, include one or more photographs documenting the condition and extent of the feature at the time of the closure request. Pertinent features shall be visible and discernible. Photographs shall be submitted with a title related to the site name and location, and the date on which it was taken.
- D.4. **Inspection log**, to be maintained on site, or at a location specified in the maintenance plan or approval letter. The inspection and maintenance log is found at: <http://dnr.wi.gov/files/PDF/forms/4400/4400-305.pdf>.

Monitoring Well Information (Attachment E)

Directions for Monitoring Well Information:

For all wells that will remain in use, be transferred to another party, or that could not be located; attach monitoring well construction and development forms (DNR Form 4400-113 A and B: http://dnr.wi.gov/topic/groundwater/documents/forms/4400_113_1_2.pdf)

Select One:

- No monitoring wells were installed as part of this response action.
- All monitoring wells have been located and will be properly abandoned upon the DNR granting conditional closure to the site
- Select One or More:**
 - Not all monitoring wells can be located, despite good faith efforts. Attachment E must include a description of efforts made to locate the wells.
 - One or more wells will remain in use at the site after this closure. Attachment E must include documentation as to the reason (s) the well(s) will remain in use. When one or more monitoring wells will remain in use this is considered a continuing obligation and a maintenance plan will be required and must be included in Attachment D.
 - One or more monitoring wells will be transferred to another owner upon case closure being granted. Attachment E should include documentation identifying the name, address and email for the new owner(s). Provide documentation from the party accepting future responsibility for monitoring well(s).

Source Legal Documents (Attachment F)

Directions for Source Legal Documents:

Label documents with the specific closure form titles (e.g., F.1. Deed, F.2. Certified Survey Map, etc.). Include all of the following documents, in the order listed:

- F.1. **Deed:** The most recent deed with legal description clearly listed.
Note: If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.
- F.2. **Certified Survey Map:** A copy of the certified survey map or the relevant section of the recorded plat map for those properties where the legal description in the most recent deed refers to a certified survey map or a recorded plat map. In cases where the certified survey map or recorded plat map are not legible or are unavailable, a copy of a parcel map from a county land information office may be substituted. A copy of a parcel map from a county land information office shall be legible, and the parcels identified in the legal description shall be clearly identified and labeled with the applicable parcel identification number.
- F.3. **Verification of Zoning:** Documentation (e.g., official zoning map or letter from municipality) of the property's or properties' current zoning status.
- F.4. **Signed Statement:** A statement signed by the Responsible Party (RP), which states that he or she believes that the attached legal description(s) accurately describe(s) the correct contaminated property or properties. This section applies to the source property only. Signed statements for Other Affected Properties should be included in Attachment G.

Notifications to Owners of Affected Properties (Attachment G)

Directions for Notifications to Owners of Affected Properties:

Complete the table on the following page for sites which require notification to owners of affected properties pursuant to ch. 292, Wis. Stats. and ch. NR 725 and 726, Wis. Adm. Code. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records law [ss. 19.31- 19.39, Wis. Stats.]. The DNR's "Guidance on Case Closure and the Requirements for Managing Continuing Obligations" (PUB-RR-606) lists specific notification requirements <http://dnr.wi.gov/files/PDF/pubs/rr/RR606.pdf>.

State law requires that the responsible party provide a 30-day, written advance notification to certain persons prior to applying for case closure. This requirement applies if: (1) the person conducting the response action does not own the source property; (2) the contamination has migrated onto another property; and/or (3) one or more monitoring wells will not be abandoned. Use form 4400-286, Notification of Continuing Obligations and Residual Contamination, at <http://dnr.wi.gov/files/PDF/forms/4400/4400-286.pdf>

Include a copy of each notification sent and accompanying proof of delivery, i.e., return receipt or signature confirmation.

Include the following documents for each property, keeping each property's documents grouped together and labeled with the letter G and the corresponding ID number from the table on the following page. (Source Property documents should only be included in Attachment F):

- **Deed:** The most recent deed with legal descriptions clearly listed for all affected properties.
Note: If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.
- **Certified Survey Map:** A copy of the certified survey map or the relevant section of the recorded plat map for those properties where the legal description in the most recent deed refers to a certified survey map or a recorded plat map. In cases where the certified survey map or recorded plat map are not legible or are unavailable, a copy of a parcel map from a county land information office may be substituted. A copy of a parcel map from a county land information office shall be legible, and the parcels identified in the legal description shall be clearly identified and labeled with the applicable parcel identification number.
- **Verification of Zoning:** Documentation (e.g., official zoning map or letter from municipality) of the property's or properties' current zoning status.
- **Signed Statement:** A statement signed by the Responsible Party (RP), which states that he or she believes the attached legal description(s) accurately describe(s) the correct contaminated property or properties.

Signatures and Findings for Closure Determination

This page has been updated as of February 2019 to comply with the requirements of Wis. Admin. Code ch. NR 712.

Check the correct box for this case closure request and complete the corresponding certification statement(s) listed below to demonstrate that the requirements of Wis. Admin. Code ch. NR 712 have been met. The responsibility for signing the certification may not be delegated per Wis. Admin. Code § NR 712.09 (1). Per Wis. Admin. Code § 712.05 (1), the work must be conducted or supervised by the person certifying.

- The investigation and/or response action(s) for this site evaluated and/or addressed groundwater (including natural attenuation remedies). Both a professional engineer and a hydrogeologist must sign this document per Wis. Admin. Code ch. NR 712.
- The investigation and the response action(s) for this site did not evaluate or address groundwater. A professional engineer must sign this document per Wis. Admin. Code ch. NR 712.

Engineering Certification

I, Steve Marshik, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Signature 

P. E. #

34139

Title Sr. Civil Engineer

P.E. Stamp



Hydrogeologist Certification

I, Lynette 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 chs. NR 700 to 726, Wis. Adm. Code.

Signature 

Title Sr. Geologist

Date

03/26/2020

Attachment A – Data Tables

A.1 Groundwater Analytical Table

A.2 Soil Analytical Results Tables

A.3 Residual Soil Contamination Table

A.4 Vapor Analytical Table (Not Applicable)

A.5 Other Media of Concern (Not Applicable)

A.6 Water Level Elevations (Not Applicable)

A.7 Other (Not Applicable)

Table A.1
Groundwater Analytical Table (2018)
Nemadji Substation Phase II
Investigation Superior, WI

		Location		SB-3
		Date		6/22/2018
		Depth		14.5 - 19.5 ft
Parameter	Units	Wisconsin Groundwater Public Health Enforcement Standards	Wisconsin Groundwater Preventive Action Limits	
Effective Date		07/01/2015	07/01/2015	
Exceedance Key		No Exceedances	No Exceedances	
Semivolatile Organic Compounds				
Acenaphthene	ug/l			< 0.0043 U
Acenaphthylene	ug/l			< 0.0063 U
Anthracene	ug/l	3000	600	< 0.0083 U
Benz(a)anthracene	ug/l			< 0.0053 U
Benzo(a)pyrene	ug/l	0.2	0.02	< 0.0054 U
Benzo(b)fluoranthene	ug/l	0.2	0.02	< 0.017 U
Benzo(g,h,i)perylene	ug/l			< 0.013 U
Benzo(k)fluoranthene	ug/l			< 0.014 U
Chrysene	ug/l	0.2	0.02	< 0.012 U
Dibenz(a,h)anthracene	ug/l			< 0.012 U
Fluoranthene	ug/l	400	80	< 0.025 U
Fluorene	ug/l	400	80	< 0.0080 U
Indeno(1,2,3-cd)pyrene	ug/l			< 0.018 U
Naphthalene	ug/l	100	10	< 0.0092 U
Phenanthrene	ug/l			< 0.014 U
Pyrene	ug/l	250	50	< 0.020 U
Volatile Organic Compounds				
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.20 U
1,1,1-Trichloroethane	ug/l	200	40	< 0.14 U
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.17 U
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.18 U
1,1-Dichloroethane	ug/l	850	85	< 0.17 U
1,1-Dichloroethylene	ug/l	7	0.7	< 0.16 U
1,1-Dichloropropene	ug/l			< 0.20 U
1,2,3-Trichlorobenzene	ug/l			< 0.21 U
1,2,3-Trichloropropane	ug/l	60	12	< 0.26 U
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.20 U
1,2,4-Trimethylbenzene	ug/l	480 c	96 c	< 0.20 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/l	0.2	0.02	< 1.7 U
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.24 U
1,2-Dichlorobenzene	ug/l	600	60	< 0.14 U
1,2-Dichloroethane	ug/l	5	0.5	< 0.22 U
1,2-Dichloroethylene, cis	ug/l	70	7	< 0.15 U
1,2-Dichloroethylene, trans	ug/l	100	20	< 0.12 U
1,2-Dichloropropane	ug/l	5	0.5	< 0.16 U
1,3,5-Trimethylbenzene	ug/l	480 c	96 c	< 0.12 U
1,3-Dichlorobenzene	ug/l	600	120	< 0.16 U
1,3-Dichloropropane	ug/l			< 0.070 U
1,3-Dichloropropene, cis	ug/l	0.4	0.04	< 0.20 U
1,3-Dichloropropene, trans	ug/l	0.4	0.04	< 0.18 U
1,4-Dichlorobenzene	ug/l	75	15	< 0.17 U
2,2-Dichloropropane	ug/l			< 0.17 U
Acetone	ug/l	9000	1800	< 9.2 U
Allyl chloride	ug/l			< 0.29 U
Benzene	ug/l	5	0.5	< 0.10 U
Bromobenzene	ug/l			< 0.21 U
Bromochloromethane	ug/l			< 0.27 U
Bromodichloromethane	ug/l	0.6	0.06	< 0.22 U
Bromoform	ug/l	4.4	0.44	< 0.80 U
Bromomethane	ug/l	10	1	< 1.8 U
Butylbenzene	ug/l			< 0.24 U
Butylbenzene, sec	ug/l			< 0.15 U
Butylbenzene, tert	ug/l			< 0.15 U

Table A.1
Groundwater Analytical Table (2018)
Nemadji Substation Phase II Investigation
Superior, WI

			Location	SB-3
			Date	6/22/2018
			Depth	14.5 - 19.5 ft
Parameter	Units	Wisconsin Groundwater Public Health Enforcement Standards	Wisconsin Groundwater Preventive Action Limits	
Effective Date		07/01/2015	07/01/2015	
Exceedance Key		No Exceedances	No Exceedances	
Carbon tetrachloride	ug/l	5	0.5	< 0.19 U
Chlorobenzene	ug/l	100	20	< 0.17 U
Chlorodibromomethane	ug/l	60	6	< 0.12 U
Chloroethane	ug/l	400	80	< 0.49 U
Chloroform	ug/l	6	0.6	< 0.45 U
Chloromethane	ug/l	30	3	< 0.16 U
Chlorotoluene, o	ug/l			< 0.16 U
Chlorotoluene, p	ug/l			< 0.13 U
Cumene (isopropyl benzene)	ug/l			< 0.18 U
Cymene p- (toluene isopropyl p-)	ug/l			< 0.15 U
Dibromomethane (methylene bromide)	ug/l			< 0.16 U
Dichlorodifluoromethane (Freon-12)	ug/l	1000	200	< 0.23 U
Dichlorofluoromethane (Freon-21)	ug/l	7000		< 0.14 U
Ethyl benzene	ug/l	700	140	< 0.14 U
Ethyl ether	ug/l	1000	100	< 0.095 U
Hexachlorobutadiene	ug/l			< 0.31 U
Methyl ethyl ketone (2-butanone)	ug/l	4000	800	< 0.99 U
Methyl isobutyl ketone (MIBK)	ug/l	500	50	< 0.42 U
Methyl tertiary butyl ether (MTBE)	ug/l	60	12	< 0.16 U
Methylene chloride	ug/l	5	0.5	< 0.98 U
Naphthalene	ug/l	100	10	< 0.48 U
Propylbenzene	ug/l			< 0.10 U
Styrene	ug/l	100	10	< 0.19 U
Tetrachloroethylene	ug/l	5	0.5	< 0.17 U
Tetrahydrofuran	ug/l	50	10	< 2.2 U
Toluene	ug/l	800	160	2.1
Trichloroethylene (TCE)	ug/l	5	0.5	< 0.15 U
Trichlorofluoromethane (Freon-11)	ug/l	3490	698	< 0.23 U
Trichlorotrifluoroethane (Freon 113)	ug/l			< 0.22 U
Vinyl chloride	ug/l	0.2	0.02	< 0.092 U
Xylene, total	ug/l	2000 (4)	400 (4)	< 0.31 U

(4) Xylene includes meta-, ortho-, and para-xylene combined.
c Value represents the criteria for Trimethylbenzenes (1,2,4- and 1,3,5- combined).
U The analyte was analyzed for, but was not detected.

Table A.2.a
Soil Analytical Results Table (2020)
Nemadji Substation Phase II Investigation
Superior, WI

Parameter	Units	Location																					
		SB-6	SB-6	SB-7	SB-7	SB-8	SB-8	SB-9	SB-10	SB-10	SB-10	SB-11	SB-11	SB-12	SB-13	SB-14	SB-15	SB-16	SB-17	SB-18			
		Date 1/06/2020	Date 1/06/2020	Date 1/06/2020	Date 1/06/2020	Date 1/06/2020	Date 1/06/2020	Date 1/06/2020	Date 1/06/2020	Date 1/06/2020	Date 1/06/2020	Date 1/06/2020	Date 1/06/2020	Date 1/06/2020	Date 1/06/2020	Date 1/06/2020	Date 1/06/2020	Date 1/06/2020	Date 1/06/2020	Date 1/07/2020	Date 1/07/2020		
Depth	1.5 - 2 ft	5 - 6 ft	2 - 4 ft	6 - 8 ft	2 - 4 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	5 - 6 ft	1 - 2 ft	2 - 4 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	2 - 4 ft			
		Wisconsin Groundwater RCLs, DF=2	Wisconsin Not to Exceed Direct Contact Industrial RCLs	Wisconsin Not to Exceed Direct Contact Non-Industrial RCLs																			
Effective Date		12/01/2018	12/01/2018	12/01/2018																			
Exceedance Key		Bold	No Exceedances	No Exceedances																			
General Parameters																							
Moisture	%				24.1	26.4	23.0	27.2	26.6	27.3	27.3	26.4	27.7	23.1	36.3	27.7	23.9	24.7	33.9	35.5	25.4	26.2	24.8
Volatile Organic Compounds																							
1,2,4-Trimethylbenzene	mg/kg	1.3787 (1)	219	219	< 0.0133 U	< 0.0141 U	< 0.0131 U	< 0.0143 U	< 0.0142 U	< 0.0137 U	< 0.0143 U	< 0.0140 U	< 0.0142 U	< 0.0132 U	< 0.0189 U	< 0.0138 U	< 0.0137 U	< 0.0137 U	< 0.0174 U	< 0.0155 U	< 0.0139 U	< 0.0136 U	< 0.0134 U
1,3,5-Trimethylbenzene	mg/kg	1.3787 (1)	182	182	< 0.0106 U	< 0.0112 U	< 0.0104 U	< 0.0114 U	< 0.0113 U	< 0.0109 U	< 0.0114 U	< 0.0112 U	< 0.0113 U	< 0.0105 U	< 0.0150 U	< 0.0110 U	< 0.0109 U	< 0.0109 U	< 0.0138 U	< 0.0124 U	< 0.0111 U	< 0.0109 U	< 0.0107 U
Benzene	mg/kg	0.0051	7.07	1.6	0.0399	< 0.0040 U	< 0.0037 U	< 0.0040 U	< 0.0040 U	< 0.0039 U	< 0.0040 U	< 0.0039 U	< 0.0040 U	< 0.0037 U	< 0.0053 U	< 0.0039 U	< 0.0039 U	< 0.0039 U	< 0.0049 U	< 0.0044 U	< 0.0039 U	< 0.0038 U	< 0.0038 U
Ethyl benzene	mg/kg	1.57	35.4	8.02	< 0.0036 U	< 0.0038 U	< 0.0036 U	< 0.0039 U	< 0.0039 U	< 0.0037 U	< 0.0039 U	< 0.0038 U	< 0.0039 U	< 0.0036 U	< 0.0051 U	< 0.0038 U	< 0.0037 U	< 0.0037 U	< 0.0047 U	< 0.0042 U	< 0.0038 U	< 0.0037 U	< 0.0036 U
Methyl tertiary butyl ether (MTBE)	mg/kg	0.027	282	63.8	< 0.0079 U	< 0.0084 U	< 0.0078 U	< 0.0085 U	< 0.0084 U	< 0.0081 U	< 0.0085 U	< 0.0083 U	< 0.0085 U	< 0.0078 U	< 0.0112 U	< 0.0082 U	< 0.0081 U	< 0.0081 U	< 0.0103 U	< 0.0092 U	< 0.0083 U	< 0.0081 U	< 0.0080 U
Naphthalene	mg/kg	0.6582	24.1	5.52	0.166 J	< 0.0658 U	< 0.0613 U	< 0.0670 U	< 0.0663 U	< 0.0639 U	< 0.0668 U	< 0.0655 U	< 0.0665 U	< 0.0615 U	< 0.0884 U	< 0.0646 U	< 0.0639 U	< 0.0640 U	< 0.0812 U	< 0.0726 U	< 0.0652 U	< 0.0639 U	< 0.0628 U
Toluene	mg/kg	1.1072	818	818	0.0512 J	< 0.0172 U	< 0.0160 U	< 0.0175 U	< 0.0173 U	< 0.0167 U	< 0.0174 U	< 0.0171 U	< 0.0173 U	< 0.0160 U	< 0.0230 U	< 0.0168 U	< 0.0167 U	< 0.0167 U	< 0.0212 U	< 0.0189 U	< 0.0170 U	< 0.0167 U	< 0.0164 U
Xylene, total	mg/kg	3.96	260	260	< 0.0155 U	< 0.0163 U	< 0.0152 U	< 0.0166 U	< 0.0164 U	< 0.0158 U	< 0.0166 U	< 0.0162 U	< 0.0165 U	< 0.0153 U	< 0.0219 U	< 0.0160 U	< 0.0158 U	< 0.0159 U	< 0.0201 U	< 0.0180 U	< 0.0162 U	< 0.0158 U	< 0.0156 U
Total Petroleum Hydrocarbons																							
Diesel Range Organics, C10-C28	mg/kg				23.6	< 4.9 U	< 4.8 U	< 5.1 U	8.2 J	< 4.8 U	< 5.1 U	< 5.3 U	< 5.4 U	121 J	19.5 J	< 5.3 U	< 5.0 U	< 4.8 U	6.0 J	< 5.0 U	26.5	< 5.1 U	< 5.1 U
Barr Calculated Comparison - Industrial																							
Exceedance Count	no unit		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hazard Index	no unit		≤ 1.0		0.00028	0.00010	0.000095	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.000096	0.00014	0.00010	0.00010	0.00010	0.00013	0.00011	0.00010	0.000099	0.000098
Cumulative Cancer Risk	no unit		≤ 1E-05		1.30E-08	3.40E-09	3.20E-09	3.50E-09	3.50E-09	3.30E-09	3.50E-09	3.40E-09	3.50E-09	3.20E-09	4.60E-09	3.40E-09	3.30E-09	3.30E-09	4.20E-09	3.80E-09	3.40E-09	3.30E-09	3.30E-09
Barr Calculated Comparison -Non-Industrial																							
Exceedance Count	no unit			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hazard Index	no unit			≤ 1.0	0.0014	0.00050	0.00047	0.00051	0.00051	0.00049	0.00051	0.00050	0.00051	0.00047	0.00067	0.00049	0.00049	0.00049	0.00062	0.00055	0.00050	0.00049	0.00048
Cumulative Cancer Risk	no unit			≤ 1E-05	5.60E-08	1.50E-08	1.40E-08	1.50E-08	1.50E-08	1.50E-08	1.50E-08	1.50E-08	1.50E-08	1.40E-08	2.00E-08	1.50E-08	1.50E-08	1.50E-08	1.90E-08	1.70E-08	1.50E-08	1.50E-08	1.40E-08

(1) Representing the criteria for combined Trimethylbenzenes.
J Estimated detected value. Either certain QC criteria were not met or the concentration is between the laboratory's detection and quantitation limits.
U The analyte was analyzed for, but was not detected.

Table A.2.a
Soil Analytical Results Table (2020)
Nemadji Substation Phase II Investigation
Superior, WI

Parameter	Units	Location			SB-18	SB-19	SB-20	SB-21	SB-21	SB-22	SB-22	SB-23	SB-24	SB-25	SB-26	SB-26	SB-27	SB-27	SB-28	SB-29	SB-29	
		Wisconsin Groundwater RCLs, DF=2	Wisconsin Not to Exceed Direct Contact Industrial RCLs	Wisconsin Not to Exceed Direct Contact Non-Industrial RCLs	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date
		12/01/2018	12/01/2018	12/01/2018	1/07/2020	1/07/2020	1/07/2020	1/06/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020
Depth	6 - 8 ft	6 - 8 ft	6 - 8 ft	2 - 4 ft	6 - 8 ft	2 - 4 ft	6 - 8 ft	6 - 8 ft	2 - 4 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	2 - 4 ft	6 - 8 ft	2 - 4 ft	6 - 8 ft	6 - 8 ft	2 - 4 ft	6 - 8 ft		
Effective Date		12/01/2018	12/01/2018	12/01/2018																		
Exceedance Key		Bold	No Exceedances	No Exceedances																		
General Parameters																						
Moisture	%				27.2	24.5	25.7	24.8	25.2	24.3	25.2	23.4	23.6	34.5	25.5	29.5	25.8	26.4	27.1	24.0	29.3	
Volatile Organic Compounds																						
1,2,4-Trimethylbenzene	mg/kg	1.3787 (1)	219	219	< 0.0138 U	< 0.0138 U	< 0.0132 U	< 0.0129 U	< 0.0136 U	< 0.0130 U	< 0.0132 U	< 0.0133 U	< 0.0132 U	< 0.0162 U	< 0.0139 U	< 0.0138 U	< 0.0131 U	< 0.0133 U	< 0.0131 U	< 0.0128 U	< 0.0137 U	
1,3,5-Trimethylbenzene	mg/kg	1.3787 (1)	182	182	< 0.0110 U	< 0.0110 U	< 0.0105 U	< 0.0103 U	< 0.0108 U	< 0.0104 U	< 0.0105 U	< 0.0106 U	< 0.0106 U	< 0.0129 U	< 0.0111 U	< 0.0110 U	< 0.0104 U	< 0.0106 U	< 0.0104 U	< 0.0102 U	< 0.0109 U	
Benzene	mg/kg	0.0051	7.07	1.6	< 0.0039 U	< 0.0039 U	< 0.0037 U	< 0.0036 U	< 0.0038 U	< 0.0037 U	< 0.0037 U	< 0.0037 U	< 0.0037 U	< 0.0046 U	< 0.0039 U	< 0.0039 U	< 0.0037 U	< 0.0038 U	< 0.0037 U	< 0.0036 U	< 0.0039 U	
Ethyl benzene	mg/kg	1.57	35.4	8.02	< 0.0037 U	< 0.0037 U	< 0.0036 U	< 0.0035 U	< 0.0037 U	< 0.0035 U	< 0.0036 U	< 0.0036 U	< 0.0036 U	< 0.0044 U	< 0.0038 U	< 0.0038 U	< 0.0036 U	< 0.0036 U	< 0.0036 U	< 0.0035 U	< 0.0037 U	
Methyl tertiary butyl ether (MTBE)	mg/kg	0.027	282	63.8	< 0.0082 U	< 0.0082 U	< 0.0078 U	< 0.0077 U	< 0.0081 U	< 0.0077 U	< 0.0078 U	< 0.0079 U	< 0.0079 U	< 0.0097 U	< 0.0083 U	< 0.0082 U	< 0.0078 U	< 0.0079 U	< 0.0078 U	< 0.0076 U	< 0.0082 U	
Naphthalene	mg/kg	0.6582	24.1	5.52	< 0.0644 U	< 0.0644 U	< 0.0617 U	< 0.0605 U	< 0.0636 U	< 0.0609 U	< 0.0617 U	< 0.0621 U	< 0.0620 U	< 0.0759 U	< 0.0649 U	< 0.0647 U	< 0.0613 U	< 0.0624 U	< 0.0612 U	< 0.0600 U	< 0.0641 U	
Toluene	mg/kg	1.1072	818	818	< 0.0168 U	< 0.0168 U	< 0.0161 U	< 0.0158 U	< 0.0166 U	< 0.0159 U	< 0.0161 U	< 0.0162 U	< 0.0162 U	< 0.0198 U	< 0.0169 U	< 0.0169 U	< 0.0160 U	< 0.0163 U	< 0.0160 U	< 0.0156 U	< 0.0167 U	
Xylene, total	mg/kg	3.96	260	260	< 0.0160 U	< 0.0160 U	< 0.0153 U	< 0.0150 U	< 0.0158 U	< 0.0151 U	< 0.0153 U	< 0.0154 U	< 0.0154 U	< 0.0188 U	< 0.0161 U	< 0.0160 U	< 0.0152 U	< 0.0155 U	< 0.0152 U	< 0.0149 U	< 0.0159 U	
Total Petroleum Hydrocarbons																						
Diesel Range Organics, C10-C28	mg/kg				< 5.1 U	< 5.0 U	< 4.9 U	< 6.0 U	< 4.9 U	< 4.5 U	< 5.6 U	< 4.4 U	< 4.9 U	15.5 J	< 4.8 U	< 5.3 U	< 5.0 U	< 4.8 U	< 5.1 U	14.0 J	< 5.3 U	
Barr Calculated Comparison - Industrial																						
Exceedance Count	no unit		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hazard Index	no unit		≤ 1.0		0.00010	0.00010	0.000096	0.000094	0.000099	0.000095	0.000096	0.000097	0.000096	0.00012	0.00010	0.00010	0.000095	0.000097	0.000095	0.000093	0.00010	
Cumulative Cancer Risk	no unit		≤ 1E-0.5		3.40E-09	3.40E-09	3.20E-09	3.10E-09	3.30E-09	3.20E-09	3.20E-09	3.20E-09	3.20E-09	4.00E-09	3.40E-09	3.40E-09	3.20E-09	3.30E-09	3.20E-09	3.10E-09	3.30E-09	
Barr Calculated Comparison -Non-Industrial																						
Exceedance Count	no unit			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hazard Index	no unit			≤ 1.0	0.00049	0.00049	0.00047	0.00046	0.00049	0.00047	0.00047	0.00047	0.00047	0.00058	0.00050	0.00049	0.00047	0.00048	0.00047	0.00046	0.00049	
Cumulative Cancer Risk	no unit			≤ 1E-05	1.50E-08	1.50E-08	1.40E-08	1.40E-08	1.40E-08	1.40E-08	1.40E-08	1.40E-08	1.40E-08	1.70E-08	1.50E-08	1.50E-08	1.40E-08	1.40E-08	1.40E-08	1.40E-08	1.50E-08	

(1) Representing the criteria for combined Trimethylbenzenes.
J Estimated detected value. Either certain QC criteria were not met or the concentration is between the laboratory's detection and quantitation limits.
U The analyte was analyzed for, but was not detected.

Table A.2.b
Soil Analytical Results Table (2018)
Nemadji Substation Phase II Investigation
Superior, WI

Parameter	Units	Location				SB-1	SB-1	SB-2	SB-2	SB-3	SB-3	SB-4	SB-4	SB-5	SB-5
		Wisconsin Groundwater RCLs, DF=2	Wisconsin Not to Exceed Direct Contact Industrial RCLs	Wisconsin Not to Exceed Direct Contact Non-Industrial RCLs	WDR Background Threshold Values	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/22/2018	6/22/2018	6/22/2018	6/22/2018
		Date	Date	Date	Date	2 - 3 ft	12 - 13 ft	0 - 1 ft	6 - 7 ft	0 - 2 ft	8 - 9 ft	0 - 2 ft	6 - 7 ft	0 - 1 ft	8 - 9 ft
Effective Date		12/01/2018	12/01/2018	12/01/2018	12/01/2018										
Exceedance Key		Bold	<u>Underline</u>	<i>Italics</i>	Reference Only										
Methyl isobutyl ketone (MIBK)	mg/kg	0.2252	3360	3360		< 0.0411 U	< 0.0411 U	< 0.0411 U	< 0.0411 U	< 0.0411 U	< 0.0411 U	< 0.0411 U	< 0.0411 U	< 0.0411 U	< 0.0411 U
Methyl tertiary butyl ether (MTBE)	mg/kg	0.027	282	63.8		< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U
Methylene chloride	mg/kg	0.0026	1150	61.8		< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U
Styrene	mg/kg	0.22	867	867		< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U
Tetrachloroethylene	mg/kg	0.0045	145	33		< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U
Toluene	mg/kg	1.1072	818	818		< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	0.0388 J	< 0.0250 U	
Trichloroethylene (TCE)	mg/kg	0.0036	8.41	1.3		< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	
Vinyl chloride	mg/kg	0.0001	2.08	0.067		< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	
Xylene, m & p	mg/kg	3.96 XYL	260 XYL	260 XYL		< 0.0500 U	< 0.0500 U	< 0.0500 U	< 0.0500 U	< 0.0500 U	< 0.0500 U	< 0.0500 U	< 0.0500 U	< 0.0500 U	
Xylene, o	mg/kg	3.96 XYL	434	434		< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	
Xylene, total (Barr Calculation)	mg/kg	3.96	260	260		ND	ND	ND	ND	ND	ND	ND	ND	ND	
Barr Calculated Comparison - Industrial ¹															
Exceedance Count	no unit		0			0	0	0	0	0	0	0	0	0	
Hazard Index	no unit		≤ 1.0			0.0065	0.0066	0.0065	0.0065	0.0066	0.0065	0.0065	0.0065	0.12	
Cumulative Cancer Risk	no unit		≤ 1E-0.5			8.70E-08	8.70E-08	8.70E-08	8.70E-08	8.70E-08	8.80E-08	8.70E-08	8.70E-08	1.80E-07	
Barr Calculated Comparison - Non-Industrial ¹															
Exceedance Count	no unit			0		0	0	0	0	0	0	0	0	1	
Hazard Index	no unit			≤ 1.0		0.031	0.031	0.03	0.03	0.031	0.031	0.031	0.03	0.29	
Cumulative Cancer Risk	no unit			≤ 1E-05		7.20E-07	7.20E-07	7.20E-07	7.20E-07	7.20E-07	7.40E-07	7.20E-07	7.20E-07	2.40E-06	

¹ Comparison calculated using the reported value for Xylene, m & p in replace for "Xylenes" and the reported value for Chromium in replace of "Chromium(III), Insoluble Salts" in the RCL calculator

* Estimated value, QA/QC criteria not met.

CR3 Value represents the criteria for Chromium(III).

J Estimated detected value. Either certain QC criteria were not met or the concentration is between the laboratory's detection and quantitation limits.

ND Not detected.

U The analyte was analyzed for, but was not detected.

XYL Value represents the criteria for Xylene, total (m-,o-,p- combined).

Table A.3
Residual Soil Contamination Table (2020)
Nemadji Substation Phase II Investigation
Superior, WI

Parameter	Units	Location			SB-6	SB-8	SB-10	SB-11	SB-14	SB-16	SB-25	SB-29
		Wisconsin Groundwater RCLs, DF=2	Wisconsin Not to Exceed Direct Contact Industrial RCLs	Wisconsin Not to Exceed Direct Contact Non-Industrial RCLs	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/07/2020	1/07/2020
		Depth			1.5 - 2 ft	2 - 4 ft	1 - 2 ft	2 - 4 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	2 - 4 ft
Effective Date		06/01/2018	06/01/2018	06/01/2018								
Exceedance Key		Bold	No Exceedances	No Exceedances								
Volatile Organic Compounds												
Benzene	mg/kg	0.0051	7.07	1.6	0.0399	< 0.0040 U	< 0.0037 U	< 0.0053 U	< 0.0049 U	< 0.0039 U	< 0.0046 U	< 0.0036 U
Naphthalene	mg/kg	0.6582	24.1	5.52	0.166 J	< 0.0663 U	< 0.0615 U	< 0.0884 U	< 0.0812 U	< 0.0652 U	< 0.0759 U	< 0.0600 U
Toluene	mg/kg	1.1072	818	818	0.0512 J	< 0.0173 U	< 0.0160 U	< 0.0230 U	< 0.0212 U	< 0.0170 U	< 0.0198 U	< 0.0156 U
Total Petroleum Hydrocarbons												
Diesel Range Organics, C10-C28	mg/kg				23.6	8.2 J	121 J	19.5 J	6.0 J	26.5	15.5 J	14.0 J
Barr Calculated Comparison - Industrial												
Exceedance Count	no unit		0		0	0	0	0	0	0	0	0
Hazard Index	no unit		≤ 1.0		0.00028	0.00010	0.000096	0.00014	0.00013	0.00010	0.00012	0.000093
Cumulative Cancer Risk	no unit		≤ 1E-0.5		1.30E-08	3.50E-09	3.20E-09	4.60E-09	4.20E-09	3.40E-09	4.00E-09	3.10E-09
Barr Calculated Comparison -Non-Industrial												
Exceedance Count	no unit			0	0	0	0	0	0	0	0	0
Hazard Index	no unit			≤ 1.0	0.0014	0.00051	0.00047	0.00067	0.00062	0.00050	0.00058	0.00046
Cumulative Cancer Risk	no unit			≤ 1E-05	5.60E-08	1.50E-08	1.40E-08	2.00E-08	1.90E-08	1.50E-08	1.70E-08	1.40E-08

J Estimated detected value. Either certain QC criteria were not met or the concentration is between the laboratory's detection and quantitation limits.

U The analyte was analyzed for, but was not detected.

DF Dilution Factor.

RCLs Residual Contaminant Levels.

Table A.3.b
Residual Soil Contamination Table (2018)
nemadji Substation Phase II Investigation
Superior, WI

Parameter	Units	Location				SB-1	SB-1	SB-2	SB-2	SB-3	SB-3	SB-4	SB-4	SB-5	SB-5
		Wisconsin Not to Exceed Industrial RCLs	Wisconsin Not to Exceed Non-Industrial RCLs	WDNR Background Threshold Values	Date	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/22/2018	6/22/2018	6/22/2018	6/22/2018
Effective Date		06/01/2018	06/01/2018	06/01/2018	Depth	2 - 3 ft	12 - 13 ft	0 - 1 ft	6 - 7 ft	0 - 2 ft	8 - 9 ft	0 - 2 ft	6 - 7 ft	0 - 1 ft	8 - 9 ft
Exceedance Key		<u>Underlined</u>	<i>Italics</i>	Reference Only											
General Parameters															
Moisture	%					27.6	35.3	20.3	24.5	24.5	31.6	26.7	29.4	23.3	28.1
Metals															
Mercury	mg/kg	3.13	3.13			0.023 j	0.026 j	0.022 j	0.020 j	0.026 j	0.021 j	0.023 j	0.021 j	0.10	0.017 j
Arsenic	mg/kg	<u>3</u>	<i>0.677</i>	8		<u>3.1</u>	<u>3.8</u>	<u>3.0</u>	<u>3.3</u>	<u>3.5</u>	<u>2.8</u>	<u>3.0</u>	<u>3.0</u>	<i>5.1 j</i>	<i>3.4</i>
Barium	mg/kg	100000	15300	364		245	193	145	150	174	176	191	160	287	173
Cadmium	mg/kg	985	71.1	1		--	--	--	--	--	0.11 j	--	0.097 j	0.56 j	--
Chromium	mg/kg	100000 CR3	100000 CR3	44		49.6	42.9	37.0	39.5	41.7	42.6	48.6	39.4	1850	42.0
Lead	mg/kg	800	400	52		10.5	9.5	7.6	8.1	9.0	7.8	9.1	7.7	88.2	8.4
Selenium	mg/kg	5840	391			0.56 j	--	--	--	--	--	--	--	--	--
Silver	mg/kg	5840	391			--	--	--	--	--	--	--	--	1.1 j	--
Semivolatile Organic Compounds															
Acenaphthene	ug/kg	45200000	3590000			--	--	--	--	--	--	--	--	6.9	--
Acenaphthylene	ug/kg					--	--	--	--	--	--	--	--	3.4	--
Anthracene	ug/kg	100000000	17900000			--	--	--	--	--	--	--	--	11.0	--
Benz(a)anthracene	ug/kg	20800	1140			--	--	--	--	--	--	--	--	77.8	--
Benzo(a)pyrene	ug/kg	2110	115			--	--	--	--	--	1.2 j	--	--	128	--
Benzo(b)fluoranthene	ug/kg	21100	1150			1.1 j	--	--	--	--	2.2	--	--	162	--
Benzo(g,h,i)perylene	ug/kg					--	--	--	--	--	2.3 j	--	--	116	--
Benzo(k)fluoranthene	ug/kg	211000	11500			--	--	--	--	--	2.2 j	--	--	55.7	--
Chrysene	ug/kg	2110000	115000			--	--	--	--	--	--	--	--	98.1	--
Dibenz(a,h)anthracene	ug/kg	2110	115			--	--	--	--	--	2.2 j	--	--	32.5	--
Fluoranthene	ug/kg	30100000	2390000			1.8 j	--	--	--	--	1.9 j	--	--	90.4	--
Fluorene	ug/kg	30100000	2390000			--	--	--	--	--	--	--	--	2.5	--
Indeno(1,2,3-cd)pyrene	ug/kg	21100	1150			--	--	--	--	--	2.2 j	--	--	94.4	--
Naphthalene	ug/kg	24100	5520			--	--	--	--	--	--	--	--	4.3	--
Phenanthrene	ug/kg					--	--	--	--	--	--	--	--	39.1	--
Pyrene	ug/kg	22600000	1790000			--	--	--	--	--	--	--	--	75.2	--
Volatile Organic Compounds **															
Toluene	ug/kg	818000	818000			--	--	--	--	--	--	--	--	38.8 j	--
Barr Calculated Comparison - Non-Industrial															
Exceedance Count	no unit	0	0			0	0	0	0	0	0	0	0	1	0

Note
** Non-detect VOC compounds reported on a wet weight basis per WIDNR

Attachment B – Maps, Figures, and Photos

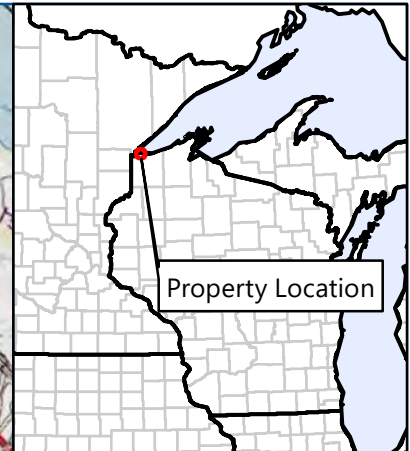
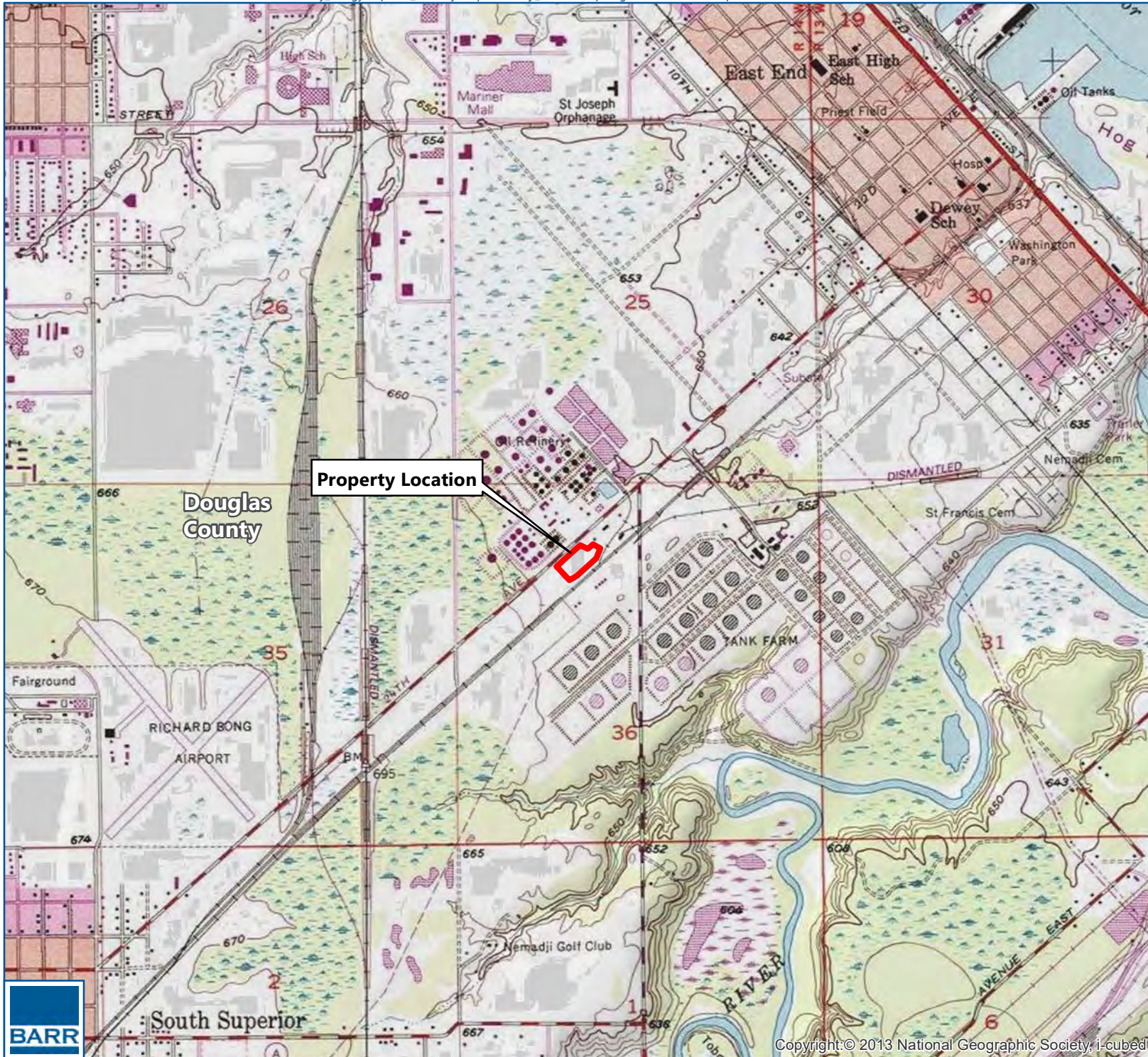
B.1 Location Maps

B.2 Soil Figures

B.3 Groundwater Figures

B.4 Vapor Maps and Other Media (Not Applicable)

B.5 Structural Impediment Photos (Not Applicable)



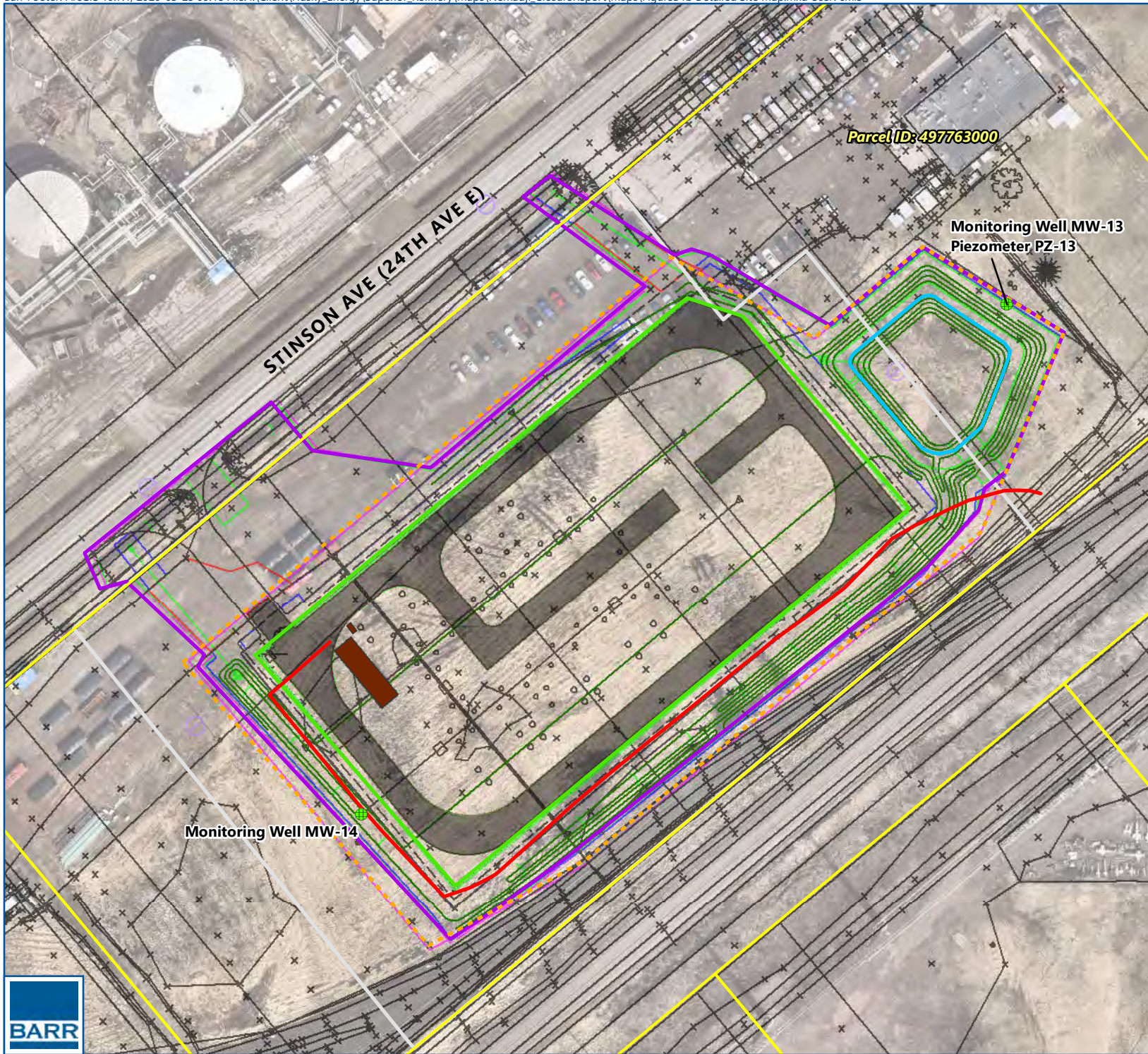
 Property Boundary










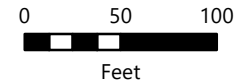
0 1,000 2,000
Feet



LOCATION MAP
SWL&P Nemadji Substation
Superior, WI
FIGURE B.1.a



-  Monitoring Well
-  Property Line
-  Underground Electrical
-  Construction Limits
-  Proposed Substation Fenceline
-  Gravel Surfacing
-  Foundations
-  Proposed Pond
-  2018 Phase II Property Boundary
-  Parcel Boundary
-  Topographic Contour (1 ft)



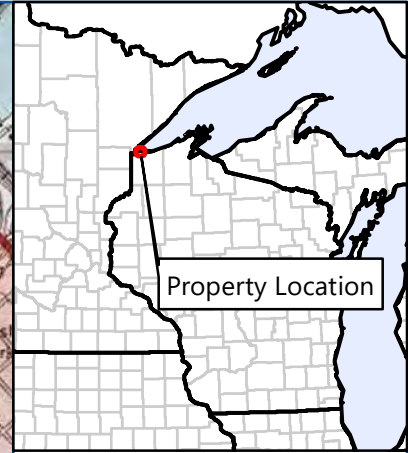
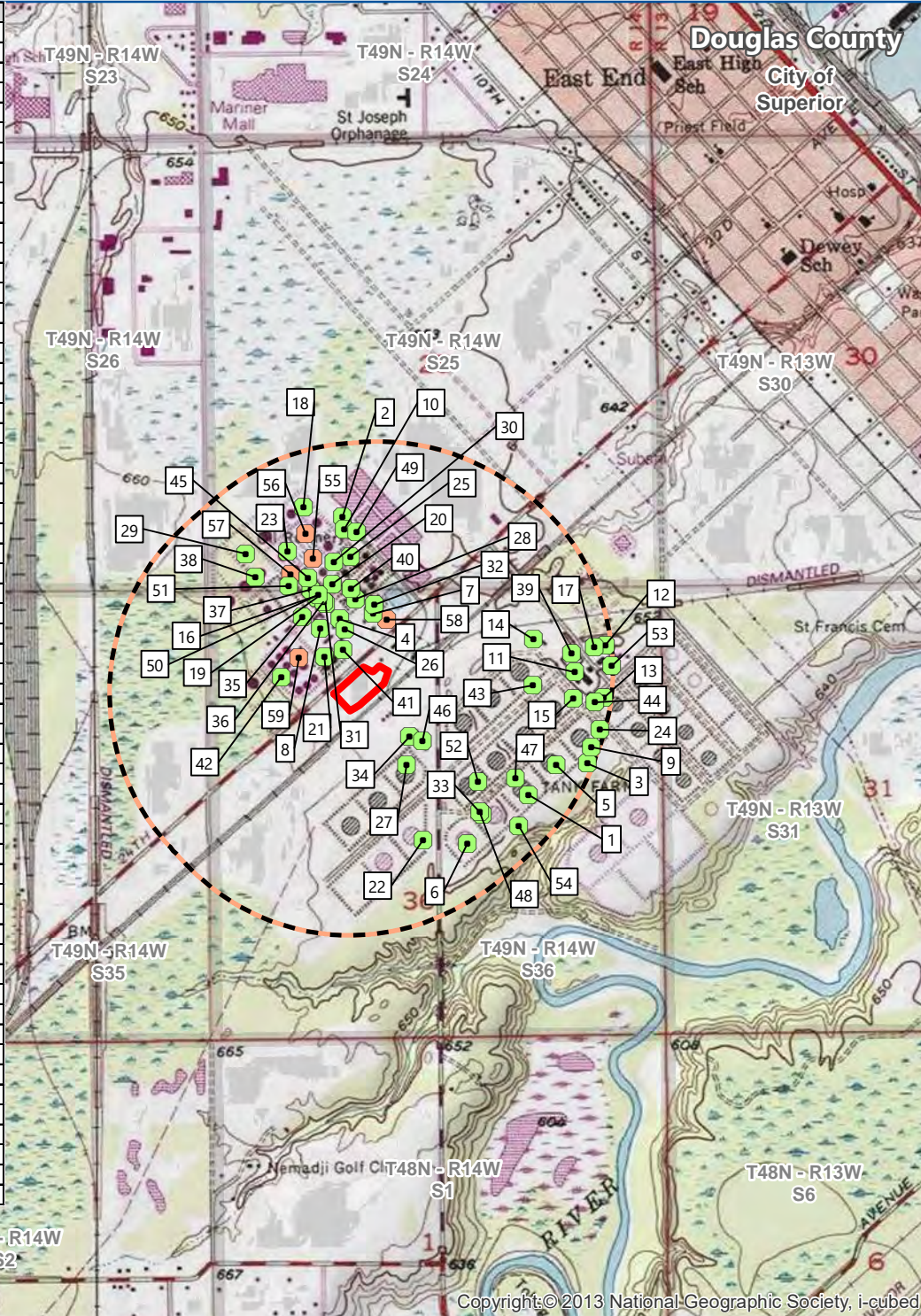
1 inch = 100 feet

Imagery: Nearmap, 4/25/2019

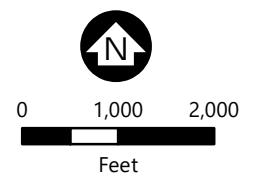


DETAILED SITE MAP
SWL&P Nemadji Substation
Superior, WI
FIGURE B.1.b

Map ID	Activity #	Activity
1	216220009	LAKEHEAD PIPELINE - CRUDE OIL TANK 22
2	216222650	MURPHY OIL - FUEL LOADING AREA
3	216176579	LAKEHEAD PIPELINE CO L P
4	216222670	MURPHY OIL - TANK S-1, S-2
5	216178165	LAKEHEAD PIPELINE - TANK 21 CRUDE OIL
6	216275100	LAKEHEAD PIPELINE - TANK 24
7	216242301	MURPHY OIL - VAPOR RECOVERY UNIT
8	216222638	MURPHY OIL - CRUDE UNIT PROCESS AREA
9	216558992	ENBRIDGE ENERGY - TANK 20 VALVE
10	216222628	MURPHY OIL - PROPANE/BUTANE LOADING AREA
11	216558988	ENBRIDGE ENERGY - OFFICE EXCAVATION
12	216560841	ENBRIDGE ENERGY TERMINAL - LINE 5 PIG TRAP
13	216558987	ENBRIDGE ENERGY - TANK 9
14	216279246	LAKEHEAD PIPELINE CO L P
15	216183249	LAKEHEAD PIPELINE - MANIFOLD 3
16	216000522	MURPHY OIL - TANK #34
17	216000161	MURPHY OIL - LAKEHEAD TANK FAC
18	216221525	MURPHY OIL - TANK #59
19	216000507	MURPHY OIL - 24TH
20	216000523	MURPHY OIL - TANK #67
21	216000563	MURPHY OIL - TANK #102
22	216112803	HUSKY OIL LTD TANK 28
23	216221534	MURPHY OIL - TANK #29 & 30
24	316000168	LAKEHEAD PIPE LINE CO
25	216222617	MURPHY OIL - TANK #65 & 66
26	216246715	MURPHY OIL - SLOP OIL MANIFOLD AREA
27	216000508	MURPHY OIL - BARDON AVE (TANK 25)
28	216190549	MURPHY OIL - TANK #1 & 2 (FORMER)
29	216221920	MURPHY OIL - TANK #47
30	216221941	MURPHY OIL - TANK #39
31	316000736	MURPHY OIL - WAREHOUSE
32	216222701	MURPHY OIL - TANK BASIN #51 & 52
33	216558989	ENBRIDGE ENERGY - TANK 23
34	216275090	ENBRIDGE SUPERIOR TERMINAL
35	216550859	MURPHY OIL - S OF GREEN GAS UNIT
36	216226861	MURPHY OIL - CONTAMINATED SOIL UNDER ROADWAY
37	216222721	MURPHY OIL - TANK #32 & 33
38	216000506	MURPHY OIL - STINSON #3
39	216000512	LAKEHEAD PIPELINE - PUMP ST
40	216221947	MURPHY OIL - TANK #8
41	216221988	MURPHY OIL - TANK #81
42	216221908	MURPHY OIL - TANK #79
43	216513788	ENBRIDGE ENERGY - NEMADJI RIVER
44	216552700	ENBRIDGE ENERGY - TANK 9 PRESSURE LINE
45	216221933	MURPHY OIL - TANK #31
46	216000027	LAKEHEAD PIPELINE - PLM TOOL SHOP
47	216556786	ENBRIDGE ENERGY - TANK 22
48	216275130	LAKEHEAD PIPELINE - TANK 23
49	216221811	MURPHY OIL - UNDERGROUND PIPELINE
50	216000571	MURPHY OIL - TANK #34 & 35
51	216118396	MURPHY OIL USA
52	216558990	ENBRIDGE ENERGY - TANK 19
53	216577548	ENBRIDGE SUPERIOR TERMINAL - LINE 5 VALVE 553
54	216579604	ENBRIDGE SUPERIOR - FIELD BOOSTER 23
55	216526812	MURPHY OIL - TANK BASIN #68
56	216223154	MURPHY OIL - TANK #70
57	216222712	MURPHY OIL - TANK #40
58	216515749	MURPHY OIL - LOADING DOCK AREA
59	216581317	SUPERIOR REFINING COMPANY LLC



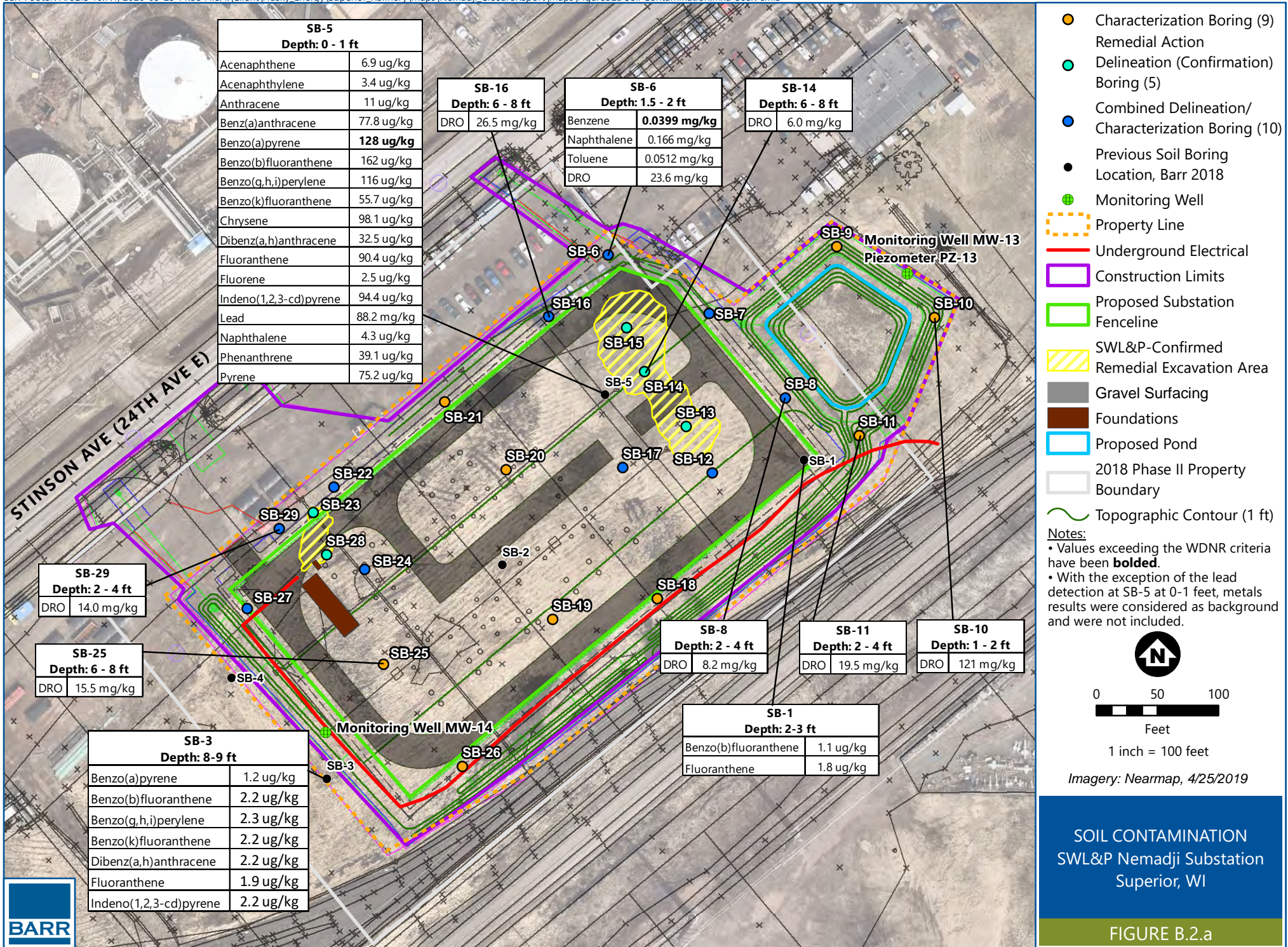
- Property Boundary
- 1/2 Mile Radius
- Remediation & Redevelopment (RR) Sites With 1/2 Mile Radius
- Open/Ongoing
- Closed/Completed



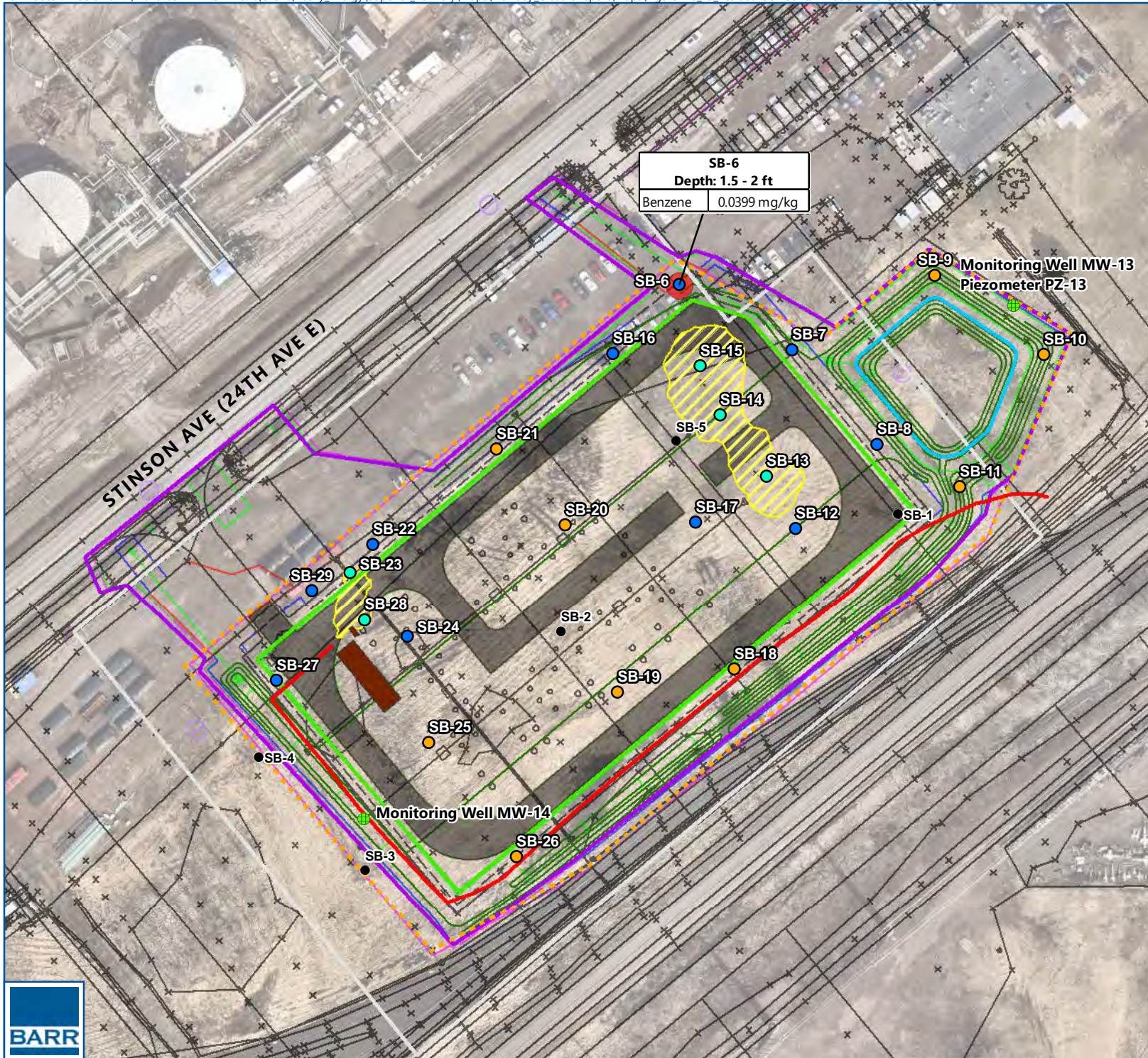
RR SITES MAP
SWL&P Nemadji Substation
Superior, WI

FIGURE B.1.c



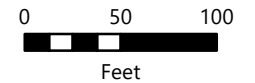


SOIL CONTAMINATION
SWL&P Nemadji Substation
Superior, WI
FIGURE B.2.a



SB-6
 Depth: 1.5 - 2 ft
 Benzene 0.0399 mg/kg

- Characterization Boring (9)
Remedial Action
- Delineation (Confirmation)
Boring (5)
- Combined Delineation/
Characterization Boring (10)
- Previous Soil Boring
Location, Barr 2018
- Monitoring Well
- Property Line
- Underground Electrical
- Construction Limits
- Proposed Substation
Fenceline
- SWL&P-Confirmed
Remedial Excavation Area
- Gravel Surfacing
- Foundations
- Proposed Pond
- 2018 Phase II Property
Boundary
- ~ Topographic Contour (1 ft)
- Estimated Extent of
Residual Soil Contamination



1 inch = 100 feet

Imagery: Nearmap, 4/25/2019



RESIDUAL SOIL
 CONTAMINATION
 SWL&P Nemadji Substation
 Superior, WI

FIGURE B.2.b

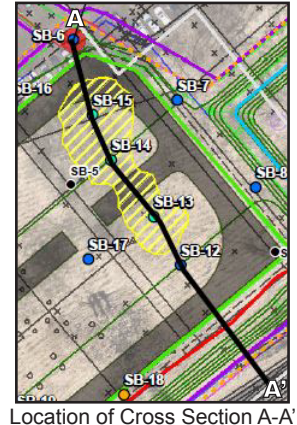
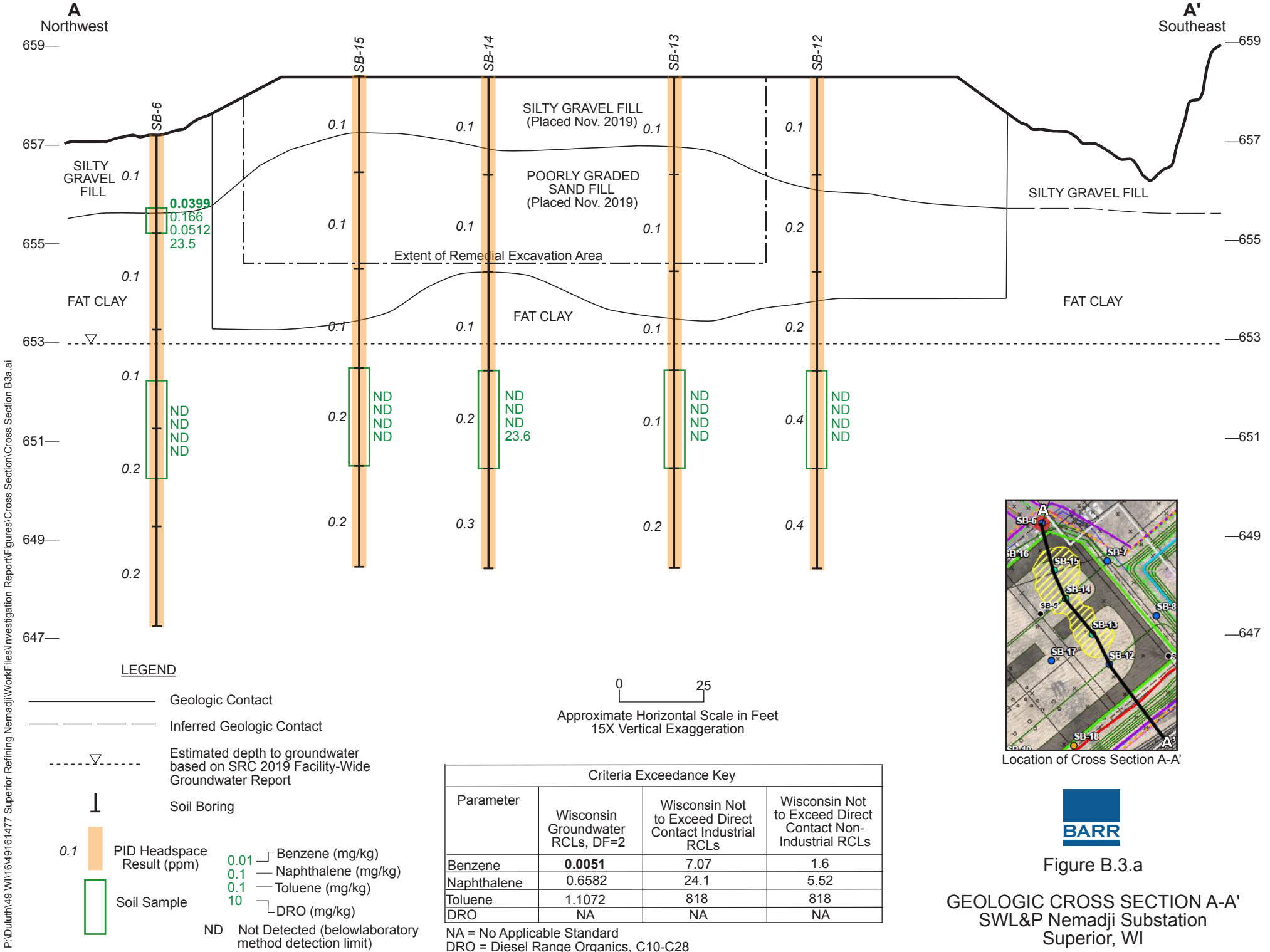
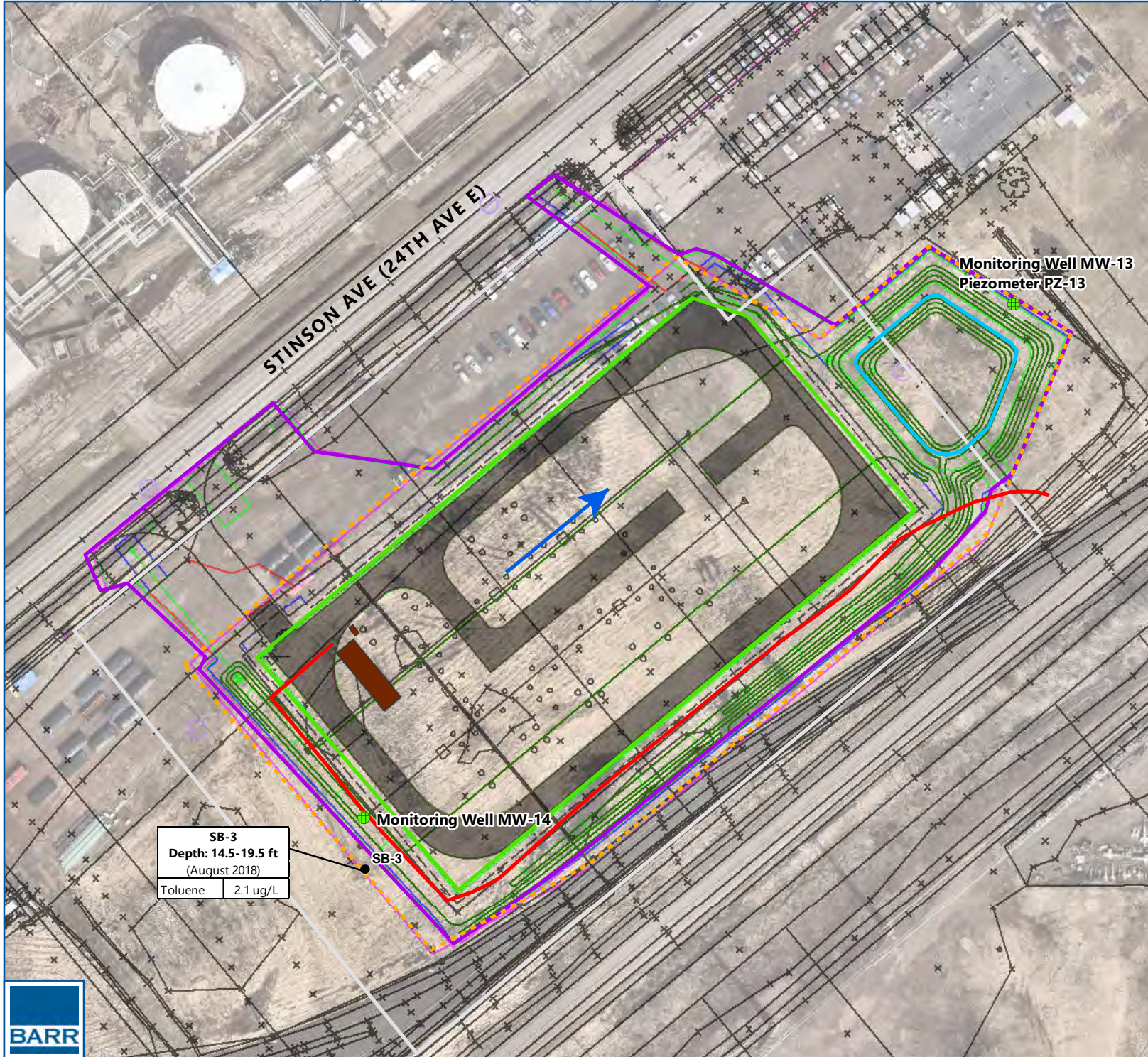
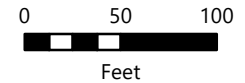


Figure B.3.a

GEOLOGIC CROSS SECTION A-A'
SWL&P Nemadji Substation
Superior, WI



- Monitoring Well
- Previous Soil Boring Location, Barr 2018
- Property Line
- Underground Electrical
- Construction Limits
- Proposed Substation Fenceline
- Gravel Surfacing
- Foundations
- Proposed Pond
- 2018 Phase II Property Boundary
- ~ Topographic Contour (1 ft)
- ➔ Flow Direction Based On SRC Annual Groundwater Monitoring Data



1 inch = 100 feet

Imagery: Nearmap, 4/25/2019

**GROUNDWATER
ISOCONCENTRATION**
 SWL&P Nemadji Substation
 Superior, WI

FIGURE B.3.b



Attachment C – Documentation of Remedial Action

C.1 Site Investigation Documentation

C.2 Investigative Waste

C.3 Description of the Methodology (Not Applicable)*

C.4 Construction Documentation (Not Applicable)*

C.5 Decommissioning of Remedial System (Not Applicable)*

C.6 Other (Not Applicable)

***Remedial action was not implemented at the site**

C.1 – Site Investigation Documentation

SWL&P Nemadji Substation Limited Phase III Investigation Results

Technical Memorandum

To: John Sager, Wisconsin Department of Natural Resources
From: Lynette Carney and Christina Sehr, Barr Engineering Co.
Subject: SWL&P Nemadji Substation Phase III Investigation Results
Date: March 26, 2020
Project: 49161477.00
BRRTS No. 02-16-585474
c: Mark Darby, Superior Refining Company LLC

Barr Engineering Co. (Barr) was retained by Superior Refining Company LLC (SRC) to complete a Phase III Investigation of a property owned by SRC and leased to Superior Water, Light & Power (SWL&P) for the construction and operation of a new electrical substation (Nemadji Substation). The property is located at 2407 Stinson Ave, Superior, Wisconsin in the NW $\frac{1}{4}$ of Section 36, T49N, R14W (Property). The Property location is shown on Figure 1.

A Phase I Environmental Site Assessment and a Phase II Investigation were completed by Barr in 2018 to characterize soil and groundwater and to assess baseline conditions at the Property prior to leasing. Field screening and laboratory analytical results from five soil borings completed in 2018 did not identify soil or groundwater conditions that required further action prior to development of the site. The 2018 Phase II Investigation Report is included as Attachment A.

In November 2019, as part of the Nemadji Substation site development, SWL&P excavated the majority of the site to a depth of 3-4 feet for the placement of engineered fill. During earthwork activities, SWL&P encountered hydrocarbon contaminated soil in two separate locations (Figure 2). According to SWL&P, approximately 1,000 tons of hydrocarbon contaminated soil encountered within the extent of their construction footprint was segregated, characterized and transported off-site for disposal at Shamrock Landfill. Field screening was not performed and analytical confirmation samples were not collected from the excavation extent to document remaining site conditions.

Phase III Project Objectives

The objectives of this Phase III investigation are to evaluate the condition of remaining soils beneath and surrounding SWL&P's hydrocarbon contaminated soil excavations, to supplement the site characterization data collected during the 2018 investigation, and to document final site conditions at the Property under the requirements of NR 716.15.

This report summarizes the results, opinions, and conclusions of the Phase III Investigation. Descriptions of the Property background, investigation activities, sample locations and analytical results are summarized below. Additional background information is included in the 2018 Phase II Investigation Results Report (Attachment A).

General Information

Figure 1 provides a location map showing the SWL&P Nemadji Substation and the surrounding area using the USGS 7.5-minute topographic map.

Site Information: BRRTs Number: 02-16-585474
Facility Identification Numbers: 816009590
Superior Refining Company LLC
2407 Stinson Avenue
Superior, Wisconsin
Douglas County, Wisconsin
NW ¼ of Section 36, T49N, R14W
Latitude / Longitude: 46.68842 / -92.06988 (Site Center)
WTM91 Coordinates: X: 361726, Y: 692621 (Site Center)

Responsible Party: Superior Refining Company LLC
Attn: Mark Darby, Environmental Manager
2407 Stinson Avenue
Superior, WI 54880
Phone: (715) 398-8453
Email: mark.darby@huskyenergy.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

Physical Setting

The Property consists of approximately 5.18 acres located in an area between the operating Superior Refinery and a large pipeline terminal facility as shown on Figure 1. The Property is currently leased to SWL&P for construction of an electrical substation.

Topography of the Property is relatively flat, with a gentle slope down to the east. The property is underlain by clayey till and glaciolacustrine sediment planed by waves of proglacial Lake Duluth (Clayton, 1985). Based on facility-wide groundwater monitoring at the refinery, which includes groundwater monitoring wells located on and near the Property, shallow groundwater flow direction at the Property is to the northeast towards Newton Creek, ultimately discharging into Lake Superior approximately 1.7 miles northeast of the Property. Groundwater is typically encountered at less than 10 feet below ground surface (bgs) with estimated groundwater flow velocity of 0.4 cm/year (or 0.013 feet per year) (Gannett Fleming, 2014).

The Property is accessible via Stinson Avenue (24th Avenue East) and an approximately 80-foot-wide gravel parking lot/equipment laydown area is located along the northwest Property boundary. Historically the Property has been used as a storage/laydown area associated with the adjacent refinery. A warehouse was previously located on the Property and has since been demolished.

The current use of adjoining properties includes Superior Refinery to the north/northwest, unoccupied grassy/forested land and rail lines to the southwest, Superior Refinery laboratory building and grassy area to the east/northeast, and rail lines and a petroleum pipeline terminal facility to the south/southeast.

Investigation Activities

On December 19, 2019, Barr submitted a *Site Investigation Work Plan* (Work Plan) to the Wisconsin Department of Natural Resources (WDNR), which included rationale for boring placement, sampling and analysis, and additional investigation details. The Work Plan is provided in Attachment B.

The investigation approach was developed to define the extent of remaining contamination, if any, associated with the November 2019 excavation activities and to further characterize site conditions to obtain baseline information of the Property. A total of fifteen "remedial action delineation" borings were advanced to evaluate the effectiveness of the remedial excavation efforts performed by SWL&P. Nine additional "site characterization" borings were advanced across the site to further assess baseline conditions at the Property following completion of the remedial activities.

On January 6 and 7, 2020, Barr and its subcontractor, Twin Ports Testing (TPT), advanced a total of 24 direct-push borings (SB-6 through SB-29) to depths of 10 feet bgs at the locations shown on Figure 2. The boring locations were selected based on site features and previous 2018 Phase II boring locations, as summarized in the Work Plan. Photographs capturing site conditions during the Phase III Investigation are included in Attachment C.

One or two representative soil samples collected from each soil boring were submitted for laboratory analyses. Where possible, one sample was collected from 2-4 feet bgs to intersect remaining native soils below the Nemadji Substation construction fill and one from 6-8 feet bgs. Soil samples were field-screened for organic vapors using headspace sample screening procedures as per the Work Plan. Additional evidence of contamination such as staining, odor, discoloration, and sheen was documented in the field at each location. Soils were described according to ASTM D-2488, *Standard Practice for Description and Identification of Soils (Visual/Manual Method)*. Boring locations were surveyed using global positioning system (GPS) equipment. Soil boring logs are provided in Attachment D.

Soil borings SB-18 and SB-26 were offset 16 and 15 feet, respectively, from the original locations identified in the Work Plan to avoid drilling through unfrozen standing water contained by the berm at the Property's edge. The borings were offset perpendicular to the Property fence where the ground was confirmed to be solid.

Barr submitted soil samples to Pace Analytical Laboratories (PACE) in Minneapolis, Minnesota for analysis of the following:

- petroleum volatile organic compounds (PVOCs) and naphthalene by method EPA 8260B
- diesel range organic compounds (DRO) by method WI MOD DRO 8015D (C10-C28)

Soil analytical results were compared to WDNR generic residual contaminant level (RCL) criteria for the direct contact and groundwater pathways.

Phase III Investigation Results

Soil boring stratigraphy generally consisted of one to two feet of silty gravel and/or poorly graded sand fill material overlying fat clay. The fill materials encountered were placed during the site development for the Nemadji Substation. The native fat clay was typically of high plasticity, stiff consistency, moist, and red-brown in color. Headspace sample organic vapor screening in the field, including background, produced total headspace readings less than 2.5 parts per million (ppm) across the Property. Headspace readings for all samples can be found in Table 1. There was no staining, odor, discoloration, sheen or other indications of contamination observed in the field, except in soil borings SB-6 and SB-10.

Soil boring SB-6 is located north of the main remedial excavation area and had discoloration and a faint odor in the 1.5-2 foot interval. Soil boring SB-10 is located at the northeast edge of the Property and had slag-like material in the 0.6-2 foot interval. Borings were advanced eight feet past the deepest observed impact and soil samples were collected from the interval where potential impacts were observed or anticipated and from a lower interval beneath the potential impact zone.

Tables 2 and 3 summarize the soil samples collected, analyses performed, and analytical results. Table 2 presents the analytical results for samples with detections of compounds at concentrations equal to or greater than laboratory method detection limits (MDLs). Included for comparison are the generic RCLs developed by the WDNR according to the procedures in NR 720.10 and NR 720.12, Wis. Adm. Code for the groundwater pathway and direct contact pathway.

Table 3 presents all analytical results, including those results below the MDLs. Copies of the laboratory analytical reports are included in Attachment E. The following provides a summary of the soil analytical laboratory results.

PVOCs + Naphthalene

Benzene was detected in one soil sample from soil boring SB-6 (1.5-2 feet) at a concentration of 0.4 milligrams per kilogram (mg/kg) and is the only compound and the only sample that exceeded a WDNR groundwater RCL. Naphthalene and toluene were also detected in soil boring SB-6 (1.5-2 feet), but concentrations were below the laboratory practical quantitation limit (PQL). The direct contact RCL was not exceeded by any compounds.

DRO

DRO was detected in the following soil samples: SB-6 (1.5-2 feet), SB-8 (2-4 feet), SB-10 (1-2 feet), SB-11 (2-4 feet), SB-14 (6-8 feet), SB-16 (6-8 feet), SB-25 (6-8 feet), and SB-29 (2-4 feet). The only detections reported above the laboratory PQL were SB-6 (1.5-2 feet) with a concentration of 23.6 parts per million (ppm) and SB-16 (6-8 feet) with a concentration of 26.5 ppm. A DRO concentration of 121 ppm was reported (but below the PQL) in sample SB-10 (1-2 feet). Although the WDNR does not have RCL criteria for DRO, these samples were collected as an additional screening tool and to support landfill soil characterization sampling requirements should additional soil remediation be required.

Cumulative

The combined PVOC + Naphthalene detections for each sample interval were also compared to the WDNR cumulative direct contact hazard index. No samples exceeded the Hazard Index or Cumulative Cancer Risk Sample standards.

Quality Assurance and Quality Control

The sample results were reviewed in accordance with Barr's standard operating procedures for organic data review. Sample results greater than the MDL and below the PQL are flagged with a "J" indicating estimated concentrations. The non-detect concentrations are presented as "<MDL" in the data tables. Sample SB-10 (1-2 feet) was analyzed at a 10 times dilution which yielded a J-flagged result at 121 mg/kg for DRO because the result was detected above the MDL and below the PQL. The remaining DRO and PVOC + Naphthalene samples analyzed during this soil investigation were not diluted. Samples SB-11 (2-4 feet), SB-10 (1-2 feet) and SB-6 (1.5-2 feet) had high boiling point hydrocarbons present in the sample.

The method, trip and field blank samples had no detections of target analytes above the laboratory reporting limits. The quality control samples (e.g. laboratory control sample, laboratory control sample duplicate, matrix spike, matrix spike duplicate, surrogate spike, and laboratory duplicate samples) were within the laboratory established limits for accuracy and precision with the following notable exceptions. One laboratory control sample/laboratory control sample duplicate relative percent difference exceeded the laboratory acceptance limit for DRO; however, no results were qualified because the associated spike recoveries displayed acceptable accuracy.

The laboratory analytical data were evaluated for quality assurance/quality control purposes and were determined to be acceptable for the evaluation conducted for this Phase III Investigation. Qualifiers, as appropriate, were added to the data as indicated in the comprehensive data tables.

Phase III Investigation Conclusions

Based on the proposed land use, native soil types, groundwater flow rate, and result comparisons to the WDNR risk-based Industrial, Non-Industrial and Groundwater RCLs, the isolated low concentrations of compounds detected in site soil samples do not appear to present a risk to human health or the environment.

Recommendation

Additional investigation or remedial actions are not necessary to further delineate or remediate the soil impacts encountered by SWL&P. It is recommended that SRC submit a Case Closure Request for this Property for consideration by the WDNR Closure Committee.

Limitations

The scope of this Phase III Investigation was intended to evaluate the areas of contaminated soil identified during construction activities in 2019 and to further assess the Property for the presence of petroleum-related contaminants. Laboratory analysis were performed for those parameters which were identified as potential contaminants prior to conducting this investigation.

Attachments

Table 1	Headspace Screening Summary
Table 2	Soil Analytical Summary – Detected Values Only
Table 3	Soil Analytical Summary - All Results
Figure 1	Property Location Map
Figure 2	Soil Boring Locations
Attachment A	2018 Phase II Investigation Report (with sub-Attachments)
Attachment B	2019 Site Investigation Work Plan
Attachment C	2020 Phase III Investigation Representative Photographs
Attachment D	2020 Phase III Investigation Soil Boring Logs
Attachment E	2020 Phase III Investigation Soil Laboratory Analytical Reports

To: John Sager, Wisconsin Department of Natural Resources
From: Lynette Carney and Christina Sehart, Barr Engineering Co.
Subject: SWL&P Nemadji Substation Phase III Investigation Results
Date: March 26, 2020
Page: 7

References

ASTM, 2009. *D-2488-09a, Standard Practice for Description and Identification of Soils (Visual/Manual Method)* ASTM International, West Conshohocken, PA; 2009.

Clayton, Lee, 1985. *Pleistocene Geology of the Superior Region, Wisconsin*, Wisconsin Geological and Natural History Survey Information Circular 46, Plate 1; 1985.

Gannett Fleming, 2014. *Final Site Investigation and Remedial Action Plan, Calumet Superior LLC Refinery, Superior, Wisconsin, prepared for Calumet Superior LLC; April 30, 2014.*

Tables

Table 1
Headspace Screening Summary
(PID Headspace Readings)
Nemadji Substation Phase III
Investigation Superior, WI

Location Depth (feet)	SB-6	SB-7	SB-8	SB-9	SB-10	SB-11	SB-12	SB-13	SB-14	SB-15	SB-16	SB-17	SB-18	SB-19	SB-20	SB-21	SB-22	SB-23	SB-24	SB-25	SB-26	SB-27	SB-28	SB-29
0-2	0.1 ¹	0.4	0.1	0.3	0.6 ²	0.1	0.1	0.1	0.1	0.1	0.4	0.2	0.7	0.6	0.3	0.4	0.4	0.1	0.6	0.9	1.0	1.2	0.6	0.9
2-4	0.1	0.4	0.4	0.3	0.7	0.3	0.2	0.1	0.1	0.1	0.5	0.3	1.0	0.7	0.4	0.3	0.4	0.1	0.7	1.1	1.0	1.2	0.9	0.8
4-6	0.1	0.4	0.6	0.3	0.6	0.3	0.2	0.1	0.1	0.1	1.2	0.2	1.1	0.7	0.6	0.4	0.6	0.2	0.9	1.2	1.1	2.5	1.1	0.8
6-8	0.2	0.5	0.8	0.4	0.5	0.4	0.4	0.1	0.2	0.2	1.7	0.4	1.1	0.5	0.6	0.4	0.5	0.2	0.9	1.1	1.0	2.5	1.2	1.0
8-10	0.2	0.5	1.1	0.4	0.3	0.6	0.4	0.2	0.3	0.2	1.8	0.3	1.1	0.7	0.6	0.4	0.4	0.3	1.0	1.2	1.1	1.4	1.0	0.9
Completion Depth (feet)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

Soil borings were completed January 6-7, 2020.

Intervals are presented in depth of feet below ground surface. Relative differences in ground surface elevations are not represented. Ground surface elevations are included on individual boring logs in appendices.

Headspace readings are presented in parts per million (ppm) and include background values that range from 0.0 to 0.4 ppm.

Field observations:

¹ Black discoloration, faint odor, trace wood chips and fibers.

² Gray, metallic, vesicular slag like material.

For additional detail regarding discoloration, odor, and sheen, see boring logs.

Table 2
Soil Analytical Data Results - Detections Only
Nemadji Substation Phase III Investigation
Superior, WI

Parameter	Units	Location			SB-6	SB-8	SB-10	SB-11	SB-14	SB-16	SB-25	SB-29
		Wisconsin Groundwater RCLs, DF=2	Wisconsin Not to Exceed Direct Contact Industrial RCLs	Wisconsin Not to Exceed Direct Contact Non-Industrial RCLs	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/07/2020	1/07/2020
		Depth	1.5 - 2 ft	2 - 4 ft	1 - 2 ft	2 - 4 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	2 - 4 ft	
Effective Date		06/01/2018	06/01/2018	06/01/2018								
Exceedance Key		Shade	No Exceedances	No Exceedances								
Volatile Organic Compounds												
Benzene	mg/kg	0.0051	7.07	1.6	0.0399	< 0.0040 U	< 0.0037 U	< 0.0053 U	< 0.0049 U	< 0.0039 U	< 0.0046 U	< 0.0036 U
Naphthalene	mg/kg	0.6582	24.1	5.52	0.166 J	< 0.0663 U	< 0.0615 U	< 0.0884 U	< 0.0812 U	< 0.0652 U	< 0.0759 U	< 0.0600 U
Toluene	mg/kg	1.1072	818	818	0.0512 J	< 0.0173 U	< 0.0160 U	< 0.0230 U	< 0.0212 U	< 0.0170 U	< 0.0198 U	< 0.0156 U
Total Petroleum Hydrocarbons												
Diesel Range Organics, C10-C28	mg/kg				23.6	8.2 J	121 J	19.5 J	6.0 J	26.5	15.5 J	14.0 J
Barr Calculated Comparison - Industrial												
Exceedance Count	no unit		0		0	0	0	0	0	0	0	0
Hazard Index	no unit		≤ 1.0		0.00028	0.00010	0.000096	0.00014	0.00013	0.00010	0.00012	0.000093
Cumulative Cancer Risk	no unit		≤ 1E-0.5		1.30E-08	3.50E-09	3.20E-09	4.60E-09	4.20E-09	3.40E-09	4.00E-09	3.10E-09
Barr Calculated Comparison -Non-Industrial												
Exceedance Count	no unit			0	0	0	0	0	0	0	0	0
Hazard Index	no unit		≤ 1.0		0.0014	0.00051	0.00047	0.00067	0.00062	0.00050	0.00058	0.00046
Cumulative Cancer Risk	no unit		≤ 1E-05		5.60E-08	1.50E-08	1.40E-08	2.00E-08	1.90E-08	1.50E-08	1.70E-08	1.40E-08

J Estimated detected value. Either certain QC criteria were not met or the concentration is between the laboratory's detection and quantitation limits.

U The analyte was analyzed for, but was not detected.

DF Dilution Factor.

RCLs Residual Contaminant Levels.

Table 3
Soil Analytical Data Results - All Results
Nemadji Substation Phase III Investigation
Superior, WI

Parameter	Units	Location			SB-6	SB-6	SB-7	SB-7	SB-8	SB-8	SB-9	SB-10	SB-10	SB-10	SB-11	SB-11	SB-12	SB-13	SB-14	SB-15	SB-16	SB-17	SB-18
		Date	Date	Date	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/07/2020	1/07/2020
		Depth	Depth	Depth	1.5 - 2 ft	5 - 6 ft	2 - 4 ft	6 - 8 ft	2 - 4 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	5 - 6 ft	1 - 2 ft	2 - 4 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	2 - 4 ft
		Wisconsin Groundwater RCLs, DF=2	Wisconsin Not to Exceed Direct Contact Industrial RCLs	Wisconsin Not to Exceed Direct Contact Non-Industrial RCLs																			
Effective Date		12/01/2018	12/01/2018	12/01/2018																			
Exceedance Key		Shade	No Exceedances	No Exceedances																			
General Parameters																							
Moisture	%				24.1	26.4	23.0	27.2	26.6	27.3	27.3	26.4	27.7	23.1	36.3	27.7	23.9	24.7	33.9	35.5	25.4	26.2	24.8
Volatile Organic Compounds																							
1,2,4-Trimethylbenzene	mg/kg	1.3787 (1)	219	219	< 0.0133 U	< 0.0141 U	< 0.0131 U	< 0.0143 U	< 0.0142 U	< 0.0137 U	< 0.0143 U	< 0.0140 U	< 0.0142 U	< 0.0132 U	< 0.0189 U	< 0.0138 U	< 0.0137 U	< 0.0137 U	< 0.0174 U	< 0.0155 U	< 0.0139 U	< 0.0136 U	< 0.0134 U
1,3,5-Trimethylbenzene	mg/kg	1.3787 (1)	182	182	< 0.0106 U	< 0.0112 U	< 0.0104 U	< 0.0114 U	< 0.0113 U	< 0.0109 U	< 0.0114 U	< 0.0112 U	< 0.0113 U	< 0.0105 U	< 0.0150 U	< 0.0110 U	< 0.0109 U	< 0.0109 U	< 0.0138 U	< 0.0124 U	< 0.0111 U	< 0.0109 U	< 0.0107 U
Benzene	mg/kg	0.0051	7.07	1.6	0.0399	< 0.0040 U	< 0.0037 U	< 0.0040 U	< 0.0040 U	< 0.0039 U	< 0.0040 U	< 0.0039 U	< 0.0040 U	< 0.0037 U	< 0.0053 U	< 0.0039 U	< 0.0039 U	< 0.0039 U	< 0.0049 U	< 0.0044 U	< 0.0039 U	< 0.0038 U	< 0.0038 U
Ethyl benzene	mg/kg	1.57	35.4	8.02	< 0.0036 U	< 0.0038 U	< 0.0036 U	< 0.0039 U	< 0.0039 U	< 0.0037 U	< 0.0039 U	< 0.0038 U	< 0.0039 U	< 0.0036 U	< 0.0051 U	< 0.0038 U	< 0.0037 U	< 0.0037 U	< 0.0047 U	< 0.0042 U	< 0.0038 U	< 0.0037 U	< 0.0036 U
Methyl tertiary butyl ether (MTBE)	mg/kg	0.027	282	63.8	< 0.0079 U	< 0.0084 U	< 0.0078 U	< 0.0085 U	< 0.0084 U	< 0.0081 U	< 0.0085 U	< 0.0083 U	< 0.0085 U	< 0.0078 U	< 0.0112 U	< 0.0082 U	< 0.0081 U	< 0.0081 U	< 0.0103 U	< 0.0092 U	< 0.0083 U	< 0.0081 U	< 0.0080 U
Naphthalene	mg/kg	0.6582	24.1	5.52	0.166 J	< 0.0658 U	< 0.0613 U	< 0.0670 U	< 0.0663 U	< 0.0639 U	< 0.0668 U	< 0.0655 U	< 0.0665 U	< 0.0615 U	< 0.0884 U	< 0.0646 U	< 0.0639 U	< 0.0640 U	< 0.0812 U	< 0.0726 U	< 0.0652 U	< 0.0639 U	< 0.0628 U
Toluene	mg/kg	1.1072	818	818	0.0512 J	< 0.0172 U	< 0.0160 U	< 0.0175 U	< 0.0173 U	< 0.0167 U	< 0.0174 U	< 0.0171 U	< 0.0173 U	< 0.0160 U	< 0.0230 U	< 0.0168 U	< 0.0167 U	< 0.0167 U	< 0.0212 U	< 0.0189 U	< 0.0170 U	< 0.0167 U	< 0.0164 U
Xylene, total	mg/kg	3.96	260	260	< 0.0155 U	< 0.0163 U	< 0.0152 U	< 0.0166 U	< 0.0164 U	< 0.0158 U	< 0.0166 U	< 0.0162 U	< 0.0165 U	< 0.0153 U	< 0.0219 U	< 0.0160 U	< 0.0158 U	< 0.0159 U	< 0.0201 U	< 0.0180 U	< 0.0162 U	< 0.0158 U	< 0.0156 U
Total Petroleum Hydrocarbons																							
Diesel Range Organics, C10-C28	mg/kg				23.6	< 4.9 U	< 4.8 U	< 5.1 U	8.2 J	< 4.8 U	< 5.1 U	< 5.3 U	< 5.4 U	121 J	19.5 J	< 5.3 U	< 5.0 U	< 4.8 U	6.0 J	< 5.0 U	26.5	< 5.1 U	< 5.1 U
Barr Calculated Comparison - Industrial																							
Exceedance Count	no unit		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hazard Index	no unit		≤ 1.0		0.00028	0.00010	0.000095	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.000096	0.00014	0.00010	0.00010	0.00010	0.00013	0.00011	0.00010	0.000099	0.000098
Cumulative Cancer Risk	no unit		≤ 1E-05		1.30E-08	3.40E-09	3.20E-09	3.50E-09	3.50E-09	3.30E-09	3.50E-09	3.40E-09	3.50E-09	3.20E-09	4.60E-09	3.40E-09	3.30E-09	3.30E-09	4.20E-09	3.80E-09	3.40E-09	3.30E-09	3.30E-09
Barr Calculated Comparison -Non-Industrial																							
Exceedance Count	no unit			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hazard Index	no unit			≤ 1.0	0.0014	0.00050	0.00047	0.00051	0.00051	0.00049	0.00051	0.00050	0.00051	0.00047	0.00067	0.00049	0.00049	0.00049	0.00062	0.00055	0.00050	0.00049	0.00048
Cumulative Cancer Risk	no unit			≤ 1E-05	5.60E-08	1.50E-08	1.40E-08	1.50E-08	1.50E-08	1.50E-08	1.50E-08	1.50E-08	1.50E-08	1.40E-08	2.00E-08	1.50E-08	1.50E-08	1.50E-08	1.90E-08	1.70E-08	1.50E-08	1.50E-08	1.40E-08

(1) Representing the criteria for combined Trimethylbenzenes.

J Estimated detected value. Either certain QC criteria were not met or the concentration is between the laboratory's detection and quantitation limits.

U The analyte was analyzed for, but was not detected.

Table 3
Soil Analytical Data Results - All Results
Nemadji Substation Phase II Investigation
Superior, WI

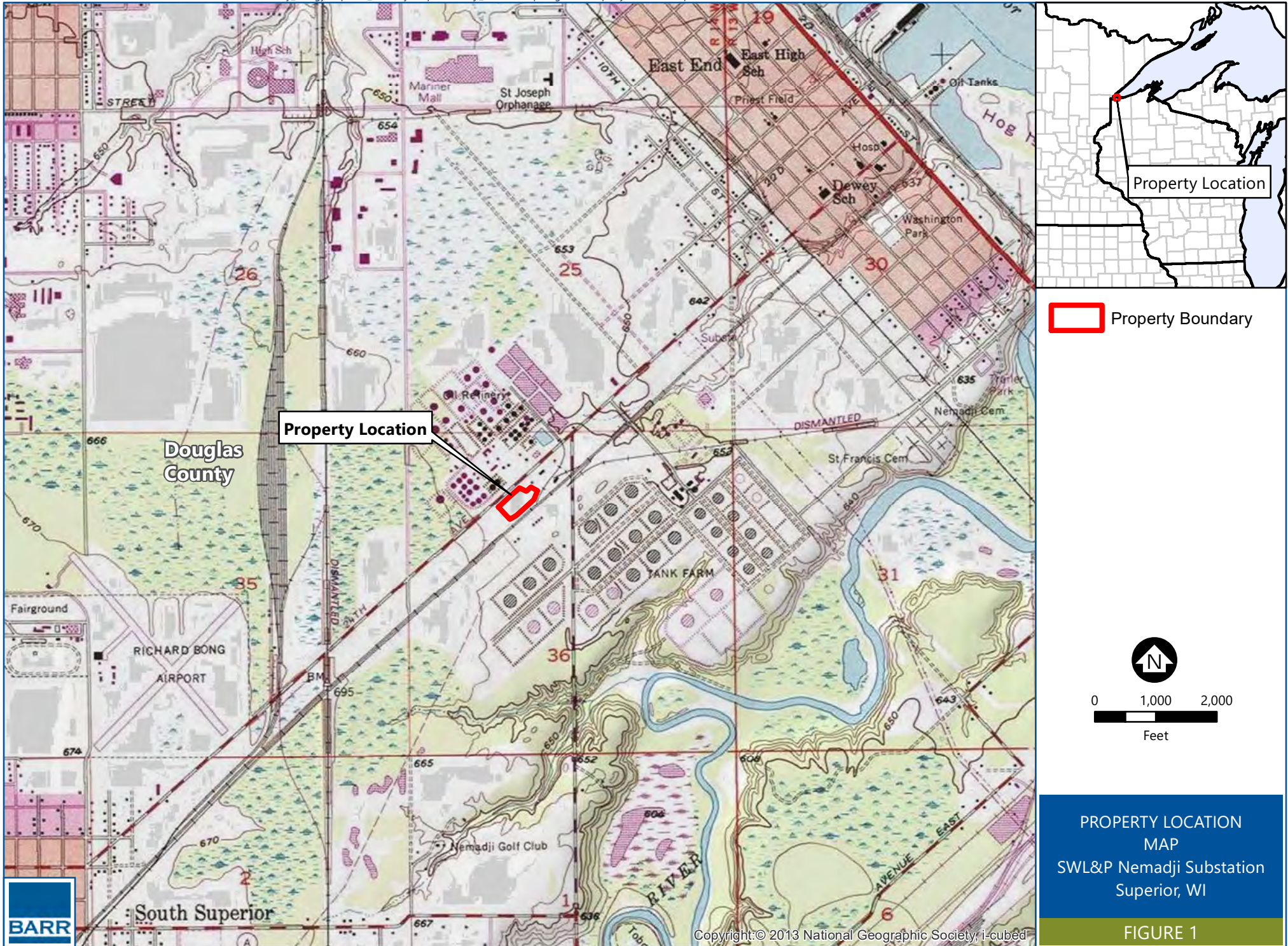
Location		SB-18	SB-19	SB-20	SB-21	SB-21	SB-22	SB-22	SB-23	SB-24	SB-25	SB-26	SB-26	SB-27	SB-27	SB-28	SB-29	SB-29			
Date		1/07/2020	1/07/2020	1/07/2020	1/06/2020	1/06/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020			
Depth		6 - 8 ft	6 - 8 ft	6 - 8 ft	2 - 4 ft	6 - 8 ft	2 - 4 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	2 - 4 ft	6 - 8 ft	2 - 4 ft	6 - 8 ft	6 - 8 ft	2 - 4 ft	6 - 8 ft			
Parameter	Units	Wisconsin Groundwater RCLs, DF=2	Wisconsin Not to Exceed Direct Contact Industrial RCLs	Wisconsin Not to Exceed Direct Contact Non-Industrial RCLs																	
Effective Date		12/01/2018	12/01/2018	12/01/2018																	
Exceedance Key		Shade	No Exceedances	No Exceedances																	
General Parameters																					
Moisture	%				27.2	24.5	25.7	24.8	25.2	24.3	25.2	23.4	23.6	34.5	25.5	29.5	25.8	26.4	27.1	24.0	29.3
Volatile Organic Compounds																					
1,2,4-Trimethylbenzene	mg/kg	1.3787 (1)	219	219	< 0.0138 U	< 0.0138 U	< 0.0132 U	< 0.0129 U	< 0.0136 U	< 0.0130 U	< 0.0132 U	< 0.0133 U	< 0.0132 U	< 0.0162 U	< 0.0139 U	< 0.0138 U	< 0.0131 U	< 0.0133 U	< 0.0131 U	< 0.0128 U	< 0.0137 U
1,3,5-Trimethylbenzene	mg/kg	1.3787 (1)	182	182	< 0.0110 U	< 0.0110 U	< 0.0105 U	< 0.0103 U	< 0.0108 U	< 0.0104 U	< 0.0105 U	< 0.0106 U	< 0.0106 U	< 0.0129 U	< 0.0111 U	< 0.0110 U	< 0.0104 U	< 0.0106 U	< 0.0104 U	< 0.0102 U	< 0.0109 U
Benzene	mg/kg	0.0051	7.07	1.6	< 0.0039 U	< 0.0039 U	< 0.0037 U	< 0.0036 U	< 0.0038 U	< 0.0037 U	< 0.0037 U	< 0.0037 U	< 0.0037 U	< 0.0046 U	< 0.0039 U	< 0.0039 U	< 0.0037 U	< 0.0038 U	< 0.0037 U	< 0.0036 U	< 0.0039 U
Ethyl benzene	mg/kg	1.57	35.4	8.02	< 0.0037 U	< 0.0037 U	< 0.0036 U	< 0.0035 U	< 0.0037 U	< 0.0035 U	< 0.0036 U	< 0.0036 U	< 0.0036 U	< 0.0044 U	< 0.0038 U	< 0.0038 U	< 0.0036 U	< 0.0036 U	< 0.0036 U	< 0.0035 U	< 0.0037 U
Methyl tertiary butyl ether (MTBE)	mg/kg	0.027	282	63.8	< 0.0082 U	< 0.0082 U	< 0.0078 U	< 0.0077 U	< 0.0081 U	< 0.0077 U	< 0.0078 U	< 0.0079 U	< 0.0079 U	< 0.0097 U	< 0.0083 U	< 0.0082 U	< 0.0078 U	< 0.0079 U	< 0.0078 U	< 0.0076 U	< 0.0082 U
Naphthalene	mg/kg	0.6582	24.1	5.52	< 0.0644 U	< 0.0644 U	< 0.0617 U	< 0.0605 U	< 0.0636 U	< 0.0609 U	< 0.0617 U	< 0.0621 U	< 0.0620 U	< 0.0759 U	< 0.0649 U	< 0.0647 U	< 0.0613 U	< 0.0624 U	< 0.0612 U	< 0.0600 U	< 0.0641 U
Toluene	mg/kg	1.1072	818	818	< 0.0168 U	< 0.0168 U	< 0.0161 U	< 0.0158 U	< 0.0166 U	< 0.0159 U	< 0.0161 U	< 0.0162 U	< 0.0162 U	< 0.0198 U	< 0.0169 U	< 0.0169 U	< 0.0160 U	< 0.0163 U	< 0.0160 U	< 0.0156 U	< 0.0167 U
Xylene, total	mg/kg	3.96	260	260	< 0.0160 U	< 0.0160 U	< 0.0153 U	< 0.0150 U	< 0.0158 U	< 0.0151 U	< 0.0153 U	< 0.0154 U	< 0.0154 U	< 0.0188 U	< 0.0161 U	< 0.0160 U	< 0.0152 U	< 0.0155 U	< 0.0152 U	< 0.0149 U	< 0.0159 U
Total Petroleum Hydrocarbons																					
Diesel Range Organics, C10-C28	mg/kg				< 5.1 U	< 5.0 U	< 4.9 U	< 6.0 U	< 4.9 U	< 4.5 U	< 5.6 U	< 4.4 U	< 4.9 U	15.5 J	< 4.8 U	< 5.3 U	< 5.0 U	< 4.8 U	< 5.1 U	14.0 J	< 5.3 U
Barr Calculated Comparison - Industrial																					
Exceedance Count	no unit		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hazard Index	no unit		≤ 1.0		0.00010	0.00010	0.000096	0.000094	0.000099	0.000095	0.000096	0.000097	0.000096	0.00012	0.00010	0.00010	0.000095	0.000097	0.000095	0.000093	0.00010
Cumulative Cancer Risk	no unit		≤ 1E-05		3.40E-09	3.40E-09	3.20E-09	3.10E-09	3.30E-09	3.20E-09	3.20E-09	3.20E-09	3.20E-09	4.00E-09	3.40E-09	3.40E-09	3.20E-09	3.30E-09	3.20E-09	3.10E-09	3.30E-09
Barr Calculated Comparison -Non-Industrial																					
Exceedance Count	no unit			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hazard Index	no unit			≤ 1.0	0.00049	0.00049	0.00047	0.00046	0.00049	0.00047	0.00047	0.00047	0.00047	0.00058	0.00050	0.00049	0.00047	0.00048	0.00047	0.00046	0.00049
Cumulative Cancer Risk	no unit			≤ 1E-05	1.50E-08	1.50E-08	1.40E-08	1.40E-08	1.40E-08	1.40E-08	1.40E-08	1.40E-08	1.40E-08	1.70E-08	1.50E-08	1.50E-08	1.40E-08	1.40E-08	1.40E-08	1.40E-08	1.50E-08

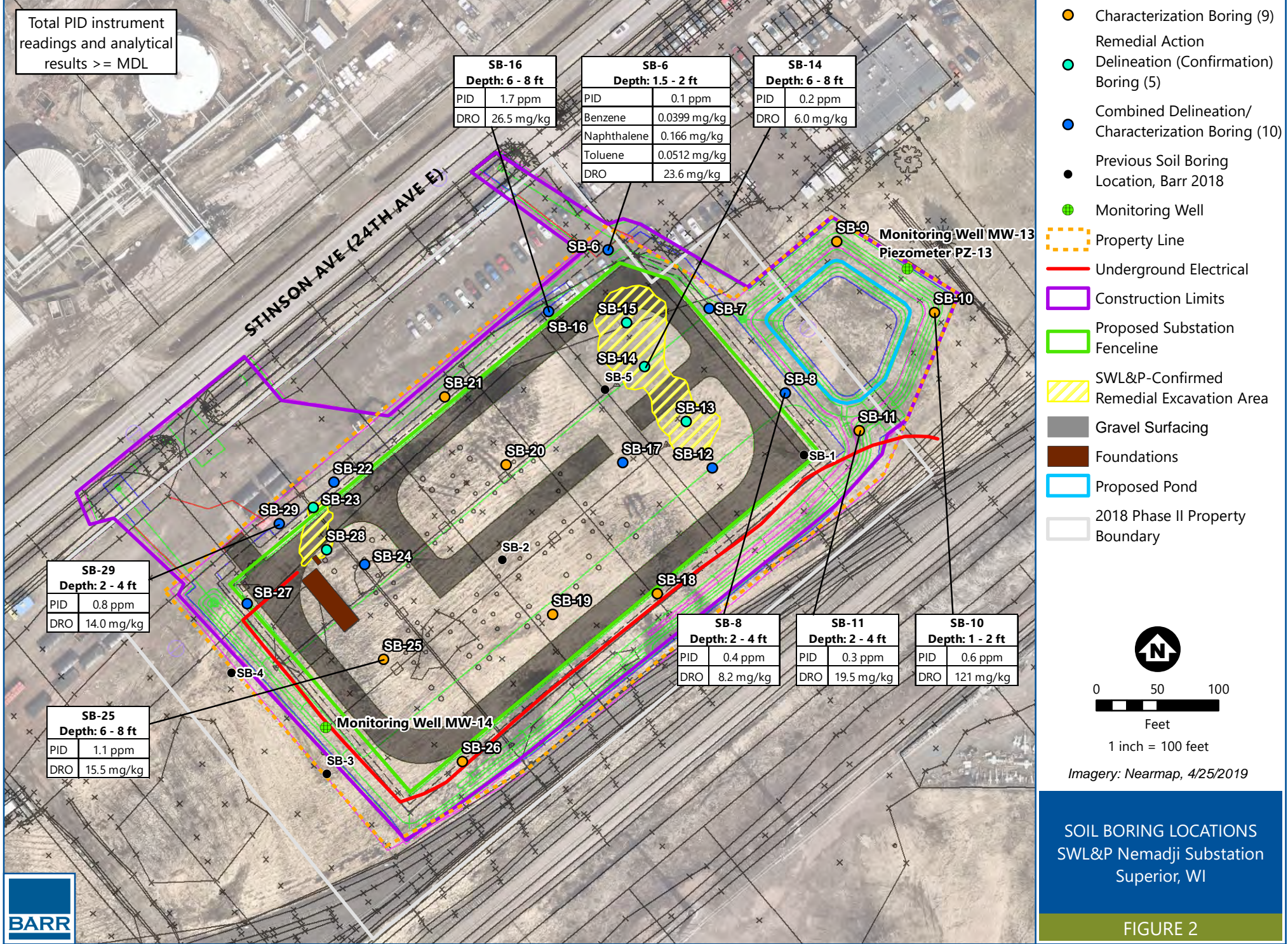
(1) Representing the criteria for combined Trimethylbenzenes.

J Estimated detected value. Either certain QC criteria were not met or the concentration is between the laboratory's detection and quantitation limits.

U The analyte was analyzed for, but was not detected.

Figures





SOIL BORING LOCATIONS
SWL&P Nemadji Substation
Superior, WI

FIGURE 2

Attachment A

Limited Phase II Investigation Results – Future ALLETE Substation Site

Technical Memorandum

To: Mark Darby, Superior Refining Company, LLC (Husky Energy)
From: Lynette Carney and Martin Bevis, Barr Engineering Co.
Subject: Phase II Investigation Results – Future ALLETE Substation Site
Date: August 24, 2018
Project: 49161423.00

Project Objectives

Barr Engineering Co. (Barr) was retained by Superior Refining Company, LLC (a subsidiary of Husky Energy Inc.) to complete a Phase II investigation of a property owned by Husky Energy Inc. There is historical indication that the property was formerly used as a parking lot and equipment laydown area. Husky intends to lease the Property to ALLETE/Minnesota Power/Superior Water, Light and Power for construction of an electrical substation. The property is located in Section 36 of Township 49 North, Range 14 West in Superior, Douglas County, Wisconsin (Property). The Property location is shown on Figure 1.

In May 2018, Barr performed a Phase I Environmental Site Assessment (ESA) Report (Barr, 2018). No recognized environmental conditions (RECs) were identified, though the report included findings of nine potential sources of hazardous substances or petroleum products near the Property:

1. Adjacent Husky Refinery (North);
2. Adjacent Husky Refinery fire on April 26, 2018;
3. Adjacent Enbridge Energy Terminal site (South);
4. Adjoining Husky Refinery laboratory (East);
5. Adjoining and upgradient railroads (West and South);
6. A small amount of miscellaneous historical debris on the Property;
7. Existing electrical power pole transformers;
8. Surrounding industrial property use and equipment storage on Property; and
9. Various petroleum pipelines located adjacent to the Property.

The objectives of the Phase II investigation were to: characterize soil and groundwater to identify potential impacts and assess baseline conditions at the property prior to leasing.

To: Mark Darby, Superior Refining Company, LLC (Husky Energy)
From: Lynette Carney and Martin Bevis, Barr Engineering Co.
Subject: Phase II Investigation Results – Future ALLETE Substation Site
Date: August 24, 2018
Page: 2

This report summarizes the results, opinions, and conclusions of the Phase II investigation. Descriptions of the Property background, investigation approach, sample locations and analytical results are summarized below. Additional information is included in the Phase I ESA Report (Barr, 2018).

Background Information

The Property consists of approximately 5.18 acres located in an area between the operating Husky Refinery and a large Enbridge pipeline terminal facility as shown on Figure 1. The Property will be leased to ALLETE/Minnesota Power/Superior Water, Light and Power for construction of an electrical substation. Much of the following Property information was summarized from information presented in Barr's Phase I ESA Report (Barr, 2018):

Topography of the Property is relatively flat, with a gentle slope down to the east. The property is underlain by clayey till and glaciolacustrine sediment planed by waves of proglacial Lake Duluth (Clayton, 1985). Based on groundwater monitoring at the refinery, which includes groundwater monitoring wells located on and near the Property, shallow groundwater flow direction at the Property is to the northeast towards Newton Creek, ultimately discharging into Lake Superior approximately 1.7 miles northeast of the Property. The depth to shallow groundwater in MW-14, which is located on the Property, is typically less than two feet below the ground surface (Gannett Fleming, 2017). Husky's monitoring wells on and near the Property are shown on Figure 2.

No buildings are currently located on the Property. The Property is accessible via Stinson Avenue (24th Avenue East) and an approximately 80-foot-wide gravel parking lot/equipment laydown area is located along the northwest Property boundary. No drinking water or sanitary service is provided to the Property. Historically the Property has been used as a storage/laydown area associated with the adjacent refinery. A warehouse was previously located on the Property and has since been demolished.

The current use of adjoining properties includes Husky Refinery to the north/northwest, unoccupied grassy/forested land and rail lines to the southwest, Husky Refinery laboratory building and grassy area to the east/northeast, and rail lines and Enbridge petroleum pipeline terminal facility to the south/southeast.

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Investigation Approach and Summary of Activities

A Phase II Investigation was completed to assess for soil and groundwater impacts on the Property and to establish baseline environmental data. On June 22 and 23, 2018, Barr and its subcontractor, Twin Ports Testing, used a Geoprobe to advance five direct-push borings (SB-1 through SB-5) to depths of 20 feet below ground surface (bgs) at the locations shown on Figure 2. The borings locations were selected to provide representative coverage of the Property.

At each of the boring locations, one shallow soil sample was collected from depths between 0 and 3 feet bgs and one deeper sample was collected from intervals between 6 and 13 feet bgs. Soil samples were field-screened for organic vapors using headspace sample screening procedures described in our Standard Operating Procedures (included in Attachment A). Additional evidence of contamination such as staining, odor, discoloration, and sheen were evaluated and/or documented in the field. Soils were described according to ASTM D-2488, *Standard Practice for Description and Identification of Soils (Visual/Manual Method)*. Boring locations were surveyed using global positioning system (GPS) methods.

Temporary monitoring wells, with five-foot PVC well screens, were placed into three borings completed on June 21 (SB-1, SB-2, and SB-3). The wells were left in place over night to allow time for groundwater to equilibrate.

Barr submitted ten soil samples to Pace Analytical Laboratories in Minneapolis, MN. The soil samples were analyzed for the following compounds:

- Resource Conservation and Recovery Act (RCRA) list of 8 metals by methods 6010D and 7471B;
- polycyclic aromatic hydrocarbons (PAHs) by method 8270D; and
- volatile organic compounds (VOCs) by method 8260.

Due to poor recovery, only one groundwater sample (SB-3) was collected and submitted for analysis of VOCs by method 8260B and PAHs by method 8270D.

Results

Representative photographs of the boring locations and soil encountered at each location are included as Attachment B. Logs of each soil boring are included as Attachment C. Boring stratigraphy generally consisted of six inches or less of organic-rich topsoil overlying lean clay. The clay was typically of medium plasticity, stiff consistency, moist, red color, and glaciolacustrine origin. There was no staining, odor, discoloration, sheen or other indications of contamination observed in the field with the exception of SB-5, where the top six inches of soil

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was composed of 70% angular shiny black sand and gravel – apparent weathered bituminous pavement. Headspace sample organic vapor screening in the field produced headspace readings less than 0.6 parts per million (ppm) across the site, with the exception of the top six inches of SB-5 (described above), where headspace results were 1.2 ppm.

The day following temporary monitoring well installation, approximately 3.5 feet of water was found in SB-1; SB-2 was dry, and SB-3 contained approximately 11 feet of water. Because SB-1 and SB-3 were located in areas of the site with shallow perched water on the ground surface while SB-2 was located in a portion of the site with dry ground, it is possible that water encountered in soil borings SB-1 and SB-3 may have been influenced by perched surface water draining into the open boring holes overnight. Although a small amount of water was measured in the SB-1 borehole, an insufficient amount of water remain for sampling after purging only one well volume. Therefore, a groundwater sample was only collected from SB-3.

Tables 1 and 2 summarize the soil samples collected, analyses performed, and analytical results. Table 1 presents the analytical results for detections only or compounds detected at concentrations equal to or greater than laboratory method detection limits (MDLs). Included for comparison are the Wisconsin Department of Natural Resources (WDNR) Remediation & Redevelopment Program Residual Contaminant Levels (RCLs) developed by the WDNR according to the procedures in NR 720.10 and NR 720.12, Wis. Adm. Code. Non-industrial and industrial RCLs are included for comparison.

Table 2 presents all of the analytical results, including those results below the MDLs. Table 3 presents all of the groundwater analytical results compared to enforcement standard (ES) and Preventative Action Limit (PAL) criteria in NR 140.10 Wis. Adm. Code. Copies of the laboratory analytical reports are included in Attachment D.

Soil Analytical Results

Metals Results - Five of the eight RCRA metals were detected in each of the soil samples (Table 1). Arsenic was the only metal detected above the industrial RCLs; and arsenic concentrations exceeded industrial RCLs consistently in all soil samples, except SB-3_8-9 ft., where the concentration was below industrial criteria. Mercury, barium, chromium, and lead were found at concentrations below non-industrial RCLs in each sample. Cadmium, selenium and silver were not found above laboratory quantitation limits in any of the samples.

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PAHs - Each of the PAHs were detected in SB-5_0-1 ft., but only the concentration of benzo(a)pyrene was in exceedance of non-industrial RCLs (Table 1). The only other detection of PAHs above laboratory quantitation limits was Benzo(b)fluoranthene in SB-3_8-9 ft.

VOCs - There were no VOCs detected above laboratory quantitation limits. Toluene was detected in SB-5_0-1 ft., but the concentration was below the quantitation limit.

Cumulative - The combined detections for each sample interval were also compared to the WDNR cumulative hazard index. No samples exceeded the Hazard Index or Cumulative Cancer Risk Sample standards. Sample SB-5 from 0-1 ft. was the only interval with any exceedances and had an Exceedance Count of one.

Groundwater Analytical Results

The only analyte detected in groundwater from SB-3 was toluene. This detection was below the WDNR NR 140 ES and PAL. Previous annual groundwater monitoring at wells MW-14 (located on the Property near SB-3) and MW-13/PZ-13 (located just northeast of Property) did not identify detectable concentrations of petroleum VOCs/naphthalene over the past 3 years (Gannett Fleming, 2016, 2017, 2018). As previously identified, it is possible that perched surface water observed at the time of sample collection may have migrated into SB-3.

Conclusions

Field screening at the five direct-push boring locations did not identify petroleum impacts or other concerns in soil. Soils generally consisted of lean, red, glaciolacustrine clay overlain by a few inches of organic topsoil.

Perched surface water is believed to have mixed with the groundwater encountered in SB-3. Only one VOC was detected in the groundwater sample from SB-3 (toluene), but the concentration was below the WDNR ES and PAL. This is consistent with the favorable groundwater monitoring results over the past three years from existing groundwater monitoring wells located on and near the subject Property and Refinery.

With the exception of arsenic, soil concentrations for RCRA metals and PAHs were below WDNR non-industrial RCLs. Arsenic was found at concentrations above the industrial RCLs in nine of the ten soil samples collected. However, given the documented baseline for arsenic in the Superior, Wisconsin area, the arsenic concentrations are believed to be naturally occurring and were universally below WDNR background threshold values (BTVs) as published and defined in their

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RCL Spreadsheet and Publication PUB-RR-890. The three other metals detected above laboratory quantitation limits in each of the soil samples (i.e., barium, chromium, and lead) were found at concentrations below the non-industrial RCLs and below the WDNR background threshold values, with the exception of the result from SB-5 0-1 ft., where asphalt/fill soils were encountered at the surface. Metals detected in soil at the Property are therefore unlikely to be the result of past property uses.

In addition to chromium and lead concentrations above WDNR background threshold values, results from SB-5 0-1 ft. included multiple low-level concentration of PAHs, including a concentration of benzo(a)pyrene in exceedance of non-industrial RCLs; and a trace concentration of toluene. This sample contained pieces of apparent weathered asphalt. The chromium, lead, PAHs, and toluene detected at SB-5_0-1 ft. likely derive from the apparent weathered asphalt contained in the sample, not the underlying soil. No other samples at the property exhibited similar elevated analyte concentrations, including other surface samples and the deeper sample collected from the same boring (SB-5_8-9). Therefore, compounds associated with the apparent weathered asphalt do not appear to have leached into underlying soil or to have been distributed across the site.

Trace concentrations of PAHs were detected in SB-1 from 2-3 ft. and SB-3 from 8-9 ft. A trace concentration of toluene in groundwater was detected in soil boring SB-3, which was screened from 14.5-19.5 ft. bgs. The other PAH and VOC concentrations detected were below the RCLs for soil and the ES and PAL for groundwater. Based on WDNR risk-based industrial and non-industrial RCLs, the isolated low concentrations do not present a risk for human health and the environment.

Limitations

The scope of this Phase II investigation was intended to investigate the potential for the presence of specific contaminants at representative locations. Laboratory analysis was performed for those parameters which were identified as potential contaminants prior to conducting this investigation.

Attachments

Table 1	Soil Analytical Summary – Detected Values Only
Table 2	Soil Analytical Summary - All Results
Table 3	Groundwater Analytical Summary

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Figure 1 Property Location Map

Figure 2 Soil Boring Locations

Attachment A Standard Operating Procedures

Attachment B Representative Photographs

Attachment C Soil Boring Logs

Attachment D Soil and Groundwater Laboratory Analytical Reports

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Tables

Table 1
Soil Analytical Data Summary Detections Only
Husky Energy Property- Future Substation Site
Superior, WI

Parameter	Units	Location				SB-1	SB-1	SB-2	SB-2	SB-3	SB-3	SB-4	SB-4	SB-5	SB-5
		Wisconsin Not to Exceed Industrial RCLs	Wisconsin Not to Exceed Non-Industrial RCLs	WDNR Background Threshold Values	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date
		06/01/2018	06/01/2018	06/01/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/22/2018	6/22/2018	6/22/2018	6/22/2018	6/22/2018
Depth	2 - 3 ft	12 - 13 ft	0 - 1 ft	6 - 7 ft	0 - 2 ft	8 - 9 ft	0 - 2 ft	6 - 7 ft	0 - 1 ft	8 - 9 ft	0 - 1 ft	8 - 9 ft	0 - 1 ft	8 - 9 ft	
Effective Date		06/01/2018	06/01/2018	06/01/2018											
Exceedance Key		Bold	<u>Underline</u>	Reference Only											
General Parameters															
Moisture	%				27.6	35.3	20.3	24.5	24.5	31.6	26.7	29.4	23.3	28.1	
Metals															
Mercury	mg/kg	3.13	3.13		0.023 j	0.026 j	0.022 j	0.020 j	0.026 j	0.021 j	0.023 j	0.021 j	0.10	0.017 j	
Arsenic	mg/kg	3	<u>0.677</u>	8	3.1	3.8	3.0	3.3	3.5	2.8	3.0	3.0	5.1 j	3.4	
Barium	mg/kg	100000	15300	364	245	193	145	150	174	176	191	160	287	173	
Cadmium	mg/kg	985	71.1	1	--	--	--	--	--	0.11 j	--	0.097 j	0.56 j	--	
Chromium	mg/kg	100000 CR3	100000 CR3	44	49.6	42.9	37.0	39.5	41.7	42.6	48.6	39.4	1850	42.0	
Lead	mg/kg	800	400	52	10.5	9.5	7.6	8.1	9.0	7.8	9.1	7.7	88.2	8.4	
Selenium	mg/kg	5840	391		0.56 j	--	--	--	--	--	--	--	--	--	
Silver	mg/kg	5840	391		--	--	--	--	--	--	--	--	1.1 j	--	
Semivolatile Organic Compounds															
Acenaphthene	ug/kg	45200000	3590000		--	--	--	--	--	--	--	--	6.9	--	
Acenaphthylene	ug/kg				--	--	--	--	--	--	--	--	3.4	--	
Anthracene	ug/kg	100000000	17900000		--	--	--	--	--	--	--	--	11.0	--	
Benz(a)anthracene	ug/kg	20800	1140		--	--	--	--	--	--	--	--	77.8	--	
Benzo(a)pyrene	ug/kg	2110	<u>115</u>		--	--	--	--	--	1.2 j	--	--	<u>128</u>	--	
Benzo(b)fluoranthene	ug/kg	21100	1150		1.1 j	--	--	--	--	2.2	--	--	162	--	
Benzo(g,h,i)perylene	ug/kg				--	--	--	--	--	2.3 j	--	--	116	--	
Benzo(k)fluoranthene	ug/kg	211000	11500		--	--	--	--	--	2.2 j	--	--	55.7	--	
Chrysene	ug/kg	2110000	115000		--	--	--	--	--	--	--	--	98.1	--	
Dibenz(a,h)anthracene	ug/kg	2110	115		--	--	--	--	--	2.2 j	--	--	32.5	--	
Fluoranthene	ug/kg	30100000	2390000		1.8 j	--	--	--	--	1.9 j	--	--	90.4	--	
Fluorene	ug/kg	30100000	2390000		--	--	--	--	--	--	--	--	2.5	--	
Indeno(1,2,3-cd)pyrene	ug/kg	21100	1150		--	--	--	--	--	2.2 j	--	--	94.4	--	
Naphthalene	ug/kg	24100	5520		--	--	--	--	--	--	--	--	4.3	--	
Phenanthrene	ug/kg				--	--	--	--	--	--	--	--	39.1	--	
Pyrene	ug/kg	22600000	1790000		--	--	--	--	--	--	--	--	75.2	--	
Volatile Organic Compounds **															
Toluene	ug/kg	818000	818000		--	--	--	--	--	--	--	--	38.8 j	--	
Barr Calculated Comparison - Non-Industrial															
Exceedance Count	no unit	0	<u>0</u>		0	0	0	0	0	0	0	0	1	0	

Note

** Non-detect VOC compounds reported on a wet weight basis per WIDNR requirements.

Table 2
Soil Analytical Data Summary
Husky Energy Property- Future Substation Site
Superior, WI

Parameter	Units	Location				SB-1	SB-1	SB-2	SB-2	SB-3	SB-3	SB-4	SB-4	SB-5	SB-5
		Wisconsin Not to Exceed Industrial RCLs	Wisconsin Not to Exceed Non-Industrial RCLs	WDNR Background Threshold Values	Date	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/22/2018	6/22/2018	6/22/2018	6/22/2018
		Depth	2 - 3 ft	12 - 13 ft	0 - 1 ft	6 - 7 ft	0 - 2 ft	8 - 9 ft	0 - 2 ft	6 - 7 ft	0 - 1 ft	8 - 9 ft			
Effective Date		06/01/2018	06/01/2018	06/01/2018											
Exceedance Key		Bold	<u>Underline</u>	Reference Only											
General Parameters															
Moisture	%				27.6	35.3	20.3	24.5	24.5	31.6	26.7	29.4	23.3	28.1	
Metals															
Mercury	mg/kg	3.13	3.13		0.023 j	0.026 j	0.022 j	0.020 j	0.026 j	0.021 j	0.023 j	0.021 j	0.10	0.017 j	
Arsenic	mg/kg	3	<u>0.677</u>	8	3.1	3.8	3.0	3.3	3.5	2.8	3.0	3.0	5.1 j	3.4	
Barium	mg/kg	100000	15300	364	245	193	145	150	174	176	191	160	287	173	
Cadmium	mg/kg	985	71.1	1	< 0.075	< 0.082	< 0.065	< 0.070	< 0.069	0.11 j	< 0.071	0.097 j	0.56 j	< 0.073	
Chromium	mg/kg	100000 CR3	100000 CR3	44	49.6	42.9	37.0	39.5	41.7	42.6	48.6	39.4	1850	42.0	
Lead	mg/kg	800	400	52	10.5	9.5	7.6	8.1	9.0	7.8	9.1	7.7	88.2	8.4	
Selenium	mg/kg	5840	391		0.56 j*	< 0.61	< 0.49	< 0.52	< 0.51	< 0.58	< 0.53	< 0.56	< 5.2	< 0.54	
Silver	mg/kg	5840	391		< 0.11	< 0.12	< 0.098	< 0.11	< 0.10	< 0.12	< 0.11	< 0.11	1.1 j	< 0.11	
Semivolatile Organic Compounds															
Acenaphthene	ug/kg	45200000	3590000		< 0.56	< 0.63	< 0.51	< 0.54	< 0.54	< 0.60	< 0.56	< 0.58	6.9	< 0.57	
Acenaphthylene	ug/kg				< 0.68	< 0.76	< 0.62	< 0.66	< 0.65	< 0.72	< 0.67	< 0.70	3.4	< 0.69	
Anthracene	ug/kg	100000000	17900000		< 0.65	< 0.72	< 0.59	< 0.62	< 0.62	< 0.68	< 0.64	< 0.66	11.0	< 0.65	
Benz(a)anthracene	ug/kg	20800	1140		< 1.5	< 1.7	< 1.4	< 1.4	< 1.4	< 1.6	< 1.5	< 1.5	77.8	< 1.5	
Benzo(a)pyrene	ug/kg	2110	<u>115</u>		< 0.95	< 1.1	< 0.86	< 0.91	< 0.91	1.2 j	< 0.94	< 0.97	<u>128</u>	< 0.95	
Benzo(b)fluoranthene	ug/kg	21100	1150		1.1 j	< 0.57	< 0.47	< 0.49	< 0.49	2.2	< 0.51	< 0.53	162	< 0.52	
Benzo(g,h,i)perylene	ug/kg				< 0.87	< 0.97	< 0.79	< 0.84	< 0.83	2.3 j	< 0.86	< 0.90	116	< 0.88	
Benzo(k)fluoranthene	ug/kg	211000	11500		< 1.2	< 1.3	< 1.1	< 1.1	< 1.1	2.2 j	< 1.2	< 1.2	55.7	< 1.2	
Chrysene	ug/kg	2110000	115000		< 1.9	< 2.1	< 1.7	< 1.8	< 1.8	< 2.0	< 1.9	< 1.9	98.1	< 1.9	
Dibenz(a,h)anthracene	ug/kg	2110	115		< 0.64	< 0.71	< 0.58	< 0.61	< 0.61	2.2 j	< 0.63	< 0.65	32.5	< 0.64	
Fluoranthene	ug/kg	30100000	2390000		1.8 j	< 0.66	< 0.54	< 0.57	< 0.56	1.9 j	< 0.58	< 0.61	90.4	< 0.59	
Fluorene	ug/kg	30100000	2390000		< 0.43	< 0.48	< 0.39	< 0.41	< 0.41	< 0.46	< 0.43	< 0.44	2.5	< 0.43	
Indeno(1,2,3-cd)pyrene	ug/kg	21100	1150		< 0.93	< 1.0	< 0.84	< 0.89	< 0.88	2.2 j	< 0.91	< 0.95	94.4	< 0.93	
Naphthalene	ug/kg	24100	5520		< 1.1	< 1.2	< 0.97	< 1.0	< 1.0	< 1.1	< 1.1	< 1.1	4.3	< 1.1	
Phenanthrene	ug/kg				< 2.7	< 3.0	< 2.4	< 2.5	< 2.5	< 2.8	< 2.6	< 2.7	39.1	< 2.7	
Pyrene	ug/kg	22600000	1790000		< 2.1	< 2.4	< 1.9	< 2.0	< 2.0	< 2.2	< 2.1	< 2.2	75.2	< 2.1	

**Table 2
Soil Analytical Data Summary
Husky Energy Property- Future Substation Site
Superior, WI**

Parameter	Units	Location		WDNR Background Threshold Values	SB-1	SB-1	SB-2	SB-2	SB-3	SB-3	SB-4	SB-4	SB-5	SB-5
		Date	Date		Date	Date	Date	Date	Date	Date	Date	Date		
		6/21/2018	6/21/2018		6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/22/2018	6/22/2018	6/22/2018	6/22/2018	
Depth	2 - 3 ft	12 - 13 ft	0 - 1 ft	6 - 7 ft	0 - 2 ft	8 - 9 ft	0 - 2 ft	6 - 7 ft	0 - 1 ft	8 - 9 ft				
Wisconsin Not to Exceed Industrial RCLs		06/01/2018	06/01/2018	06/01/2018										
Effective Date		06/01/2018	<u>06/01/2018</u>	Reference Only										
Exceedance Key		Bold	<u>Underline</u>											
Volatile Organic Compounds **														
1,1,1-Trichloroethane	ug/kg	640000	640000		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,1,2,2-Tetrachloroethane	ug/kg	3600	810		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,1,2-Trichloroethane	ug/kg	7010	1590		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,1-Dichloroethane	ug/kg	22200	5060		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,1-Dichloroethylene	ug/kg	1190000	320000		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,2-Dichloroethane	ug/kg	2870	652		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,2-Dichloroethylene, cis	ug/kg	2340000	156000		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,2-Dichloroethylene, trans	ug/kg	1850000	1560000		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,2-Dichloropropane	ug/kg	15000	3400		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,3-Dichloropropene, cis	ug/kg	1210000	1210000		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,3-Dichloropropene, trans	ug/kg	1510000	1510000		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
2-Hexanone	ug/kg	1760000	237000		< 52.0	< 52.0	< 52.0	< 52.0	< 52.0	< 52.0	< 52.0	< 52.0	< 52.0	< 52.0
Acetone	ug/kg	10000000	6340000		< 77.8	< 77.8	< 77.8	< 77.8	< 77.8	< 77.8	< 77.8	< 77.8	< 77.8	< 77.8
Benzene	ug/kg	7070	1600		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Bromodichloromethane	ug/kg	1830	418		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Bromoform	ug/kg	113000	25400		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Bromomethane	ug/kg	43000	9600		< 69.9	< 69.9	< 69.9	< 69.9	< 69.9	< 69.9	< 69.9	< 69.9	< 69.9	< 69.9
Carbon disulfide	ug/kg	738000	738000		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Carbon tetrachloride	ug/kg	4030	916		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Chlorobenzene	ug/kg	761000	370000		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Chlorodibromomethane	ug/kg	38900	8280		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Chloroethane	ug/kg	2120000	2120000		< 67.0	< 67.0	< 67.0	< 67.0	< 67.0	< 67.0	< 67.0	< 67.0	< 67.0	< 67.0
Chloroform	ug/kg	1980	454		< 46.4	< 46.4	< 46.4	< 46.4	< 46.4	< 46.4	< 46.4	< 46.4	< 46.4	< 46.4
Chloromethane	ug/kg	669000	159000		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Ethyl benzene	ug/kg	35400	8020		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Methyl ethyl ketone (2-butanone)	ug/kg	28400000	28400000		< 107	< 107	< 107	< 107	< 107	< 107	< 107	< 107	< 107	< 107
Methyl isobutyl ketone (MIBK)	ug/kg	3360000	3360000		< 41.1	< 41.1	< 41.1	< 41.1	< 41.1	< 41.1	< 41.1	< 41.1	< 41.1	< 41.1
Methyl tertiary butyl ether (MTBE)	ug/kg	282000	63800		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Methylene chloride	ug/kg	1150000	61800		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Styrene	ug/kg	867000	867000		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Tetrachloroethylene	ug/kg	145000	33000		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Toluene	ug/kg	818000	818000		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	38.8 j	< 25.0
Trichloroethylene (TCE)	ug/kg	8410	1300		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Vinyl chloride	ug/kg	2080	67		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Xylene, m & p	ug/kg	260000 XYL	260000 XYL		< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0
Xylene, o	ug/kg	434000	434000		< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Xylene, total (Barr Calculation)	ug/kg	260000	260000		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barr Calculated Comparison - Industrial														
Exceedance Count	no unit	0	0		0	0	0	0	0	0	0	0	0	0
Hazard Index	no unit	≤ 1.0	≤ 1.0		0.0004	0.0004	0.0003	0.0003	0.0004	0.0003	0.0003	0.0003	0.1124	0.0011
Cumulative Cancer Risk	no unit	≤ 1E-0.5	≤ 1E-0.5		5.2E-11	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.8E-09	0.0E+00	0.0E+00	9.2E-08	0.0E+00
Barr Calculated Comparison - Non-Industrial														
Exceedance Count	no unit	0	0		0	0	0	0	0	0	0	0	1	0
Hazard Index	no unit	≤ 1.0	≤ 1.0		0.0029	0.0017	0.0014	0.0013	0.0017	0.0014	0.0015	0.0013	0.2342	0.0003
Cumulative Cancer Risk	no unit	≤ 1E-0.5	≤ 1E-0.5		9.6E-10	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.4E-08	0.0E+00	0.0E+00	1.7E-06	0.0E+00

Note

** Non-detect VOC compounds reported on a wet weight basis per WIDNR requirements.

**Table 3
Groundwater Analytical Data Summary
Husky Energy Property- Future Substation Site
Superior, WI**

		Location	SB-3
		Date	6/22/2018
		Depth	14.5 - 19.5 ft
		Sample Type	N
Parameter	Units	Wisconsin Groundwater Public Health Enforcement Standards	Wisconsin Groundwater Preventive Action Limits
Effective Date		07/01/2015	07/01/2015
Exceedance Key		No Exceed	No Exceed
Semivolatile Organic Compounds			
Acenaphthene	ug/l		< 0.0043
Acenaphthylene	ug/l		< 0.0063
Anthracene	ug/l	3000	< 0.0083
Benz(a)anthracene	ug/l		< 0.0053
Benzo(a)pyrene	ug/l	0.2	< 0.0054
Benzo(b)fluoranthene	ug/l	0.2	< 0.017
Benzo(g,h,i)perylene	ug/l		< 0.013
Benzo(k)fluoranthene	ug/l		< 0.014
Chrysene	ug/l	0.2	< 0.012
Dibenz(a,h)anthracene	ug/l		< 0.012
Fluoranthene	ug/l	400	< 0.025
Fluorene	ug/l	400	< 0.0080
Indeno(1,2,3-cd)pyrene	ug/l		< 0.018
Naphthalene	ug/l	100	< 0.0092
Phenanthrene	ug/l		< 0.014
Pyrene	ug/l	250	< 0.020
Volatile Organic Compounds			
1,1,1,2-Tetrachloroethane	ug/l	70	< 0.20
1,1,1-Trichloroethane	ug/l	200	< 0.14
1,1,2,2-Tetrachloroethane	ug/l	0.2	< 0.17
1,1,2-Trichloroethane	ug/l	5	< 0.18
1,1-Dichloroethane	ug/l	850	< 0.17
1,1-Dichloroethylene	ug/l	7	< 0.16
1,1-Dichloropropene	ug/l		< 0.20
1,2,3-Trichlorobenzene	ug/l		< 0.21
1,2,3-Trichloropropane	ug/l	60	< 0.26
1,2,4-Trichlorobenzene	ug/l	70	< 0.20
1,2,4-Trimethylbenzene	ug/l	480 c	< 0.20
1,2-Dibromo-3-chloropropane (DBCP)	ug/l	0.2	< 1.7
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005
1,2-Dichlorobenzene	ug/l	600	< 0.14
1,2-Dichloroethane	ug/l	5	< 0.22
1,2-Dichloroethylene, cis	ug/l	70	< 0.15
1,2-Dichloroethylene, trans	ug/l	100	< 0.12
1,2-Dichloropropane	ug/l	5	< 0.16
1,3,5-Trimethylbenzene	ug/l	480 c	< 0.12
1,3-Dichlorobenzene	ug/l	600	< 0.16
1,3-Dichloropropane	ug/l		< 0.070
1,3-Dichloropropene, cis	ug/l	0.4	< 0.20
1,3-Dichloropropene, trans	ug/l	0.4	< 0.18
1,4-Dichlorobenzene	ug/l	75	< 0.17
2,2-Dichloropropane	ug/l		< 0.17
Acetone	ug/l	9000	< 9.2
Allyl chloride	ug/l		< 0.29
Benzene	ug/l	5	< 0.10
Bromobenzene	ug/l		< 0.21
Bromochloromethane	ug/l		< 0.27
Bromodichloromethane	ug/l	0.6	< 0.22
Bromoform	ug/l	4.4	< 0.80

**Table 3
Groundwater Analytical Data Summary
Husky Energy Property- Future Substation Site
Superior, WI**

		Location	SB-3
		Date	6/22/2018
		Depth	14.5 - 19.5 ft
		Sample Type	N
Parameter	Units	Wisconsin Groundwater Public Health Enforcement Standards	Wisconsin Groundwater Preventive Action Limits
Effective Date		07/01/2015	07/01/2015
Exceedance Key		No Exceed	No Exceed
Bromomethane	ug/l	10	1
Butylbenzene	ug/l		< 0.24
Butylbenzene, sec	ug/l		< 0.15
Butylbenzene, tert	ug/l		< 0.15
Carbon tetrachloride	ug/l	5	0.5
Chlorobenzene	ug/l	100	20
Chlorodibromomethane	ug/l	60	6
Chloroethane	ug/l	400	80
Chloroform	ug/l	6	0.6
Chloromethane	ug/l	30	3
Chlorotoluene, o	ug/l		< 0.16
Chlorotoluene, p	ug/l		< 0.13
Cumene (isopropyl benzene)	ug/l		< 0.18
Cymene p- (toluene isopropyl p-)	ug/l		< 0.15
Dibromomethane (methylene bromide)	ug/l		< 0.16
Dichlorodifluoromethane (Freon-12)	ug/l	1000	200
Dichlorofluoromethane (Freon-21)	ug/l	7000	
Ethyl benzene	ug/l	700	140
Ethyl ether	ug/l	1000	100
Hexachlorobutadiene	ug/l		< 0.31
Methyl ethyl ketone (2-butanone)	ug/l	4000	800
Methyl isobutyl ketone (MIBK)	ug/l	500	50
Methyl tertiary butyl ether (MTBE)	ug/l	60	12
Methylene chloride	ug/l	5	0.5
Naphthalene	ug/l	100	10
Propylbenzene	ug/l		< 0.10
Styrene	ug/l	100	10
Tetrachloroethylene	ug/l	5	0.5
Tetrahydrofuran	ug/l	50	10
Toluene	ug/l	800	160
Trichloroethylene (TCE)	ug/l	5	0.5
Trichlorofluoromethane (Freon-11)	ug/l	3490	698
Trichlorotrifluoroethane (Freon 113)	ug/l		< 0.22
Vinyl chloride	ug/l	0.2	0.02
Xylene, total	ug/l	2000 (4)	400 (4)

Data Footnotes and Qualifiers

Barr Standard Footnotes and Qualifiers

--	Not analyzed/Not available.
j	Estimated detected value. The reported value is less than the stated laboratory quantitation limit but greater than the laboratory method detection limit.
*	Estimated value, QA/QC criteria not met.
**	Non-detect VOC compounds reported on a wet weight basis per WIDNR requirements.

Wisconsin RCLs

CR3	Value represents the criteria for Chromium(III)
XYL	Value represents the criteria for Xylene, total (m-,o-,p- combined).

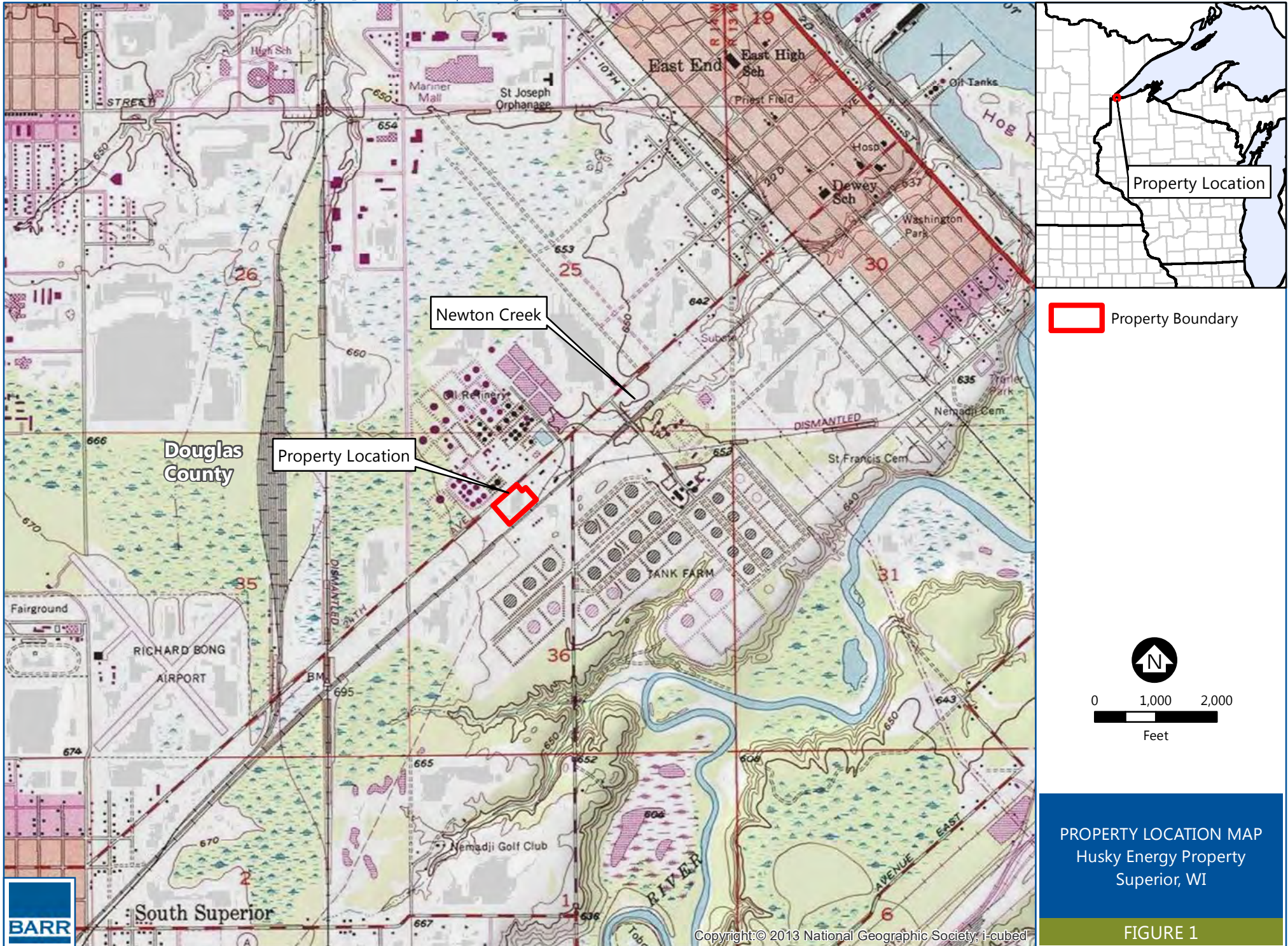
Wisconsin Groundwater Public Health Enforcement Standards

(4)	Xylene includes meta-, ortho-, and para-xylene combined.
c	Value represents the criteria for Trimethylbenzes (1,2,4- and 1,3,5- combined).

Wisconsin Preventive Action Limits

(4)	Xylene includes meta-, ortho-, and para-xylene combined.
c	Value represents the criteria for Trimethylbenzes (1,2,4- and 1,3,5- combined).

Figures



PROPERTY LOCATION MAP
Husky Energy Property
Superior, WI

FIGURE 1



FIGURE 2

Attachments

Attachment A

Standard Operating Procedures

Collection of Groundwater Samples

Collection of Soil Samples

Decontamination of Sampling Equipment

Field Screening of Soil Samples



Standard Operating Procedure

Collection of Groundwater Samples from a Temporary or Permanent Monitoring Well (Includes Well Purging and Stabilization)

Revision 1

April 5, 2016

Approved By:

<u>Kim Johannessen</u>	<u><i>Kim Johannessen</i></u>	<u>04/05/16</u>
Print	Technical Reviewer Signature	Date
<u>Terri Olson</u>	<u><i>Terri A. Olson</i></u>	<u>04/05/16</u>
Print	QA Manager Signature	Date

Review of the SOP has been performed and the SOP still reflects current practice.

Initials: _____	Date: _____
Initials: _____	Date: _____
Initials: _____	Date: _____
Initials: _____	Date: _____

Collection of Groundwater Samples from a Monitoring Well (Includes Well Purging and Stabilization)

1.0 Scope and Applicability

The purpose of this Standard Operating Procedure (SOP) is to describe the methods used for monitoring well purging, stabilization, and sampling (excluding residential/water supply systems). The SOP also provides details regarding the calculation of purge volumes and measurement of groundwater stabilization criteria and identifies the common container, preservative, and holding times for typical groundwater sample analyses.

The recommended procedures in this SOP should be followed unless conditions make it impractical or inappropriate to do so. Modifications should be noted in the applicable documentation and communicated to appropriate personnel. Significant changes may result in a revision or newly created SOP.

2.0 Limitations

- Sample collection methods can vary by project. If not specified in the project scope of work and/or documentation (e.g., Work Plan, Sampling Analysis Plan (SAP), or Quality Assurance Project Plan (QAPP)), consult with the appropriate regulatory agency for guidance.
- Collection of groundwater samples from residential/water supply systems are not discussed within this SOP.
- Dedicated sampling equipment and/or decontamination of sampling equipment is required to prevent cross-contamination.
- Low-flow sampling methods are not discussed within this SOP.
- Sample collection using 'clean hands/dirty hands' methods is not discussed within this SOP.

3.0 Responsibilities

Equipment Technicians are responsible to maintain equipment in working order and aid in troubleshooting equipment issues.

The role of the Project Health and Safety Team Leader is to oversee all aspects of on-site safety activities.

The Project Manager, in conjunction with the client, develops the site specific scope of work (e.g., Work Plan, SAP, etc.).

Experienced Field Technician(s) are responsible for the measurement of well pumping rates, calculation of well purge volume, field screening procedures, field equipment and calibration, proper sample identification, collection of samples, quality control procedures, and documentation.

Project staff are responsible for ordering sample containers prior to the sampling event.

4.0 Safety

Barr staff is responsible for conducting all aspects of the job safely. When applicable, refer to the appropriate Project Health and Safety Plan (PHASP) to understand the hazards associated with suspected

contamination, symptoms of exposure, methods to minimize exposure, personal protection equipment (PPE), and personal air monitoring required when using this SOP. Minimum protection of two pair of chemical resistant gloves (e.g., nitrile) and safety glasses with side shields should be worn to prevent sample contact with the skin and eyes. When sampling waters contaminated with corrosive materials, emergency eye flushing facilities should be available.

5.0 Equipment, Reagents, and Supplies

- Water quality meter (e.g., YSI, or equivalent)
- Polyethylene bailer and rope
- Sample tubing and fittings
- Turbidimeter (optional)
- Coolers
- Ice
- Chemical resistant gloves (e.g., nitrile)
- Custody seal, if applicable
- Calculator
- Locks/keys
- Pump (peristaltic or submersible), power source, and appropriate drive tubing
- Cord reel (optional)
- Graduated measuring container
- Plastic bags
- Waterproof ink pen or pencil
- Clock or stopwatch
- Sample containers (method specific)
- Sample labels
- Chain-of-custody (COC)

6.0 Procedure

This section describes the procedure(s) for calibrating field equipment, measuring pumping rates, calculating purge volumes, well purging, measuring well stabilization, and the sampling, handling, and delivery of groundwater samples. Best practices include setting up the purging, stabilization, and sampling equipment in an upwind direction from any potential source of contamination.

This SOP describes the groundwater collection from a bore hole, temporary well, or permanent monitoring well. Typically, a direct-push (Geoprobe® or equivalent) will be used to create the bore hole or temporary well by advancing the direct-push sampler to the desired sampling interval (sampling depth). When the sampling depth is reached, small diameter extension rods are inserted through the steel probe rods to hold the groundwater sampler screen in place while the rods and screen sheath are retracted, exposing the screen. The groundwater sampler screen can typically be exposed up to 41 inches, but can be exposed a shorter length depending on project requirements. Alternately, a small diameter PVC well screen and riser pipe may be installed in the bore hole for use as a temporary well. Polyethylene (or project specified) tubing is placed into the bore hole or temporary well, and a peristaltic pump (or equivalent) or project specified pump is used to draw water samples to the surface for collection. Well stabilization is not always necessary for temporary wells but if required by the project, see Section 6.2.6 of this SOP.

After each borehole or temporary well is constructed, the probe rods are decontaminated by the drilling contractor in accordance with project requirements. The polyethylene (or project specified) tubing is discarded after each sample is collected and new tubing is used for the collection of the next sample. The

borehole and temporary well locations will be permanently sealed following applicable state and local regulations.

6.1 Calibration

The water quality meter and turbidimeter will be calibrated as per the applicable Barr SOP. The meters will undergo calibration checks, at a minimum, before and after sampling. The calibration check will be documented on a calibration form (as appropriate) and/or in the field notebook. Any significant issues found during the calibration check will be noted in the field notebook and the Equipment Technicians will be notified.

6.2 Purging/Well Stabilization/Sampling

Prior to sampling, purging of the monitoring well is performed to remove stagnant water from within the well and to stabilize the well to allow for representative groundwater sample collection. The term 'purge volume' refers to the amount of water removed from a well before groundwater sample collection occurs.

Purging well volumes and stabilizing to remove stagnant water from a temporary well may not be necessary due to the short time frame between well installation and sampling. Purging and well stabilization procedure for temporary wells may vary by project or by well. Recommended practice is to purge a temporary well until the water clears, if possible, prior to sampling; however, purging prior to sampling may not be possible at all if water is limited (as it might be in a perched water zone), or water recharge is slow (as it would be in a clayey or silty water bearing zone).

6.2.1 Purge Volume

The volume of standing water in the well is calculated to determine the purge volume that needs to be removed from the well. The water level must be measured in order to determine the volume (see applicable Barr SOP). Calculation of the purge volume is addressed in Section 6.3, Data Reduction/Calculation of this SOP and Table 1. If a well is pumped dry, this constitutes an adequate purge and the well can be sampled following recovery. Refer to project documentation for volumes required to be purged.

6.2.2 Bailer Purging

A bailer can be used for slowly recovering wells with minimal water volume and a depth to groundwater greater than 25 feet. A new disposable polyethylene bailer with a check valve can be attached to a cord reel or a downrigger and support assembly. Polyethylene bailers can be hauled using stainless steel wire or new nylon line (rope).

- Put on gloves for skin protection and to prevent sample contamination.
- Secure the bailer and lower slowly into the water column until the bailer is submerged. Avoid rapid movements of the bailer to minimize turbidity. A cord reel can be used to aid in the lowering of the bailer.
- Raise the bailer and empty the water collected from the bailer into a graduated measuring container.
- Sampling may begin once desired volume is purged and the well has stabilized (see Section 6.2.6, Well Stabilization of this SOP).

6.2.3 Peristaltic Pump Purging

A peristaltic pump is used when the water level is within suction lift (e.g., within about 25 feet of the ground surface but may be less at higher altitudes). It usually is a low-volume suction pump with low pumping rates suitable for sampling shallow, small-diameter wells.

- Put on gloves for skin protection and to prevent sample contamination.
- Lower tubing into the well water (1 to 2 feet below surface) and cut to the desired length.
- Connect the well tubing to the drive tubing entering the pump.
- Connect the drive tubing exiting the pump to the short section of tubing entering the flow-through cell or graduated measuring container.
- Turn on pump and set the speed at the desired rate of flow.
- Sampling may begin once desired volume is purged and the well has stabilized (see Section 6.2.6, Well Stabilization of this SOP).

6.2.4 Submersible Pump Purging

A submersible pump is used when the water level is greater than the suction lift associated with a peristaltic pump. It is commonly used in conjunction with a control box to achieve the desired pumping rate (low to high). Variable rate submersible pumps are available to fit inside 2 inch or larger wells.

6.2.4.1 1.5-inch Submersible Pump

This is a type of submersible pump that can be used in 2-inch or larger diameter wells. It can purge water from depths down to 200 feet or greater, depending on pump model and manufacturer.

- Put on gloves for skin protection and to prevent sample contamination.
- Attach appropriate diameter tubing to pump intake, lower pump, and secure at desired depth.
- Cut off tubing, allowing additional tubing length for discharge.
- Plug the pump into the controller. Pump will begin pumping using the variable speed controller. There are a variety of speed controllers available, typically designed for a specific pump.
- Attach the controller to the power supply.
- Turn on the controller and dial the speed control to the desired flow rate. The controller can slow the purge rate down to the optimum rate.

Note: If the submersible pump is not running, turn off the pump and then disconnect from the power supply. Check connections and try again.

- Attach the flow-through cell for the water quality meter.
Note: If water is considerably turbid after initial pump start-up, the flow-through cell may be connected after purge water has cleared visually.
- Sampling may begin once desired volume is purged and the well has stabilized (see Section 6.2.6, Well Stabilization of this SOP).

6.2.4.2 3 or 4-inch Submersible Pump

This pump may be used to purge water samples from any depth.

- Put on gloves for skin protection and to prevent sample contamination.

- Attach purging hose to the pipe connected on the top of the submersible pump.
- Lower the submersible pump slowly into the well until it is completely submersed into the water and secure at desired depth.
- Connect the pump to the generator with an extension cord.
- Turn switch to start the generator, put choke on, pull recoil rope, and let generator idle until it is running smoothly
- Turn on power (which is located on the front of the generator).

Note: Submersible pump should be running; if not, turn off the generator and check connections.

- Adjust flow rate to desired rate with the valve and measure the flow rate with the graduated measuring container.
 - Attach the flow-through cell for the water quality meter.
- Note: If water is considerably turbid after initial pump start-up, the flow-through cell may be connected after purge water has cleared visually.*
- Sampling may begin once desired volume is purged and the well has stabilized (see Section 6.2.6, Well Stabilization of this SOP).

6.2.5 Well Purging with In-place Plumbing

In-place plumbing consists of dedicated, submersible pumps that are permanently installed in a well.

- Put on gloves for skin protection and to prevent sample contamination.
- Turn switch to start the generator, put choke on, pull recoil rope, and let generator idle until it is running smooth.
- Connect the pump to the generator with an extension cord.
- Connect the pipe, elbow, and valve to the discharge pipe of the submersible pump (located at the top of the well) and turn on the generator.

Note: If the pump does not start, check the connection from the generator to the pump.

- When water flows from discharge of the pump, adjust the flow according to desired flow rate and measure the flow rate with the graduated measuring container.
- Attach the flow-through cell for the water quality meter.

Note: If water is considerably turbid after initial pump start-up, the flow-through cell may be connected after purge water has cleared visually.

- Sampling may begin once desired volume is purged and the well has stabilized (see Section 6.2.6, Well Stabilization of this SOP).

Note: Each dedicated pump has its own pipe, elbow, and valve. These pieces are left at each well.

6.2.6 Well Stabilization

Well stabilization is typically conducted to help verify that the groundwater sample is representative of aquifer conditions. A well is considered 'stabilized' after the well purge volume has been met and the groundwater (or well) stabilization parameter measurements are within acceptable limits for three consecutive readings. Well stabilization parameters may vary by project or regulatory agency but at a minimum typically include pH, temperature, and specific conductance (temperature corrected electrical conductivity). Dissolved oxygen (DO) and oxidation-reduction potential (ORP) may also be used as stabilization parameters.

The procedure to stabilize a well includes recording well stabilization parameter measurements collected with the water quality meter at the beginning of the well purging process and after subsequently purged well volumes. A well volume is measured as the volume of water present inside a well screen and/or casing (i.e., from the base of the well to the water level measurement) and is defined in the footnotes of Table 1. Groundwater aliquots used for stabilization parameter measurements are typically collected by either directing the purge water discharge line through a flow-through cell or by pouring groundwater from a bailer into a container holding the water quality meter probe (depending on the purging method used).

Documentation of the well stabilization process typically includes recording pertinent information such as the pump type, pumping rate, volume pumped, and well stabilization measurements on the field log data sheets or field notebook. If only the minimum parameters are used for stabilization, the DO and ORP should still be measured and recorded as they may be needed to interpret other chemical parameter results. Turbidity is measured with a standalone turbidimeter but is typically not used as a stabilization parameter. A qualitative determination of turbidity may also be noted (e.g. clear, cloudy, very cloudy, etc.).

The well may be sampled after three consecutive measurements (typically one well volume per measurement), collected at the intervals described above, are within specific project criteria or the criteria presented in Section 7.2, Measurement Criteria of this SOP.

If field parameters do not stabilize after five well volumes have been purged, then the field technician will verify that the probes and related equipment are functioning properly and that operator error is not an issue. They will also re-evaluate whether or not water is being withdrawn from the appropriate depth to effectively evacuate the well. If all the checks produce no new insight, a decision will need to be made by the project team on whether to collect samples for laboratory analysis. When samples are collected, it will be clearly documented that stabilization was not achieved; at a minimum, this fact will be reported on the field log data sheets and in the Field Sampling Report.

If the well was purged dry, it shall be allowed to recharge and the samples should then be collected. If there is insufficient sample volume for the analyses being sampled, the project team will need to decide if sampling should be carried out or if a reduced prioritized list of analyses should be collected.

6.2.7 Sampling

The project team will determine the order for sampling the wells but general guidelines are below:

- Where water quality data are available, the least contaminated wells would be sampled first, proceeding to increasingly contaminated wells.
- Where the distribution of contaminants is not known, wells considered to be up gradient from likely sources of contamination would be sampled first and downgradient wells closest to the suspected contamination would be last.
- Make certain to keep records of the order in which wells were sampled.

Similar to purging, sampling requires the use of pumps or bailers. It may be appropriate to use a different device to sample than that which was used to purge. The most common example of this is the use of a pump to purge and a bailer to sample. There are several factors to take into consideration when choosing

a sampling device. The experience of the project team will be used to determine which is appropriate and care should be taken when reviewing the advantages or disadvantages of any one device.

To prevent the possible loss of some volatile organic compounds (VOCs), samples for volatile parameters should be collected first with as little agitation and disturbance as possible, then proceed in order towards the least volatile parameter as listed in Barr's 'Water Sampling Guidelines' form. The 40 mL vials used to collect the VOC samples should be checked for air bubbles. Air bubbles may be caused by insufficient meniscus when sealing the vial, degassing after sample collection or during sample shipment, or reaction between the sample and preservative (HCl). If air bubbles > 6 mm (pea-sized) are observed during sampling, discard the vial and recollect the sample using a new vial. If air bubbles are believed to be due to the sample reacting with the preservative, the sample should be collected in an unpreserved vial if possible.

Put on new sampling gloves at each sampling site to reduce the risk of sample cross-contamination and exposure to skin. Never reuse old gloves.

Prepare sampling containers by filling out the label, using an indelible permanent pen, with the following information at a minimum:

- Sample ID
- Date and time of sample collection
- Preservative
- Sample analysis (if required by the lab)

When filling the containers, do not insert the tubing into the containers and do not overfill preserved containers. When all samples are containerized, place the filled sample containers in a sampling cooler with ice, turn off any equipment, disassemble the sampling apparatus, dispose of all one-time use (disposable) equipment, and decontaminate reusable equipment per Barr's SOP 'Decontamination of Sampling Equipment'.

6.2.7.1 Bailer Sampling

After the well has been purged and stabilized, secure the bailer and slowly lower into the top of the water column making certain not to stir up the water with the bailer, which could result in volatilizing the samples. Keep the bailer in the top portion of the water column when collecting the sample.

When the bailer is filled, slowly raise the bailer out of the well. A clean tarp may be used to cover the ground to minimize the contact of the rope with the ground. Fill containers in the order listed in Barr's 'Water Sampling Guidelines' form.

6.2.7.2 Peristaltic / Submersible Pump Sampling

After the well has been purged and stabilized, disconnect the tubing exiting the pump from the flow-through cell, if used and fill containers as listed in Barr's 'Water Sampling Guidelines' form.

6.2.7.3 Check Valve Sampling

Sampling temporary wells through tubing with a check valve may be conducted following a drilling subcontractor's procedure.

6.2.8 Preservation

Container volume, type, and preservative are important considerations in sample collection. Container volume must be adequate to meet laboratory requirements for quality control, split samples, or repeat analyses. The container type varies with the analysis required. Typically, the analytical laboratory will preserve the container before shipment. Preservation and shelf life vary; contact the laboratory to determine if an on-hand container is still useful. Barr's 'Water Sampling Guidelines' form lists the parameter, container type, container volume, and preservative for many of the most common parameters collected.

6.2.9 Handling

The samples will be bubble wrapped or bagged after collection, stored in a sample cooler, and packed on double bagged wet ice. Samples will be kept cold (≤ 6 °C, but not frozen), until receipt at the laboratory (where applicable).

Note: Samples may need to be stored indoors in winter to prevent freezing.

6.2.10 Shipment/Delivery

Once the cooler is packed to prevent breaking of bottles, the proper chain-of-custody (COC) documentation is signed and placed inside a plastic bag then added to the cooler.

All samples will be kept secured to prevent tampering. If sample coolers are left in a vehicle or field office for temporary storage, the area will be locked and secured.

Custody seals may be present, but at a minimum, the coolers must be taped shut to prevent the lid from opening during shipment.

The coolers must be delivered to the laboratory via hand or overnight delivery courier, if possible, in accordance with all Federal, State and Local transportation regulations and Barr's SOP 'Domestic Transport of Samples to the Laboratory'.

6.3 Data Reduction/Calculations

Table 1 provides the volume of water (per foot or meter of depth) based on the diameter of the casing or hole. The following are two examples of calculations used in Table 1:

Volume of Standing Water (V), cubic feet

$$V = (\pi)(r^2)(h)$$

Where: π = 3.1416

r = Well radius (ft)

h = Total well depth (ft) – depth to static water (ft) = Water column height (ft)

Note: For the table calculations, 'h' is equal to one foot.

Well Volume (WV), gallons

$$WV = (V)(7.48)$$

Where: V = Volume of standing water, cubic feet

7.48 = Cubic foot to US Gallons conversion factor

Calculate the volume of water to be purged using the equation below:

$$VP = (WV)(NMV)$$

Where: VP = Volume of water to be purged

WV = Well volume in gallons

NMV = Number of well volumes to be purged per project requirements

6.4 Disposal

Waste generated by this process will be disposed of in accordance with Federal, State and Local regulations and Barr's SOP 'Investigative Derived Waste'. Where reasonably feasible, technological changes have been implemented to minimize the potential for environmental pollution.

7.0 Quality Control and Quality Assurance (QA/QC)

The QC activities described below allow the self-verification of the quality and consistency of the work.

7.1 QA/QC Samples

QA/QC samples are defined in Barr's SOP 'Collection of Quality Control Samples'. The sampling frequency should be performed at the frequency noted in the project scope of work and/or documentation (e.g., Work Plan, SAP, or QAPP).

7.2 Well Stabilization Criteria

Well stabilization criteria to be used if there are no project specific criteria:

- pH \pm 0.1 standard units
- Temperature \pm 0.5 °C
- Specific conductance \pm 5%
- Optional Criteria:
 - ORP \pm 10 mV
 - Dissolved oxygen \pm 10% (> 0.5 mg/L)

Note: Three consecutive readings \leq 0.5 mg/L can be considered stabilized.
 - Turbidity \pm 10% (> 5 Nephelometric Turbidity Units (NTU))

Note: Three consecutive readings \leq 5 NTU can be considered stabilized.

8.0 Records

The field technician will document the pumping flow rate, well volume, time purged, volume purged, water level, total well depth and stabilization test measurements on the field log data sheet and/or field notebook. They will also document the type and number of bottles on the chain-of-custody record, as appropriate. The analysis for each container and the laboratory used will be documented on the chain-of-custody record. Refer to Barr's SOP 'Documentation on a Chain-of-Custody (COC)' for further information.

Examples of common field documentation are available in Barr's "Compendium of Field Documentation". Field documentation specific to this SOP are listed below:

- Chain-of-custody (COC)

- Sample label
- Custody seal (if applicable)
- Water Level Data Sheet
- Field Log Data Sheet
- Field Log Cover Sheet
- Field Sampling Report
- Water Sampling Guidelines (includes sampling order, container, preservation, and holding time)

The field documents and COCs are provided to a Barr Data Management Administrator for storage on the internal Barr network.

Additional records information can be found in Barr's "Records Management System Manual".

Other Barr SOP subjects referenced within this SOP: water level measurement, water quality meter, turbidimeter, collection of QC samples, decontamination of sampling equipment, and documentation on a COC.

9.0 References

Environmental Protection Agency. *Title 40 of the Code of Federal Regulations, Part 136.3.*

Environmental Protection Agency, EPA/540/P-91/007. 1999. *Compendium of ERT Groundwater Sampling Procedures.*

Minnesota Pollution Control Agency, Water Quality Division. 2006. *Sampling Procedures for Groundwater Monitoring Wells.*

Table 1**Volume of Water in Casing or Hole**

Diameter of Casing or Hole (In)	Gallons per Foot of Depth (WV)	Cubic Feet per Foot of Depth (V)	Liters per Meter of Depth	Cubic Meters per Meter of Depth
1	0.041	0.0055	0.509	0.509 x 10 ⁻³
1½	0.092	0.0123	1.142	1.142 x 10 ⁻³
2	0.163	0.0218	2.024	2.024 x 10 ⁻³
2½	0.255	0.0341	3.167	3.167 x 10 ⁻³
3	0.367	0.0491	4.558	4.558 x 10 ⁻³
3½	0.500	0.0668	6.209	6.209 x 10 ⁻³
4	0.653	0.0873	8.110	8.110 x 10 ⁻³
4½	0.826	0.1104	10.26	10.26 x 10 ⁻³
5	1.020	0.1364	12.67	12.67 x 10 ⁻³
5½	1.234	0.1650	15.33	15.33 x 10 ⁻³
6	1.469	0.1963	18.24	18.24 x 10 ⁻³
7	2.000	0.2673	24.84	24.84 x 10 ⁻³
8	2.611	0.3491	32.43	32.43 x 10 ⁻³
9	3.305	0.4418	41.04	42.04 x 10 ⁻³
10	4.080	0.5454	50.67	50.67 x 10 ⁻³
11	4.937	0.6600	61.31	61.31 x 10 ⁻³
12	5.875	0.7854	72.96	72.96 x 10 ⁻³
14	8.000	1.069	99.35	99.35 x 10 ⁻³
16	10.44	1.396	129.65	129.65 x 10 ⁻³
18	13.22	1.767	164.18	164.18 x 10 ⁻³
20	16.32	2.182	202.68	202.68 x 10 ⁻³
22	19.75	2.640	245.28	245.28 x 10 ⁻³
24	23.50	3.142	291.85	291.85 x 10 ⁻³
26	27.58	3.687	342.52	342.52 x 10 ⁻³
28	32.00	4.276	397.41	397.41 x 10 ⁻³
30	36.72	4.909	456.02	456.02 x 10 ⁻³
32	41.78	5.585	518.87	518.87 x 10 ⁻³
34	47.16	6.305	585.68	585.68 x 10 ⁻³
36	52.88	7.069	656.72	656.72 x 10 ⁻³

1 gallon = 3.7854 liters

1 liter = 0.26417 gallons

1 meter = 3.281 feet

1 gallon water weighs 8.33 lbs. = 3.785 kilograms

1 liter water weighs 1 kilogram = 2.205 lbs.

1 gallon per foot of depth = 12.419 liters per foot of depth

1 gallon per meter of depth = 12.419 x 10⁻³ cubic meters per meter of depth



Standard Operating Procedure Collection of Soil Samples

Revision 8

February 23, 2016

Approved By:

Kevin McGilp *Kevin McGilp* 02/23/16

Print Technical Reviewer Signature Date

Terri Olson *Terri A. Olson* 02/23/16

Print QA Manager Signature Date

Review of the SOP has been performed and the SOP still reflects current practice.

Initials: _____	Date: _____
Initials: _____	Date: _____
Initials: _____	Date: _____
Initials: _____	Date: _____

Collection of Soil Samples

1.0 Scope and Applicability

The purpose of this Standard Operating Procedure (SOP) is to describe the collection of a representative soil sample using a variety of methods (including compositing of discrete samples) and equipment depending on the depth and type of sample required. This procedure applies to the collection of soil samples for volatiles (VOC), semivolatiles (SVOC), metals, and inorganics analyses. It also identifies the container, preservative, and weight required for each analysis type.

The recommended procedures in this SOP should be followed unless conditions make it impractical or inappropriate to do so. Modifications should be noted in the applicable documentation and communicated to appropriate personnel. Significant changes may result in a revision or newly created SOP.

2.0 Limitations

- Sample collection methods can vary by project. If not specified in the project scope of work and/or documentation (e.g., Work Plan, Sampling Analysis Plan (SAP), or Quality Assurance Project Plan (QAPP)), consult with the appropriate regulatory agency for guidance.
- Inadequate homogenization of the samples, where applicable, can result in non-representative samples and results.
- Decontamination of sampling equipment is required to prevent cross-contamination.
- Contact the local utilities hotline prior to digging to have utilities identified at sampling locations.

3.0 Responsibilities

Equipment Technicians are responsible to maintain equipment in working order and aid in troubleshooting equipment issues.

The role of the Project Health and Safety Team Leader is to oversee all aspects of on-site safety activities.

The Project Manager, in conjunction with the client, develops the site specific scope of work (e.g., Work Plan, SAP, etc.).

Experienced Field Technicians are responsible for the proper sample identification, collection of samples, field screening procedures, field equipment and calibration, quality control procedures, and documentation.

Project staff are responsible for ordering sample containers prior to the sampling event.

4.0 Safety

Barr staff is responsible for conducting all aspects of the job safely. When applicable, refer to the appropriate Project Health and Safety Plan (PHASP) to understand the hazards associated with suspected contamination, symptoms of exposure, methods to minimize exposure, personal protection equipment (PPE), and personal air monitoring required when using this SOP. Minimum protection of two pair of chemical resistant gloves (e.g., nitrile) and safety glasses with side shields should be worn to prevent

sample contact with the skin and eyes. When sampling soils contaminated with corrosive materials, emergency eye flushing facilities should be available.

Some of the sample containers may require the use of preservatives. Consult the applicable Safety Data Sheet to review hazards and appropriate PPE to minimize exposure.

5.0 Equipment, Reagents, and Supplies

- Sampling devices/tools
- Stainless steel mixing bowl and spoon
- Sample containers (method specific)
- Balance
- Coolers
- Plastic bags
- Non-phosphorus containing detergent (e.g., Liquinox™)
- Chemical resistant gloves (e.g., nitrile)
- Paper towels/laboratory tissues
- Chain-of-custody (COC)
- Sample label
- Custody seal, if applicable
- Waterproof ink pen or pencil
- Ice

6.0 Procedure

This section describes the procedure(s) for the sampling, handling, and delivery of soil samples.

6.1 Calibration

No specific calibration procedures are required for the actual sampling equipment; however, the calibration of the balance should be verified prior to use. Refer to the applicable Barr SOP.

6.2 Sampling

General considerations to be taken into account when planning and conducting sampling operations are the required sample weight, sample holding times, sample handling, and special precautions for trace contaminant sampling.

To prevent sample cross-contamination, the soil sampling equipment is carefully cleaned before initially sampling and after working at each sampling point per Barr's SOP 'Decontamination of Sampling Equipment'. A new, clean outer pair of disposable gloves will be worn for each sample location and sample containers are placed in separate plastic bags after collecting, preserving and tagging. Sample collection activities will proceed progressively from the least contaminated area to the most contaminated area (when known).

Depending on the project work to be done, soil samples will be collected for analysis by either a drilling apparatus (equipped with a split spoon or core barrel sampler), hand excavation (hand auger, trowel, or shovel), or direct-push (Geoprobe®) technology

- If a drilling apparatus was used, retrieve the split spoon or core barrel sampler from the desired sampling interval and open. If a liner (sleeve) is present and will not be sampled in the field, wrap the ends of the liner with heavy-duty aluminum foil, taking care to not pierce the foil. Tape the foil to the brass liner with duct tape to seal. Cover the ends of the liner with plastic caps or duct tape to fully protect the foil and package for shipment to the laboratory. If a liner is being sampled in the field, open the liner to sample the soil.

- If hand excavating, dig with a trowel or shovel to the desired sampling interval and expose a fresh soil surface to sample. Collect a large sample on a shovel and bring it to the surface or collect the sample directly from the fresh soil surface. The hand excavation technique may be done from the bucket of a backhoe also.
- If direct-push (Geoprobe®) technology is used, soils are typically sampled following the subcontractor's soil sampling procedures. This method generally utilizes a direct-push soil boring rig, steel drive rods and a 2-inch outside diameter (O.D.) soil core sampler with a dedicated 1.75-inch inside diameter (I.D.) removable acetate plastic sampler liner. The probe rods and sampling unit are driven to the desired sampling depth by the static weight of the carrier vehicle and hydraulic hammer percussion. Two, four, or five-foot sample cores are typically collected. The assembly is brought to the surface and the soil sample is exposed by cutting open the sampler liner.

In most investigations, the soil samples are field screened for moisture, odor, oil sheen, discoloration and the presence of organic soil vapors and classified in accordance with ASTM D-2488, Standard Practice for Description and Identification of Soils (Visual-Manual Procedure). Refer to Barr's SOP 'Screening Soil Samples'.

The form 'Soil Sampling Guidelines' lists the analyses (in order of collection) and describes the weight of sample, preservation, container, and holding time for the most common sampling media (information can vary depending on the laboratory used). The container size, type, preservative, and holding time are important considerations in sample collection. Sample and container size must be adequate to meet laboratory requirements for quality control, split samples, or repeat analyses. The container type varies with the analysis required. Typically, the analytical laboratory will preserve the container before shipment, where applicable. Preservation and shelf life vary; contact the laboratory to determine if an on-hand container is still useful.

Both discrete and composite samples can be used for environmental investigations. A discrete sample is a sample that originated from a specific area at a specific time. The sample may be transferred directly from the sampler or sampling location to the sample container.

A composite sample is a collection of multiple temporary or discrete samples of the same medium that are combined, thoroughly homogenized, and treated as a single sample. Composite samples are valuable in characterizing a large area or volume of soil.

NOTE: Samples collected for analysis of volatile organic compounds (VOC) should not be homogenized or composited, due to aeration of the sample during mixing which may result in loss of VOC.

6.2.1 Volatile Organic Compounds (VOC)

If VOC or similar analyses (e.g., GRO, TPH as Gasoline) are being analyzed, these samples should be collected as soon as possible after the soil is removed from the ground from a representative area of the most undisturbed soil possible. Please refer to Barr's SOP 'Screening Soil Samples'. It is important to note that there are different containers and sampling media available for collecting a soil sample for VOC. Typically, the VOC sample is collected at a 1:1 weight ratio with a preservative. A coring device, such as a Terra Core® or En Core® sampler, is the first choice for sampling. After VOC samples are collected, mix the remaining soil from the sampling locations/intervals prior to filling the rest of the sample containers.

Note: Analytical samples should not be collected from polyethylene bags sometimes used for field screening purposes.

6.2.1.1 Terra Core® Sampler

The Terra Core® Sampler is a single use device that is typically supplied with a 40 mL VOA vial containing preservative (e.g., methanol) and an unpreserved container for % moisture/% solids determination. To use the Terra Core®, make certain the plunger is aligned with, and seated in, the handle. Push the Terra Core® into freshly exposed soil until the sample chamber is filled. Depending on the Terra Core® sampler size, a filled chamber will deliver approximately 5 or 10 g of soil. If a 1:1 ratio of soil to preservative is needed, verify the correct size sampler is being used.

Wipe the outside of the sampler, check that the soil plug is flush with the mouth of the sampler, and remove any excess soil. Rotate the plunger 90° until it is aligned with the slots in the body. Extrude the sample into the appropriate container by pushing the plunger down. To provide a good sealing surface, wipe the container lip and screw threads to remove soil and immediately screw on the lid. If preservative is present in the container, swirl to immerse the sample. Record the sample ID on the container and package for shipment to the laboratory.

6.2.1.2 En Core® Sampler

The disposable En Core® sampler is a single use device that is pushed into the soil using a reusable En Core® T-handle. Two, 5 g samplers are typically supplied with an unpreserved container for % moisture/% solids determination. Hold the En Core® coring body and push plunger down until the small O-ring rests against the tabs so the plunger moves freely.

Depress the locking lever on the T-handle. Place coring body plunger end first into the open end of the T-Handle, aligning the slots on the coring body with the locking pins in the T-Handle. Twist coring body clockwise to lock pins in slots. Make certain that the sampler is locked in place.

Turn T-handle with T-up and coring body down. This will position the plunger bottom flush with bottom of coring body. Using T-handle, push sampler into soil until coring body is completely full. When full the small O-ring will be centered in the T-handle viewing hole. Remove excess soil from the coring body exterior.

Cap the coring body while it is still on the T-handle by pushing and twisting the cap over the bottom until grooves on locking arms seat over ridge on coring body. Remove the coring body from the T-handle and lock plunger by rotating extended plunger rod fully counterclockwise until wings rest firmly against tabs.

Attach the accompanying label and package for shipment to the laboratory.

6.2.1.3 Other

If no coring device is available, an estimate of the amount of soil needed to provide the desired weight can be determined. Place an extra laboratory container, disposable weigh boat, paper towel, or laboratory tissue on a balance pan. Using a stainless steel spoon, add the desired weight (10 g or 25 g) of a representative soil sample on the balance. Once the amount has been established, discard the soil used in the estimation and collect the sample as per form 'Soil Sampling Guidelines'.

If allowed by applicable regulations for VOC sample collection, the VOC aliquot may be weighed directly into the sample container by placing the pre-weighed sample container on the balance, taring the balance, then adding the appropriate amount of soil to the container to reach the desired aliquot weight. This should be done quickly to reduce the possible loss of VOCs.

6.2.2 Compositing Discrete Samples

Discrete samples, to be used for compositing, are stored at ≤ 6 °C until each individual sample is obtained. A minimum volume of soil obtained during discrete sampling will be dependent on the final analytical requirements for the composite sample; however, a minimum weight of eight ounces should be sufficient for analysis of semivolatiles (SVOC), PCBs, pesticides, and metals.

After discrete samples have been obtained, record the locations to be included in a final composited sample in the field documentation. Appropriate laboratory containers should be labeled with this final sample identifier and the date of collection.

Retrieve the samples selected for compositing from storage. One container from each discrete sample location should remain in storage in case individual sample confirmations are necessary. Empty the entire contents of each container into a stainless steel mixing bowl, removing any large debris or rocks, and mix thoroughly.

6.2.3 Diesel Range Organics (DRO) / SVOC / General Chemistry / Metals

Using either a composited sample or a homogenized, discrete sample, fill the remaining containers in the order listed on form 'Soil Sampling Guidelines'. Unless aliquot weights are listed, pack the soil into the sample jars leaving no headspace. If allowed by applicable regulations, the WIDRO sample may be weighed directly into the sample container by placing the pre-weighed sample container on the field balance, taring the field balance, then adding the appropriate amount of soil to the container to reach the desired sample weight (~25 g).

Wipe the container lip and screw threads to remove soil and provide a good sealing surface, and immediately screw on the lid.

6.2.4 Handling

After collection, all samples should be handled as few times as possible. Samplers should use extreme care to ensure that samples are not contaminated. Immediately after samples are collected, they are bubble wrap or bagged and placed in a cooler containing bagged ice. Samples will be kept cold (≤ 6 °C, but not frozen) until receipt at the laboratory, where they are to be stored in a refrigerated area.

Keep samples secure to prevent tampering. If sample coolers are left in a vehicle or field office for temporary storage, the area will be locked and secured.

6.2.5 Shipment/Delivery

Once the cooler is packed to prevent breaking of containers, the proper COC documentation is relinquished by the sampler, placed into a plastic bag, and included in the cooler. Custody seals may be used, and the coolers should be taped shut if not hand delivered.

The coolers must be delivered to the laboratory via hand or overnight delivery courier in accordance with all Federal, State and Local transportation regulations and Barr's SOP 'Domestic Transport of Samples to the Laboratory'.

Note: Samples may have to be stored indoors in winter to prevent freezing.

6.3 Data Reduction/Calculations

No data reduction or calculations are associated with this procedure.

6.4 Disposal

Waste generated by this process will be disposed of in accordance with Federal, State and Local regulations and Barr's SOP 'Investigative Derived Waste'. Where reasonably feasible, technological changes have been implemented to minimize the potential for environmental pollution.

7.0 Quality Control and Quality Assurance (QA/QC)

The QC activities described below allow the self-verification of the quality and consistency of the work.

7.1 QA/QC Samples

QA/QC samples are defined in Barr's SOP 'Collection of Quality Control Samples'. The sampling frequency should be performed as written in the project scope of work and/or documentation (e.g., Work Plan, SAP, or QAPP).

7.2 Measurement Criteria

No specific criteria apply to the implementation of this SOP.

8.0 Records

The field technician will document the soil sampling event in a project dedicated field logbook or on field log data sheets. The analysis for each container, the number of bottles, and the laboratory used will be documented on the chain-of-custody record. Refer to Barr's SOP 'Documentation on a Chain-of-Custody (COC)' for further information.

Examples of common field documentation are available in Barr's "Compendium of Field Documentation". Field documentation specific to this SOP are listed below:

- Field Sampling Report
- Field Log Data Sheet
- COC
- Sample label
- Custody seal (if applicable)
- Soil Sampling Guidelines (includes sampling order, container, preservation, and holding time)

Field documentation and COC are provided to a Barr Data Management Administrator for storage on the internal Barr network.

Additional records information can be found in Barr's "Records Management System Manual."

Other Barr SOP subjects referenced within this SOP: screening soil samples, balance calibration, collection of QC samples, decontamination of sampling equipment, investigative derived waste, domestic transport of samples, and documentation on a COC.

9.0 References

USEPA Environmental Response Team. 2000. *SOP for Soil Sampling*.



Standard Operating Procedure Decontamination of Sampling Equipment

Revision 1

March 15, 2018

Approved By:

John W. Juntilla *John W. Juntilla* 03/15/18
Print Technical Reviewer Signature Date

Terri Olson *Terri A. Olson* 03/15/18
Print QA Manager Signature Date

Review of the SOP has been performed and the SOP still reflects current practice.	
Initials: _____	Date: _____
Initials: _____	Date: _____
Initials: _____	Date: _____
Initials: _____	Date: _____

Decontamination of Sampling Equipment

1.0 Scope and Applicability

The purpose of this Standard Operating Procedure (SOP) is to define the process used for decontaminating environmental sampling-related equipment including pumps, meters, and materials coming into contact with actual sampling equipment or with sampling personnel. This procedure is applicable to all personnel who are collecting samples and/or decontaminating sampling and field equipment.

The recommended procedures in this SOP should be followed unless conditions make it impractical or inappropriate to do so. Modifications should be noted in the applicable documentation and communicated to appropriate personnel. Significant changes may result in a revision or newly created SOP.

2.0 Limitations

- Equipment used once and discarded such as bailers, protective gear, and filtration devices are not part of this SOP.

3.0 Responsibilities

The equipment technician is responsible for ensuring field equipment has been thoroughly decontaminated and prepared for use out in the field. The field technician(s) are responsible for decontamination in the field at each individual sampling point and for ensuring adherence to any investigative derived waste (IDW) project-specific requirements set forth in a QAPP or SAP (if applicable).

The role of the Field Safety Representative is to oversee on-site safety activities.

4.0 Safety

Barr staff is responsible for implementing aspects of the job safely. Where available, refer to the appropriate Project Health and Safety Plan (PHASP) to determine the proper personal protection equipment (PPE) required when using this SOP. Barr staff is responsible for conducting all aspects of the job safely. When applicable, refer to the appropriate Project Health and Safety Plan (PHASP) to understand the hazards associated with suspected contamination, symptoms of exposure, methods to minimize exposure, personal protection equipment (PPE), and personal air monitoring required when using this SOP. Minimum protection of one pair of chemical resistant gloves (e.g., nitrile) and safety glasses with side shields should be worn to prevent sample contact with the skin and eyes. When sampling soils contaminated with corrosive materials, emergency eye flushing facilities should be available.

Some of the sample containers may require the use of preservatives. Consult the applicable Safety Data Sheet to review hazards and appropriate PPE to minimize exposure.

5.0 Equipment, Reagents, and Supplies

- Non-phosphorus detergent (e.g., Liquinox™)
- Scrub brush made of inert materials
- Oven
- Bucket
- Tap water
- Analyte-free water (e.g., distilled or deionized (DI) water, or equivalent)
- Kimwipes®, or equivalent
- Chemical resistant gloves (e.g., nitrile)
- Spray bottle
- Organic solvent (e.g. methanol)

6.0 Procedure

This section describes the procedure(s) for the decontamination of equipment used to sample water, soil, or air.

6.1 Calibration

Calibration is not applicable to this SOP.

6.2 Operation

Decontamination of sampling equipment will be performed before sampling and after working at each sampling point, if applicable.

6.2.1 Water Sampling Equipment

Equipment that does not contact sample water or the inside of the well should be rinsed with analyte-free water and inspected for remaining particles or surface film. If these are noted, repeat cleaning and rinse procedures.

Equipment that contacts sample water or the inside of the well should be cleaned (inside and outside where possible) with a non-phosphorus detergent solution applied with a spray bottle and/or scrub brush (if needed). Rinse with analyte-free water and containerize with other IDW if required by the SAP or QAPP and inspect for remaining particles or surface film. If these are noted, repeat cleaning and rinse procedures. Shake off remaining water and allow to air dry.

The internal surfaces of pumps and tubing that cannot be adequately cleaned by the above methods alone will also be cleaned by first circulating a non-phosphorus detergent solution through them followed by circulating analyte-free water. Special care will be exercised to ensure that the "rinse" fluids will be circulated in sufficient quantities to completely flush out contaminants and detergents.

When transporting or storing equipment after cleaning, the equipment will be stored in a manner that minimizes the potential for contamination.

6.2.2 Soil/Sediment Sampling Equipment

A variety of samplers (split-barrel, split-barrel with brass liners, piston sampler, backhoe, hand-auger, or shovel) may be used to retrieve soil from sampling locations. The soil sample will either be sealed within the sampler (e.g., collecting volatile samples) or the soil sample will be transferred to laboratory-supplied containers depending on the analysis to be conducted on the soil sample. The equipment required to transfer the soil from the sampler to the laboratory-supplied sample containers includes: stainless-steel

spoons or scoops and the appropriate personal protective equipment necessary for collection and handling of soil samples as described in the PHASP.

All soil sampling equipment, including split-barrels, stainless-steel spoons and scoops, will be carefully cleaned before and during sampling with a tap water and non-phosphorus detergent solution, using a brush if necessary to remove particulate matter and films. The equipment is then rinsed three times with tap water and/or three times with analyte-free water. Inspect equipment and repeat procedure if any residual soil or visible contaminants are present. Dry sampler with a Kimwipes®. Organic solvents (e.g., methanol) may be used to aid with desorbing organic material but should be kept to a minimum and must be collected and containerized if used.

At the completion of the work day, the samplers should be decontaminated following the procedure above and stored in a manner that minimizes the potential for contamination.

6.2.3 Air Sampling Equipment

For non-laboratory manifold equipment, methanol soak manifold components for a minimum of two hours. Remove from the methanol bath and place in an oven pre-heated to 90 °C and continue to heat manifold components for at least 3 hours or until interior and exterior surface inspections of the manifold components indicate that they are free of liquid methanol.

6.2.4 Handling

All equipment will be handled in a manner that minimizes cross-contamination between points. After cleaning, the equipment will be visibly inspected to detect any residues or other substances that may exist after normal cleaning. If inspection reveals that decontamination was insufficient, the decontamination procedures will be repeated.

6.3 Data Reduction/Calculations

No data reduction or calculations are associated with this procedure.

6.4 Disposal

IDW generated by this process will be disposed of in accordance with Federal, State and Local regulations and/or as required by project-specific SAP or Work Plan. Where reasonably feasible, technological changes have been implemented to minimize the potential for environmental pollution.

7.0 Quality Control and Quality Assurance (QA/QC)

The QC activities described below allow the self-verification of the quality and consistency of the work.

7.1 QA/QC Samples

Decontamination procedures may be monitored through the use of an equipment blank which consists of analyte-free water processed through non-disposable or non-dedicated aqueous or solid sampling equipment after equipment decontamination and before field sample collection. The equipment blank is analyzed for the same parameters as the samples at a project specific frequency (e.g., one per twenty samples).

7.2 Measurement Criteria

Equipment blank results should be below the laboratory's method detection limit or reporting limit (depending on the data quality objectives).

8.0 Records

When required, the field technician(s) will document the field equipment decontamination procedures in a project dedicated field logbook or on field log data sheets.

Examples of common field documentation are available in Barr's "Compendium of Field Documentation". Field documentation is listed in the applicable sample collection SOP.

Field documentation and COC are provided to a Barr Data Management Administrator for storage on the internal Barr network.

Additional records information can be found in Barr's "Records Management System Manual."

Other Barr SOP subjects referenced within this SOP: collection of samples and investigative derived waste.

9.0 References

ASTM. 2015. Standard Practice for Decontamination of Field Equipment Used at Waste Sites.



Standard Operating Procedure Field Screening Soil Samples

Revision 7

April 27, 2017

Approved By:

John W. Juntilla *John W. Juntilla* 04/27/17
Print Technical Reviewer Signature Date

Terri A. Olson *Terri A. Olson* 04/27/17
Print QA Manager Signature Date

Review of the SOP has been performed and the SOP still reflects current practice.

Initials: _____	Date: _____
Initials: _____	Date: _____
Initials: _____	Date: _____
Initials: _____	Date: _____

Field Screening of Soil Samples

1.0 Scope and Applicability

The purpose of this Standard Operating Procedure (SOP) is to describe the procedure for properly screening soil or sediment samples in the field. This procedure applies to all field technicians responsible for field screening soil or sediment samples.

The recommended procedures in this SOP should be followed unless conditions make it impractical or inappropriate to do so. Modifications should be noted in the applicable documentation and communicated to appropriate personnel. Significant changes may result in a revision or newly created SOP.

2.0 Limitations

- Screening techniques can vary by project. If not specified in the project scope of work and/or documentation (e.g., Work Plan, Sampling Analysis Plan (SAP), or Quality Assurance Project Plan (QAPP)), consult with the appropriate regulatory agency for guidance, if applicable.
- Interferences on the test can be caused by any contaminant that can cause an oil sheen on water. The samples will be carefully observed for characteristic appearance or odors which may indicate a possible contaminant other than coal tar or petroleum substances.
- Sunlight and low temperatures may interfere with headspace development.
- Water and soil particles may interfere with PID and FID measurements.
- Decontamination of screening equipment is required to prevent cross-contamination.
- Contact the local utilities hotline prior to digging to have utilities identified at sampling locations.

3.0 Responsibilities

Equipment Technicians are responsible to maintain equipment in working order and aid in troubleshooting equipment issues.

The role of the Project Health and Safety Team Leader is to oversee all aspects of on-site safety activities.

The Project Manager, in conjunction with the client, develops the site specific scope of work (e.g., Work Plan, SAP, etc.).

Experienced Field Technicians are responsible for the proper sample identification, field screening procedures, field equipment and calibration, quality control procedures, and documentation.

4.0 Safety

Barr staff is responsible for conducting all aspects of the job safely. When applicable, refer to the appropriate Project Health and Safety Plan (PHASP) to understand the hazards associated with suspected contamination, symptoms of exposure, methods to minimize exposure, personal protection equipment (PPE), and personal air monitoring required when using this SOP. Minimum protection of two pair of chemical resistant gloves (e.g., nitrile) and safety glasses with side shields should be worn to prevent sample contact with the skin and eyes. When screening soils contaminated with corrosive materials, emergency eye flushing facilities should be available.

Consult the applicable Safety Data Sheet to review hazards and appropriate PPE to minimize exposure.

5.0 Equipment, Reagents, and Supplies

- Photoionization detector (PID)
- Flame ionization detector (FID)
- Squirt bottle with tap water
- Waterproof ink pen or pencil
- Chemical resistant gloves (e.g., nitrile)
- Stainless steel spoon
- Polyethylene bags

6.0 Procedure

The field screening techniques for soils are as follows: visual examination, odor, headspace organic vapor screening, and oil sheen. The results of these four screening procedures may be used to screen soil samples for possible contamination.

6.1 Calibration

The PID or FID shall be calibrated or checked against a known concentration of a calibration gas standard prior to collection of field measurements. Calibration of the PID or FID shall follow the recommended procedures as described in the manufacturer's operation manual or as per the applicable Barr SOP.

Regular calibration checks (bump tests) are expected to be performed by the field technician a minimum of once per day of use in the field. It is recommended that bump tests be conducted around mid-day and at the end of the day. More frequent bump testing may be completed if warranted by field conditions. The bump testing results should be recorded in the field log book or field log data sheets.

If problems occur during calibration, during bump tests, or if the unit will not stay calibrated, the field technician should document the issue in the field notes then contact the equipment technician or project manager for assistance.

6.2 Screening Techniques

The field screening techniques for soils are as follows: visual examination, odor, headspace organic vapor screening, and oil sheen. The results of these four screening procedures may be used to screen soil samples for possible contamination. To prevent sample cross-contamination, the screening equipment is carefully cleaned before and after working with each sample per Barr's SOP 'Decontamination of Sampling Equipment'.

6.2.1 Visual Examination

A visual examination of the soil sample will include noting any discoloration of the soil or visible oiliness or tar.

6.2.2 Odor

The field technician will note odor only if noticed incidentally while handling the soil sample. Field technicians will not unduly expose themselves to sample odors. Odor will be described as trace, light, moderate, or strong, and appropriate description of the type of odor, if evident.

6.2.3 Headspace Organic Vapor Screening

The polyethylene bag headspace method recommended by the Minnesota Pollution Control Agency will be used in the field to screen soils suspected to contain volatile organic compounds. The screening method is intended to be used in conjunction with other "real time" observations.

The following equipment is required to conduct headspace organic vapor screening: PID or FID, polyethylene bag, log book or record sheet, and appropriate PPE. Soil samples collected from a split-barrel sampler or a direct-push (i.e., Geoprobe) sample liner will be collected immediately after opening the barrel or liner. If the sample is collected from an excavation wall, soil pile, or backhoe bucket, it will be collected from a freshly exposed surface.

- Half-fill the bag with the sample to be analyzed using a stainless-steel spoon or a gloved hand and immediately seal it. Agitate the bag for 15 seconds and manually break up any soil clumps within the bag.
- Allow headspace development for approximately 10 minutes. The sample should be kept in a shaded area out of direct sunlight. Ambient temperatures during headspace development should be recorded. When ambient temperatures are below 50°F, headspace development should be conducted inside a heated vehicle or building. After completing the headspace development, agitate the bag for an additional 15 seconds.
- Quickly puncture the bag with the sampling probe of the PID or FID at a point about one-half of the headspace depth. Exercise care to avoid uptake of water droplets or soil particles.
- Record the highest PID or FID meter response as the headspace concentration. The maximum response will likely occur between 0 to 5 seconds.
- When using a FID, it may be necessary to correct for methane. In this case, take a reading first with the carbon filter, then without. This will require two duplicate bag samples. The second reading less the first is the headspace adjusted for methane. Adjusted readings less than zero are considered zero. Methane correction is not necessary if a PID is used.

6.2.4 Oil Sheen Test

The oil sheen or hydrocarbon test is a method used to immediately determine the approximate magnitude of coal tar or petroleum contamination in soil by observation of the sample in the field. The test is useful in soils which do not have a high binding capacity with petroleum compounds or polycyclic aromatic hydrocarbons (PAHs) (i.e., petroleum compounds or PAHs are free on the surface of the soil particles and can be released by a stream of water).

The equipment required to conduct the oil sheen test includes: a stainless-steel spoon, a squirt bottle filled with tap water, a log book or field log data sheet, and the appropriate personal protective equipment necessary for collection and handling of soil samples as described in the Project Health and Safety Plan.

The procedure for conducting the oil sheen test consists of obtaining approximately 50 grams (about 30 cc) of representative soil with the spoon and then directing a stream of water onto the soil in the spoon with the squirt bottle until the soil is saturated and water begins to collect around the soil. The amount of oil sheen present on the water is determined by observation and the results of the test are reported as a magnitude of oil sheen observed: none, trace, light, moderate, heavy or rainbow. The test results, sample location, and observations of the sample's appearance and odor are recorded in the log book or field log data sheet.

The specific soil types at the area of investigation should be accounted for when performing the oil sheen test. The best results are obtained in silts, sands, and/or gravels with low organic content. The results obtained from clay soils may appear deceptively low. Typical descriptions of each test result are provided in the table below.

Oil Sheen Test Result	Description
None	No sheen detected.
Trace	Possible or faint oil sheen observed (may not continue to generate sheen as additional water is added).
Light	Obvious sheen that may not cover entire water surface
Moderate	Definite oil sheen that covers entire surface, but "rainbow colors" not distinguishable.
Heavy	Definite oil film or product that does not display rainbow colors.
Rainbow	Definite oil sheen, film or product that displays rainbow colors.

6.3 Data Reduction/Calculations

No data reduction or calculations are associated with this procedure.

6.4 Disposal

Waste generated by this process will be disposed of in accordance with Federal, State and Local regulations and Barr's SOP 'Investigative Derived Waste'. Where reasonably feasible, technological changes have been implemented to minimize the potential for environmental pollution.

7.0 Quality Control and Quality Assurance (QA/QC)

Field background readings are measured for the headspace organic vapor screening. PID and FID readings should be duplicated every 20 field samples.

8.0 Records

The field technician(s) will document the field screening activities and measurements in a project dedicated field logbook or on field log data sheets.

Examples of common field documentation are available in Barr's "Compendium of Field Documentation". Field documentation specific to this SOP are listed below:

- Field Sampling Report
- Field Log Data Sheet

Field documentation are provided to a Barr Data Management Administrator for storage on the internal Barr network.

Additional records information can be found in Barr's "Records Management System Manual."

Other Barr SOP subjects referenced within this SOP: PID and FID equipment, decontamination of sampling equipment, and investigative derived waste.

9.0 References

PID and FID operation manuals.

Attachment B

Representative Photographs



Photo 1: Setting up at SB-1.



Photo 2: Typical soil boring recovery. Pictured is recovery from SB-4, 0-5 feet bgs. Thin layer of organic topsoil visible on right (top) end of sample sleeve. Soil below is stiff glaciolacustrine lean clay.



Photo 3: Advancing sampler at SB-4.



Photo 4: Attempting to sample the temporary monitoring well at SB-1.

Attachment C

Soil Boring Logs



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 Telephone: 218-529-8200

LOG OF BORING SB-1

SHEET 1 OF 1

Project: Husky/MNPower Phase II 49161423.00 200
 Project No.: Superior, WI
 Location: UTM 15T N:5170970.147m,
 Coordinates: E:571189.0276m NAD 83
 Datum:
 Surface Elevation: 6/21/2018
 Drilling Method: Direct Push
 Sampling Method: Macro-Core
 Completion Depth: 20.0 ft

P:\IMPLS\49 W\16\49161423 SUPERIOR REFINING CO ENV ASSISWORKFILES\PHASE II INVESTIGATION\BORING LOGS\HUSKY MNPOWER LIM PH II\GPJ BARR\LIBRARY\GLB ENVIRO LOG BARR TEMPLATE.GDT

Depth, feet	Sample Type & Recovery	Sample No.	ENVIRONMENTAL DATA	SSCSU	Graphic Log	LITHOLOGIC DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL	Elevation, feet
0						ORGANIC SOIL (OL): brown; moist; medium stiff; with 20% grass fibers and trace medium to coarse-grained angular sand and fine gravel.		
			PID:0.3 D/O/S:N/ N/ N			LEAN CLAY (CL): Red-brown; moist; medium stiff; medium to high plasticity; no dilatancy; glacialacustrine deposit; with trace medium to coarse-grained angular sand and fine gravel.		
			PID:0.3 D/O/S:N/ N/ N			SB-1_2-3 ft collected for VOCs, RCRA 8 metals and PAHs.		
5								
			PID:0.8 D/O/S:N/ N/ N		CL			
			PID:0.6 D/O/S:N/ N/ N					
10								
			PID:0.5 D/O/S:N/ N/ N					
			PID:0.5 D/O/S:N/ N/ N			SB-1_12-13 ft collected for VOCs, RCRA 8 metals and PAHs.		
15						FAT CLAY (CH): Red-brown; moist; soft; high plasticity; no dilatancy; glacialacustrine deposit; with trace medium to coarse-grained angular sand and fine gravel.		
			PID:0.4 D/O/S:N/ N/ N		CH			
			PID:0.2 D/O/S:N/ N/ N			Very soft, 15-20 ft.		
20						End of boring 20.0 feet Target depth reached.		

Date Boring Started: 6/21/18 2:00 pm
 Date Boring Completed: 6/22/18 11:05 am
 Logged By: MAB
 Drilling Contractor: Twin Ports Testing
 Drill Rig: Geoprobe 7822DT

Remarks: Boring advanced in SE corner of property. Ground surface was hummocky, covered with recently chipped brush, vegetated with marsh grass, and submerged with approximately 2 inches of standing water.

PID = Headspace; D/O/S = Discoloration/Odor/Sheen; FID/MC = FID/Methane Corrected; G/S/F = Gravel/Sand/Fines
 Additional data may have been collected in the field which is not included on this log.



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LOG OF BORING SB-2

SHEET 1 OF 1

Project: Husky/MNPower Phase II 49161423.00 200
 Project No.: Superior, WI
 Location: UTM 15T N:5170941.164m,
 Coordinates: E:571114.8391m NAD 83
 Datum:
 Surface Elevation: 6/21/2018
 Drilling Method: Direct Push
 Sampling Method: Macro-Core
 Completion Depth: 20.0 ft

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Depth, feet	Sample Type & Recovery	Sample No.	ENVIRONMENTAL DATA	SSCSU	Graphic Log	LITHOLOGIC DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL	Elevation, feet
0								
0-1			PID:0.1 D/O/S:N/ N/ N		OL	ORGANIC SOIL WITH GRAVEL (OL): dark brown; moist; soft; with 30% angular basalt fine gravel.		
1-5			PID:0.2 D/O/S:N/ N/ N			LEAN CLAY (CL): brown; moist; stiff; medium to high plasticity; no dilatancy; glacialacustrine deposit; with trace angular medium to coarse-grained sand and fine gravel. SB-2_0-1 ft collected for VOCs, RCRA 8 metals and PAHs. Red-brown below 5 ft bgs.		
5-7			PID:0.2 D/O/S:N/ N/ N			With 1-2mm long planar gray mottles, 5-7 ft bgs. SB-2_6-7 ft collected for VOCs, RCRA 8 metals and PAHs.		
7-10			PID:0.3 D/O/S:N/ N/ N					
10-14			PID:0.4 D/O/S:N/ N/ N		CL			
14-19			PID:0.4 D/O/S:N/ N/ N					
19-20			PID:0.4 D/O/S:N/ N/ N					
20						End of boring 20.0 feet Target depth reached.		

Date Boring Started: 6/21/18 3:05 pm
 Date Boring Completed: 6/22/18 11:10 am
 Logged By: MAB
 Drilling Contractor: Twin Ports Testing
 Drill Rig: Geoprobe 7822DT

Remarks: Boring advanced in center of property. Ground surface was dry, flat, and grass-covered.

PID = Headspace; D/O/S = Discoloration/Odor/Sheen; FID/MC = FID/Methane Corrected; G/S/F = Gravel/Sand/Fines
 Additional data may have been collected in the field which is not included on this log.



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LOG OF BORING SB-3

SHEET 1 OF 1

Project: Husky/MNPower Phase II 49161423.00 200
 Project No.: Superior, WI
 Location: UTM 15T N:5170886.079m,
 Coordinates: E:571073.1286m NAD 83
 Datum:

Surface Elevation: 657.3 ft
 Drilling Method: Direct Push
 Sampling Method: Macro-Core
 Completion Depth: 20.0 ft

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Depth, feet	Sample Type & Recovery	Sample No.	ENVIRONMENTAL DATA	LOG	Graphic Log	LITHOLOGIC DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL	Elevation, feet
0				OL		ORGANIC SOIL (OL): dark brown; moist; soft; with 20% grass fibers.		655
			PID:0.1 D/O/S:N/ N/ N			LEAN CLAY (CL): red-brown; moist; stiff; medium to high plasticity; no dilatancy; glacialacustrine deposit; with trace angular medium to coarse-grained sand and fine gravel. SB-3_0-2 ft collected for VOCs, RCRA 8 metals and PAHs.		
			PID:0.1 D/O/S:N/ N/ N					
5			PID:0.1 D/O/S:N/ N/ N			With trace faint 1mm-long brown-gray mottling, 5-10' bgs.		650
			PID:0.2 D/O/S:N/ N/ N			SB-3_8-9 ft collected for VOCs, RCRA 8 metals and PAHs.	-Temporary Monitoring Well	
10			PID:0.2 D/O/S:N/ N/ N	CL		Medium soft consistency from 9-13.5 ft bgs.		645
			PID:0.2 D/O/S:N/ N/ N			Trace weathered fine gravel from 10-15 ft bgs.		
			PID:0.2 D/O/S:N/ N/ N			Soft consistency below 13.5 ft bgs.		
15			PID:0.2 D/O/S:N/ N/ N				-Screened at 14.5-19.5'	640
			PID:0.2 D/O/S:N/ N/ N				-Water at 9.5 ft bgs on 6/22/18, one day after installation. Likely surface water draining into boring.	
20			PID:0.2 D/O/S:N/ N/ N			End of boring 20.0 feet Target depth reached.	-SB-3_14.5-19.5 (groundwater) collected for VOCs and PAHs	

Date Boring Started: 6/22/18 4:15 pm
 Date Boring Completed: 6/22/18 11:30 am
 Logged By: MAB
 Drilling Contractor: Twin Ports Testing
 Drill Rig: Geoprobe 7822DT

Remarks: Boring advanced in SW corner of property. Ground surface was soft, vegetated with marsh grass and submerged by approximately one inch of standing water.

PID = Headspace; D/O/S = Discoloration/Odor/Sheen; FID/MC = FID/Methane Corrected; G/S/F = Gravel/Sand/Fines
 Additional data may have been collected in the field which is not included on this log.



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LOG OF BORING SB-4

SHEET 1 OF 1

Project: Husky/MNPower Phase II 49161423.00 200
 Project No.: Superior, WI
 Location: UTM 15T N:5170910.454m,
 Coordinates: E:571048.3472m NAD 83
 Datum:

Surface Elevation: 657.4 ft
 Drilling Method: Direct Push
 Sampling Method: Macro-Core
 Completion Depth: 20.0 ft

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Depth, feet	Sample Type & Recovery	Sample No.	ENVIRONMENTAL DATA	SSCSU	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation, feet
0						ORGANIC SOIL (OL): dark brown; moist; soft; with 30% grass fibers.	
			PID:0.3 D/O/S:N/ N/ N			LEAN CLAY (CL): red-brown; moist; stiff; medium plasticity; no dilatancy; glacialacustrine deposit; with trace angular medium to coarse-grained sand and fine gravel. SB-4_0-2 ft collected for VOCs, RCRA 8 metals and PAHs.	655
5			PID:0.2 D/O/S:N/ N/ N				
			PID:0.1 D/O/S:N/ N/ N			SB-4_6-7 ft collected for VOCs, RCRA 8 metals and PAHs.	650
10			PID:0.0 D/O/S:N/ N/ N			1/2-inch diameter very weathered basalt clast at 8.5 ft bgs.	
			PID:0.0 D/O/S:N/ N/ N	CL			645
15			PID:0.0 D/O/S:N/ N/ N				
			PID:0.0 D/O/S:N/ N/ N				640
20			PID:0.0 D/O/S:N/ N/ N			End of boring 20.0 feet Target depth reached.	

Date Boring Started: 6/22/18 8:35 am
 Date Boring Completed: 6/22/18 9:00 am
 Logged By: MAB
 Drilling Contractor: Twin Ports Testing
 Drill Rig: Geoprobe 7822DT

Remarks: Boring advanced in NW corner of property. Ground surface was hummocky, covered with recently chipped brush, vegetated with marsh grass, and covered in approximately 2 inches of standing water.

PID = Headspace; D/O/S = Discoloration/Odor/Sheen; FID/MC = FID/Methane Corrected; G/S/F = Gravel/Sand/Fines
 Additional data may have been collected in the field which is not included on this log.



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LOG OF BORING SB-5

SHEET 1 OF 1

Project: Husky/MNPower Phase II 49161423.00
 Project No.: 200
 Location: Superior, WI
 Coordinates: UTM 15T N:5170984.65m, E:571138.864m
 Datum: NAD 83

Surface Elevation: 657.6 ft
 Drilling Method: Direct Push
 Sampling Method: Macro-Core
 Completion Depth: 20.0 ft

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Depth, feet	Sample Type & Recovery	Sample No.	ENVIRONMENTAL DATA	SSCSU	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation, feet
0							
0 - 1			PID:1.2 D/O/S:Black/ N/ N	SM		FILL; SILTY SAND WITH GRAVEL (SM): black; moist; 70% shiny black angular fine to coarse-grained sand and fine gravel; apparent weathered asphalt pavement with topsoil. SB-5_0-1 ft collected for VOCs, RCRA 8 metals and PAHs.	657.6
1 - 5			PID:N/A D/O/S:N/ N/ N			Insufficient recovery for headspace reading.	655
5 - 8			PID:0.4 D/O/S:N/ N/ N				650
8 - 9			PID:0.5 D/O/S:N/ N/ N			SB-5_8-9 ft collected for VOCs, RCRA 8 metals and PAHs.	650
9 - 15			PID:0.3 D/O/S:N/ N/ N	CL		With trace 1-2mm-long, planar gray mottles from 5-15 ft bgs.	645
15 - 20			PID:0.3 D/O/S:N/ N/ N				640
20			PID:0.3 D/O/S:N/ N/ N			End of boring 20.0 feet Target depth reached.	640

Date Boring Started: 6/22/18 9:30 am
 Date Boring Completed: 6/22/18 9:55 am
 Logged By: MAB
 Drilling Contractor: Twin Ports Testing
 Drill Rig: Geoprobe 7822DT

Remarks: Boring advanced in NE corner of property. Ground surface was dry, level, and covered with grass and gravel.

PID = Headspace; D/O/S = Discoloration/Odor/Sheen; FID/MC = FID/Methane Corrected; G/S/F = Gravel/Sand/Fines
 Additional data may have been collected in the field which is not included on this log.

Attachment D

Soil and Groundwater Laboratory Analytical Reports

July 03, 2018

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

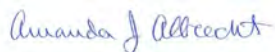
RE: Project: 49161423.00 Husky Phase II
Pace Project No.: 10436863

Dear Jim Taraldsen:

Enclosed are the analytical results for sample(s) received by the laboratory on June 22, 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,



Amanda Albrecht
amanda.albrecht@pacelabs.com
(612)607-6382
Project Manager

Enclosures

cc: BarrDM, Barr Engineering



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Minnesota Certification IDs

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414-2485

A2LA Certification #: 2926.01

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014

Arkansas Certification #: 88-0680

California Certification #: 2929

CNMI Saipan Certification #: MP0003

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

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

Florida Certification #: E87605

Georgia Certification #: 959

Guam EPA Certification #: MN00064

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 #: 03086

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064

Maryland Certification #: 322

Massachusetts Certification #: M-MN064

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: MN00064

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 #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon NwTPH 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

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DW Certification #: 9952 C

West Virginia DEP Certification #: 382

Wisconsin Certification #: 999407970

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: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10436863001	SB-1_2-3	Solid	06/21/18 14:05	06/22/18 20:00
10436863002	SB-1_12-13	Solid	06/21/18 14:30	06/22/18 20:00
10436863003	SB-2_0-1	Solid	06/21/18 15:15	06/22/18 20:00
10436863004	SB-2_6-7	Solid	06/21/18 15:30	06/22/18 20:00
10436863005	SB-3_0-2	Solid	06/21/18 16:20	06/22/18 20:00
10436863006	SB-3_8-9	Solid	06/21/18 16:35	06/22/18 20:00
10436863007	SB-4_0-2	Solid	06/22/18 08:40	06/22/18 20:00
10436863008	SB-4_6-7	Solid	06/22/18 08:55	06/22/18 20:00
10436863009	SB-5_0-1	Solid	06/22/18 09:35	06/22/18 20:00
10436863010	SB-5_8-9	Solid	06/22/18 09:50	06/22/18 20:00
10436863011	SB-3_14.5-19.5	Water	06/22/18 11:20	06/22/18 20:00
10436863012	Trip Blank	Water	06/21/18 00:00	06/22/18 20:00
10436863013	MeOH Trip Blank	Solid	06/21/18 00:00	06/22/18 20:00

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SAMPLE ANALYTE COUNT

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10436863001	SB-1_2-3	EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	STB	18	PASI-M
		EPA 8260	SMT	39	PASI-G
10436863002	SB-1_12-13	EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	STB	18	PASI-M
		EPA 8260	SMT	39	PASI-G
10436863003	SB-2_0-1	EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	STB	18	PASI-M
		EPA 8260	SMT	39	PASI-G
10436863004	SB-2_6-7	EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	STB	18	PASI-M
		EPA 8260	SMT	39	PASI-G
10436863005	SB-3_0-2	EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	STB	18	PASI-M
		EPA 8260	SMT	39	PASI-G
10436863006	SB-3_8-9	EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	STB	18	PASI-M
		EPA 8260	SMT	39	PASI-G
10436863007	SB-4_0-2	EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	STB	18	PASI-M
		EPA 8260	SMT	39	PASI-G
10436863008	SB-4_6-7	EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M

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SAMPLE ANALYTE COUNT

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10436863009	SB-5_0-1	ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	STB	18	PASI-M
		EPA 8260	SMT	39	PASI-G
		EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10436863010	SB-5_8-9	EPA 8270D by SIM	STB	18	PASI-M
		EPA 8260	SMT	39	PASI-G
		EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	STB	18	PASI-M
10436863011	SB-3_14.5-19.5	EPA 8260	SMT	39	PASI-G
		EPA 8270D by SIM	STB	18	PASI-M
		EPA 8260B	DS2	70	PASI-M
10436863012	Trip Blank	EPA 8260B	DS2	70	PASI-M
10436863013	MeOH Trip Blank	EPA 8260	SMT	39	PASI-G

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-1_2-3 **Lab ID:** 10436863001 Collected: 06/21/18 14:05 Received: 06/22/18 20:00 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
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Arsenic	3.1	mg/kg	1.6	0.48	1	06/26/18 04:58	06/27/18 06:54	7440-38-2	M1
Barium	245	mg/kg	4.2	1.3	5	06/26/18 04:58	06/27/18 15:29	7440-39-3	M1
Cadmium	<0.075	mg/kg	0.25	0.075	1	06/26/18 04:58	06/27/18 06:54	7440-43-9	
Chromium	49.6	mg/kg	5.1	1.5	5	06/26/18 04:58	06/27/18 15:29	7440-47-3	
Lead	10.5	mg/kg	5.3	1.6	5	06/26/18 04:58	06/27/18 15:29	7439-92-1	
Selenium	0.56J	mg/kg	1.9	0.56	1	06/26/18 04:58	06/27/18 06:54	7782-49-2	M1
Silver	<0.11	mg/kg	0.38	0.11	1	06/26/18 04:58	06/27/18 06:54	7440-22-4	M1
7471B Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.023J	mg/kg	0.033	0.0098	1	06/25/18 07:21	06/28/18 17:46	7439-97-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	27.6	%	0.10	0.10	1		06/27/18 16:25		
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.56	ug/kg	1.9	0.56	1	06/25/18 06:31	06/26/18 18:00	83-32-9	
Acenaphthylene	<0.68	ug/kg	2.3	0.68	1	06/25/18 06:31	06/26/18 18:00	208-96-8	
Anthracene	<0.65	ug/kg	2.2	0.65	1	06/25/18 06:31	06/26/18 18:00	120-12-7	
Benzo(a)anthracene	<1.5	ug/kg	5.0	1.5	1	06/25/18 06:31	06/26/18 18:00	56-55-3	
Benzo(a)pyrene	<0.95	ug/kg	3.2	0.95	1	06/25/18 06:31	06/26/18 18:00	50-32-8	
Benzo(b)fluoranthene	1.1J	ug/kg	1.7	0.52	1	06/25/18 06:31	06/26/18 18:00	205-99-2	
Benzo(g,h,i)perylene	<0.87	ug/kg	2.9	0.87	1	06/25/18 06:31	06/26/18 18:00	191-24-2	
Benzo(k)fluoranthene	<1.2	ug/kg	3.9	1.2	1	06/25/18 06:31	06/26/18 18:00	207-08-9	
Chrysene	<1.9	ug/kg	6.3	1.9	1	06/25/18 06:31	06/26/18 18:00	218-01-9	
Dibenz(a,h)anthracene	<0.64	ug/kg	2.1	0.64	1	06/25/18 06:31	06/26/18 18:00	53-70-3	
Fluoranthene	1.8J	ug/kg	2.0	0.59	1	06/25/18 06:31	06/26/18 18:00	206-44-0	
Fluorene	<0.43	ug/kg	1.4	0.43	1	06/25/18 06:31	06/26/18 18:00	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.93	ug/kg	3.1	0.93	1	06/25/18 06:31	06/26/18 18:00	193-39-5	
Naphthalene	<1.1	ug/kg	3.5	1.1	1	06/25/18 06:31	06/26/18 18:00	91-20-3	
Phenanthrene	<2.7	ug/kg	8.8	2.7	1	06/25/18 06:31	06/26/18 18:00	85-01-8	
Pyrene	<2.1	ug/kg	7.0	2.1	1	06/25/18 06:31	06/26/18 18:00	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	58	%	42-125		1	06/25/18 06:31	06/26/18 18:00	321-60-8	
p-Terphenyl-d14 (S)	75	%	57-125		1	06/25/18 06:31	06/26/18 18:00	1718-51-0	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 18:02	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 18:02	591-78-6	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-1_2-3 **Lab ID: 10436863001** Collected: 06/21/18 14:05 Received: 06/22/18 20:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 18:02	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 18:02	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 18:02	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 18:02	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 18:02	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 18:02	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	107	%	57-148		1	06/28/18 11:30	06/28/18 18:02	1868-53-7	
Toluene-d8 (S)	95	%	58-142		1	06/28/18 11:30	06/28/18 18:02	2037-26-5	
4-Bromofluorobenzene (S)	81	%	48-130		1	06/28/18 11:30	06/28/18 18:02	460-00-4	

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-1_12-13 **Lab ID: 10436863002** Collected: 06/21/18 14:30 Received: 06/22/18 20:00 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
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Arsenic	3.8	mg/kg	1.8	0.53	1	06/26/18 04:58	06/27/18 07:02	7440-38-2	
Barium	193	mg/kg	0.92	0.28	1	06/26/18 04:58	06/27/18 07:02	7440-39-3	
Cadmium	<0.082	mg/kg	0.27	0.082	1	06/26/18 04:58	06/27/18 07:02	7440-43-9	
Chromium	42.9	mg/kg	1.1	0.34	1	06/26/18 04:58	06/27/18 07:02	7440-47-3	
Lead	9.5	mg/kg	1.2	0.35	1	06/26/18 04:58	06/27/18 07:02	7439-92-1	
Selenium	<0.61	mg/kg	2.0	0.61	1	06/26/18 04:58	06/27/18 07:02	7782-49-2	
Silver	<0.12	mg/kg	0.41	0.12	1	06/26/18 04:58	06/27/18 07:02	7440-22-4	
7471B Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.026J	mg/kg	0.039	0.012	1	06/25/18 07:21	06/28/18 17:52	7439-97-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	35.3	%	0.10	0.10	1		06/27/18 16:26		
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.63	ug/kg	2.1	0.63	1	06/25/18 06:31	06/26/18 18:23	83-32-9	
Acenaphthylene	<0.76	ug/kg	2.5	0.76	1	06/25/18 06:31	06/26/18 18:23	208-96-8	
Anthracene	<0.72	ug/kg	2.4	0.72	1	06/25/18 06:31	06/26/18 18:23	120-12-7	
Benzo(a)anthracene	<1.7	ug/kg	5.5	1.7	1	06/25/18 06:31	06/26/18 18:23	56-55-3	
Benzo(a)pyrene	<1.1	ug/kg	3.5	1.1	1	06/25/18 06:31	06/26/18 18:23	50-32-8	
Benzo(b)fluoranthene	<0.57	ug/kg	1.9	0.57	1	06/25/18 06:31	06/26/18 18:23	205-99-2	
Benzo(g,h,i)perylene	<0.97	ug/kg	3.2	0.97	1	06/25/18 06:31	06/26/18 18:23	191-24-2	
Benzo(k)fluoranthene	<1.3	ug/kg	4.3	1.3	1	06/25/18 06:31	06/26/18 18:23	207-08-9	
Chrysene	<2.1	ug/kg	7.0	2.1	1	06/25/18 06:31	06/26/18 18:23	218-01-9	
Dibenz(a,h)anthracene	<0.71	ug/kg	2.4	0.71	1	06/25/18 06:31	06/26/18 18:23	53-70-3	
Fluoranthene	<0.66	ug/kg	2.2	0.66	1	06/25/18 06:31	06/26/18 18:23	206-44-0	
Fluorene	<0.48	ug/kg	1.6	0.48	1	06/25/18 06:31	06/26/18 18:23	86-73-7	
Indeno(1,2,3-cd)pyrene	<1.0	ug/kg	3.4	1.0	1	06/25/18 06:31	06/26/18 18:23	193-39-5	
Naphthalene	<1.2	ug/kg	4.0	1.2	1	06/25/18 06:31	06/26/18 18:23	91-20-3	
Phenanthrene	<3.0	ug/kg	9.8	3.0	1	06/25/18 06:31	06/26/18 18:23	85-01-8	
Pyrene	<2.4	ug/kg	7.8	2.4	1	06/25/18 06:31	06/26/18 18:23	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	60	%	42-125		1	06/25/18 06:31	06/26/18 18:23	321-60-8	
p-Terphenyl-d14 (S)	78	%	57-125		1	06/25/18 06:31	06/26/18 18:23	1718-51-0	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 18:25	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 18:25	591-78-6	W

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-1_12-13 **Lab ID:** 10436863002 Collected: 06/21/18 14:30 Received: 06/22/18 20:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 18:25	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 18:25	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 18:25	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 18:25	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 18:25	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 18:25	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	110	%	57-148		1	06/28/18 11:30	06/28/18 18:25	1868-53-7	
Toluene-d8 (S)	94	%	58-142		1	06/28/18 11:30	06/28/18 18:25	2037-26-5	
4-Bromofluorobenzene (S)	80	%	48-130		1	06/28/18 11:30	06/28/18 18:25	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: **SB-2_0-1** Lab ID: **10436863003** Collected: 06/21/18 15:15 Received: 06/22/18 20:00 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
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Arsenic	3.0	mg/kg	1.4	0.42	1	06/26/18 04:58	06/27/18 07:04	7440-38-2	
Barium	145	mg/kg	0.73	0.22	1	06/26/18 04:58	06/27/18 07:04	7440-39-3	
Cadmium	<0.065	mg/kg	0.22	0.065	1	06/26/18 04:58	06/27/18 07:04	7440-43-9	
Chromium	37.0	mg/kg	0.89	0.27	1	06/26/18 04:58	06/27/18 07:04	7440-47-3	
Lead	7.6	mg/kg	0.93	0.28	1	06/26/18 04:58	06/27/18 07:04	7439-92-1	
Selenium	<0.49	mg/kg	1.6	0.49	1	06/26/18 04:58	06/27/18 07:04	7782-49-2	
Silver	<0.098	mg/kg	0.33	0.098	1	06/26/18 04:58	06/27/18 07:04	7440-22-4	
7471B Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.022J	mg/kg	0.028	0.0084	1	06/25/18 07:21	06/28/18 17:54	7439-97-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	20.3	%	0.10	0.10	1		06/27/18 16:26		
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.51	ug/kg	1.7	0.51	1	06/25/18 06:31	06/26/18 18:46	83-32-9	
Acenaphthylene	<0.62	ug/kg	2.1	0.62	1	06/25/18 06:31	06/26/18 18:46	208-96-8	
Anthracene	<0.59	ug/kg	2.0	0.59	1	06/25/18 06:31	06/26/18 18:46	120-12-7	
Benzo(a)anthracene	<1.4	ug/kg	4.5	1.4	1	06/25/18 06:31	06/26/18 18:46	56-55-3	
Benzo(a)pyrene	<0.86	ug/kg	2.9	0.86	1	06/25/18 06:31	06/26/18 18:46	50-32-8	
Benzo(b)fluoranthene	<0.47	ug/kg	1.6	0.47	1	06/25/18 06:31	06/26/18 18:46	205-99-2	
Benzo(g,h,i)perylene	<0.79	ug/kg	2.6	0.79	1	06/25/18 06:31	06/26/18 18:46	191-24-2	
Benzo(k)fluoranthene	<1.1	ug/kg	3.5	1.1	1	06/25/18 06:31	06/26/18 18:46	207-08-9	
Chrysene	<1.7	ug/kg	5.7	1.7	1	06/25/18 06:31	06/26/18 18:46	218-01-9	
Dibenz(a,h)anthracene	<0.58	ug/kg	1.9	0.58	1	06/25/18 06:31	06/26/18 18:46	53-70-3	
Fluoranthene	<0.54	ug/kg	1.8	0.54	1	06/25/18 06:31	06/26/18 18:46	206-44-0	
Fluorene	<0.39	ug/kg	1.3	0.39	1	06/25/18 06:31	06/26/18 18:46	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.84	ug/kg	2.8	0.84	1	06/25/18 06:31	06/26/18 18:46	193-39-5	
Naphthalene	<0.97	ug/kg	3.2	0.97	1	06/25/18 06:31	06/26/18 18:46	91-20-3	
Phenanthrene	<2.4	ug/kg	8.0	2.4	1	06/25/18 06:31	06/26/18 18:46	85-01-8	
Pyrene	<1.9	ug/kg	6.4	1.9	1	06/25/18 06:31	06/26/18 18:46	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	60	%	42-125		1	06/25/18 06:31	06/26/18 18:46	321-60-8	
p-Terphenyl-d14 (S)	74	%	57-125		1	06/25/18 06:31	06/26/18 18:46	1718-51-0	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 18:47	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 18:47	591-78-6	W

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-2_0-1 **Lab ID: 10436863003** Collected: 06/21/18 15:15 Received: 06/22/18 20:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 18:47	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 18:47	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 18:47	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 18:47	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 18:47	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 18:47	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	117	%	57-148		1	06/28/18 11:30	06/28/18 18:47	1868-53-7	
Toluene-d8 (S)	102	%	58-142		1	06/28/18 11:30	06/28/18 18:47	2037-26-5	
4-Bromofluorobenzene (S)	87	%	48-130		1	06/28/18 11:30	06/28/18 18:47	460-00-4	

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-2_6-7 **Lab ID: 10436863004** Collected: 06/21/18 15:30 Received: 06/22/18 20:00 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
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Arsenic	3.3	mg/kg	1.5	0.45	1	06/26/18 04:58	06/27/18 07:06	7440-38-2	
Barium	150	mg/kg	0.79	0.24	1	06/26/18 04:58	06/27/18 07:06	7440-39-3	
Cadmium	<0.070	mg/kg	0.23	0.070	1	06/26/18 04:58	06/27/18 07:06	7440-43-9	
Chromium	39.5	mg/kg	0.96	0.29	1	06/26/18 04:58	06/27/18 07:06	7440-47-3	
Lead	8.1	mg/kg	1.0	0.30	1	06/26/18 04:58	06/27/18 07:06	7439-92-1	
Selenium	<0.52	mg/kg	1.7	0.52	1	06/26/18 04:58	06/27/18 07:06	7782-49-2	
Silver	<0.11	mg/kg	0.35	0.11	1	06/26/18 04:58	06/27/18 07:06	7440-22-4	
7471B Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.020J	mg/kg	0.032	0.0097	1	06/25/18 07:21	06/28/18 17:56	7439-97-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	24.5	%	0.10	0.10	1		06/27/18 16:26		
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.54	ug/kg	1.8	0.54	1	06/25/18 06:31	06/26/18 19:10	83-32-9	
Acenaphthylene	<0.66	ug/kg	2.2	0.66	1	06/25/18 06:31	06/26/18 19:10	208-96-8	
Anthracene	<0.62	ug/kg	2.1	0.62	1	06/25/18 06:31	06/26/18 19:10	120-12-7	
Benzo(a)anthracene	<1.4	ug/kg	4.8	1.4	1	06/25/18 06:31	06/26/18 19:10	56-55-3	
Benzo(a)pyrene	<0.91	ug/kg	3.0	0.91	1	06/25/18 06:31	06/26/18 19:10	50-32-8	
Benzo(b)fluoranthene	<0.49	ug/kg	1.6	0.49	1	06/25/18 06:31	06/26/18 19:10	205-99-2	
Benzo(g,h,i)perylene	<0.84	ug/kg	2.8	0.84	1	06/25/18 06:31	06/26/18 19:10	191-24-2	
Benzo(k)fluoranthene	<1.1	ug/kg	3.7	1.1	1	06/25/18 06:31	06/26/18 19:10	207-08-9	
Chrysene	<1.8	ug/kg	6.0	1.8	1	06/25/18 06:31	06/26/18 19:10	218-01-9	
Dibenz(a,h)anthracene	<0.61	ug/kg	2.0	0.61	1	06/25/18 06:31	06/26/18 19:10	53-70-3	
Fluoranthene	<0.57	ug/kg	1.9	0.57	1	06/25/18 06:31	06/26/18 19:10	206-44-0	
Fluorene	<0.41	ug/kg	1.4	0.41	1	06/25/18 06:31	06/26/18 19:10	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.89	ug/kg	3.0	0.89	1	06/25/18 06:31	06/26/18 19:10	193-39-5	
Naphthalene	<1.0	ug/kg	3.4	1.0	1	06/25/18 06:31	06/26/18 19:10	91-20-3	
Phenanthrene	<2.5	ug/kg	8.5	2.5	1	06/25/18 06:31	06/26/18 19:10	85-01-8	
Pyrene	<2.0	ug/kg	6.7	2.0	1	06/25/18 06:31	06/26/18 19:10	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	55	%	42-125		1	06/25/18 06:31	06/26/18 19:10	321-60-8	
p-Terphenyl-d14 (S)	75	%	57-125		1	06/25/18 06:31	06/26/18 19:10	1718-51-0	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	71-55-6	W
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 17:40	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 17:40	591-78-6	W

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-2_6-7 **Lab ID: 10436863004** Collected: 06/21/18 15:30 Received: 06/22/18 20:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 17:40	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 17:40	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 17:40	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 17:40	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 17:40	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 17:40	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	109	%	57-148		1	06/28/18 11:30	06/28/18 17:40	1868-53-7	
Toluene-d8 (S)	105	%	58-142		1	06/28/18 11:30	06/28/18 17:40	2037-26-5	
4-Bromofluorobenzene (S)	89	%	48-130		1	06/28/18 11:30	06/28/18 17:40	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: **SB-3_0-2** Lab ID: **10436863005** Collected: 06/21/18 16:20 Received: 06/22/18 20:00 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
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Arsenic	3.5	mg/kg	1.5	0.44	1	06/26/18 04:58	06/27/18 07:10	7440-38-2	
Barium	174	mg/kg	0.77	0.23	1	06/26/18 04:58	06/27/18 07:10	7440-39-3	
Cadmium	<0.069	mg/kg	0.23	0.069	1	06/26/18 04:58	06/27/18 07:10	7440-43-9	
Chromium	41.7	mg/kg	0.94	0.28	1	06/26/18 04:58	06/27/18 07:10	7440-47-3	
Lead	9.0	mg/kg	0.99	0.30	1	06/26/18 04:58	06/27/18 07:10	7439-92-1	
Selenium	<0.51	mg/kg	1.7	0.51	1	06/26/18 04:58	06/27/18 07:10	7782-49-2	
Silver	<0.10	mg/kg	0.35	0.10	1	06/26/18 04:58	06/27/18 07:10	7440-22-4	
7471B Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.026J	mg/kg	0.031	0.0094	1	06/25/18 07:21	06/28/18 18:03	7439-97-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	24.5	%	0.10	0.10	1		06/27/18 16:26		
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.54	ug/kg	1.8	0.54	1	06/25/18 06:31	06/26/18 19:33	83-32-9	
Acenaphthylene	<0.65	ug/kg	2.2	0.65	1	06/25/18 06:31	06/26/18 19:33	208-96-8	
Anthracene	<0.62	ug/kg	2.1	0.62	1	06/25/18 06:31	06/26/18 19:33	120-12-7	
Benzo(a)anthracene	<1.4	ug/kg	4.7	1.4	1	06/25/18 06:31	06/26/18 19:33	56-55-3	
Benzo(a)pyrene	<0.91	ug/kg	3.0	0.91	1	06/25/18 06:31	06/26/18 19:33	50-32-8	
Benzo(b)fluoranthene	<0.49	ug/kg	1.6	0.49	1	06/25/18 06:31	06/26/18 19:33	205-99-2	
Benzo(g,h,i)perylene	<0.83	ug/kg	2.8	0.83	1	06/25/18 06:31	06/26/18 19:33	191-24-2	
Benzo(k)fluoranthene	<1.1	ug/kg	3.7	1.1	1	06/25/18 06:31	06/26/18 19:33	207-08-9	
Chrysene	<1.8	ug/kg	6.0	1.8	1	06/25/18 06:31	06/26/18 19:33	218-01-9	
Dibenz(a,h)anthracene	<0.61	ug/kg	2.0	0.61	1	06/25/18 06:31	06/26/18 19:33	53-70-3	
Fluoranthene	<0.56	ug/kg	1.9	0.56	1	06/25/18 06:31	06/26/18 19:33	206-44-0	
Fluorene	<0.41	ug/kg	1.4	0.41	1	06/25/18 06:31	06/26/18 19:33	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.88	ug/kg	2.9	0.88	1	06/25/18 06:31	06/26/18 19:33	193-39-5	
Naphthalene	<1.0	ug/kg	3.4	1.0	1	06/25/18 06:31	06/26/18 19:33	91-20-3	
Phenanthrene	<2.5	ug/kg	8.4	2.5	1	06/25/18 06:31	06/26/18 19:33	85-01-8	
Pyrene	<2.0	ug/kg	6.7	2.0	1	06/25/18 06:31	06/26/18 19:33	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	79	%	42-125		1	06/25/18 06:31	06/26/18 19:33	321-60-8	
p-Terphenyl-d14 (S)	77	%	57-125		1	06/25/18 06:31	06/26/18 19:33	1718-51-0	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 19:10	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 19:10	591-78-6	W

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-3_0-2 **Lab ID: 10436863005** Collected: 06/21/18 16:20 Received: 06/22/18 20:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 19:10	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 19:10	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 19:10	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 19:10	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 19:10	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 19:10	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	109	%	57-148		1	06/28/18 11:30	06/28/18 19:10	1868-53-7	
Toluene-d8 (S)	99	%	58-142		1	06/28/18 11:30	06/28/18 19:10	2037-26-5	
4-Bromofluorobenzene (S)	83	%	48-130		1	06/28/18 11:30	06/28/18 19:10	460-00-4	

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-3_8-9 **Lab ID: 10436863006** Collected: 06/21/18 16:35 Received: 06/22/18 20:00 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
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Arsenic	2.8	mg/kg	1.7	0.50	1	06/26/18 04:58	06/27/18 07:12	7440-38-2	
Barium	176	mg/kg	0.87	0.26	1	06/26/18 04:58	06/27/18 07:12	7440-39-3	
Cadmium	0.11J	mg/kg	0.26	0.077	1	06/26/18 04:58	06/27/18 07:12	7440-43-9	
Chromium	42.6	mg/kg	1.1	0.32	1	06/26/18 04:58	06/27/18 07:12	7440-47-3	
Lead	7.8	mg/kg	1.1	0.33	1	06/26/18 04:58	06/27/18 07:12	7439-92-1	
Selenium	<0.58	mg/kg	1.9	0.58	1	06/26/18 04:58	06/27/18 07:12	7782-49-2	
Silver	<0.12	mg/kg	0.39	0.12	1	06/26/18 04:58	06/27/18 07:12	7440-22-4	
7471B Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.021J	mg/kg	0.037	0.011	1	06/25/18 07:21	06/28/18 18:05	7439-97-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	31.6	%	0.10	0.10	1		06/27/18 16:27		
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.60	ug/kg	2.0	0.60	1	06/25/18 06:31	06/26/18 19:57	83-32-9	
Acenaphthylene	<0.72	ug/kg	2.4	0.72	1	06/25/18 06:31	06/26/18 19:57	208-96-8	
Anthracene	<0.68	ug/kg	2.3	0.68	1	06/25/18 06:31	06/26/18 19:57	120-12-7	
Benzo(a)anthracene	<1.6	ug/kg	5.3	1.6	1	06/25/18 06:31	06/26/18 19:57	56-55-3	
Benzo(a)pyrene	1.2J	ug/kg	3.3	1.0	1	06/25/18 06:31	06/26/18 19:57	50-32-8	
Benzo(b)fluoranthene	2.2	ug/kg	1.8	0.55	1	06/25/18 06:31	06/26/18 19:57	205-99-2	
Benzo(g,h,i)perylene	2.3J	ug/kg	3.1	0.93	1	06/25/18 06:31	06/26/18 19:57	191-24-2	
Benzo(k)fluoranthene	2.2J	ug/kg	4.1	1.2	1	06/25/18 06:31	06/26/18 19:57	207-08-9	
Chrysene	<2.0	ug/kg	6.6	2.0	1	06/25/18 06:31	06/26/18 19:57	218-01-9	
Dibenz(a,h)anthracene	2.2J	ug/kg	2.2	0.67	1	06/25/18 06:31	06/26/18 19:57	53-70-3	
Fluoranthene	1.9J	ug/kg	2.1	0.63	1	06/25/18 06:31	06/26/18 19:57	206-44-0	
Fluorene	<0.46	ug/kg	1.5	0.46	1	06/25/18 06:31	06/26/18 19:57	86-73-7	
Indeno(1,2,3-cd)pyrene	2.2J	ug/kg	3.3	0.98	1	06/25/18 06:31	06/26/18 19:57	193-39-5	
Naphthalene	<1.1	ug/kg	3.8	1.1	1	06/25/18 06:31	06/26/18 19:57	91-20-3	
Phenanthrene	<2.8	ug/kg	9.3	2.8	1	06/25/18 06:31	06/26/18 19:57	85-01-8	
Pyrene	<2.2	ug/kg	7.4	2.2	1	06/25/18 06:31	06/26/18 19:57	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	60	%	42-125		1	06/25/18 06:31	06/26/18 19:57	321-60-8	
p-Terphenyl-d14 (S)	77	%	57-125		1	06/25/18 06:31	06/26/18 19:57	1718-51-0	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 19:32	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 19:32	591-78-6	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-3_8-9 **Lab ID: 10436863006** Collected: 06/21/18 16:35 Received: 06/22/18 20:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 19:32	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 19:32	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 19:32	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 19:32	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 19:32	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 19:32	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	103	%	57-148		1	06/28/18 11:30	06/28/18 19:32	1868-53-7	
Toluene-d8 (S)	98	%	58-142		1	06/28/18 11:30	06/28/18 19:32	2037-26-5	
4-Bromofluorobenzene (S)	82	%	48-130		1	06/28/18 11:30	06/28/18 19:32	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: **SB-4_0-2** Lab ID: **10436863007** Collected: 06/22/18 08:40 Received: 06/22/18 20:00 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
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Arsenic	3.0	mg/kg	1.5	0.46	1	06/26/18 04:58	06/27/18 07:14	7440-38-2	
Barium	191	mg/kg	0.79	0.24	1	06/26/18 04:58	06/27/18 07:14	7440-39-3	
Cadmium	<0.071	mg/kg	0.24	0.071	1	06/26/18 04:58	06/27/18 07:14	7440-43-9	
Chromium	48.6	mg/kg	0.97	0.29	1	06/26/18 04:58	06/27/18 07:14	7440-47-3	
Lead	9.1	mg/kg	1.0	0.30	1	06/26/18 04:58	06/27/18 07:14	7439-92-1	
Selenium	<0.53	mg/kg	1.8	0.53	1	06/26/18 04:58	06/27/18 07:14	7782-49-2	
Silver	<0.11	mg/kg	0.36	0.11	1	06/26/18 04:58	06/27/18 07:14	7440-22-4	
7471B Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.023J	mg/kg	0.032	0.0097	1	06/25/18 07:21	06/28/18 18:07	7439-97-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	26.7	%	0.10	0.10	1		06/27/18 16:27		
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.56	ug/kg	1.9	0.56	1	06/25/18 06:31	06/26/18 20:20	83-32-9	
Acenaphthylene	<0.67	ug/kg	2.2	0.67	1	06/25/18 06:31	06/26/18 20:20	208-96-8	
Anthracene	<0.64	ug/kg	2.1	0.64	1	06/25/18 06:31	06/26/18 20:20	120-12-7	
Benzo(a)anthracene	<1.5	ug/kg	4.9	1.5	1	06/25/18 06:31	06/26/18 20:20	56-55-3	
Benzo(a)pyrene	<0.94	ug/kg	3.1	0.94	1	06/25/18 06:31	06/26/18 20:20	50-32-8	
Benzo(b)fluoranthene	<0.51	ug/kg	1.7	0.51	1	06/25/18 06:31	06/26/18 20:20	205-99-2	
Benzo(g,h,i)perylene	<0.86	ug/kg	2.9	0.86	1	06/25/18 06:31	06/26/18 20:20	191-24-2	
Benzo(k)fluoranthene	<1.2	ug/kg	3.8	1.2	1	06/25/18 06:31	06/26/18 20:20	207-08-9	
Chrysene	<1.9	ug/kg	6.2	1.9	1	06/25/18 06:31	06/26/18 20:20	218-01-9	
Dibenz(a,h)anthracene	<0.63	ug/kg	2.1	0.63	1	06/25/18 06:31	06/26/18 20:20	53-70-3	
Fluoranthene	<0.58	ug/kg	1.9	0.58	1	06/25/18 06:31	06/26/18 20:20	206-44-0	
Fluorene	<0.43	ug/kg	1.4	0.43	1	06/25/18 06:31	06/26/18 20:20	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.91	ug/kg	3.0	0.91	1	06/25/18 06:31	06/26/18 20:20	193-39-5	
Naphthalene	<1.1	ug/kg	3.5	1.1	1	06/25/18 06:31	06/26/18 20:20	91-20-3	
Phenanthrene	<2.6	ug/kg	8.7	2.6	1	06/25/18 06:31	06/26/18 20:20	85-01-8	
Pyrene	<2.1	ug/kg	6.9	2.1	1	06/25/18 06:31	06/26/18 20:20	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	64	%	42-125		1	06/25/18 06:31	06/26/18 20:20	321-60-8	
p-Terphenyl-d14 (S)	74	%	57-125		1	06/25/18 06:31	06/26/18 20:20	1718-51-0	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 19:55	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 19:55	591-78-6	W

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-4_0-2 **Lab ID: 10436863007** Collected: 06/22/18 08:40 Received: 06/22/18 20:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 19:55	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 19:55	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 19:55	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 19:55	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 19:55	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 19:55	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	109	%	57-148		1	06/28/18 11:30	06/28/18 19:55	1868-53-7	
Toluene-d8 (S)	97	%	58-142		1	06/28/18 11:30	06/28/18 19:55	2037-26-5	
4-Bromofluorobenzene (S)	80	%	48-130		1	06/28/18 11:30	06/28/18 19:55	460-00-4	

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-4_6-7 **Lab ID: 10436863008** Collected: 06/22/18 08:55 Received: 06/22/18 20:00 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
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Arsenic	3.0	mg/kg	1.6	0.48	1	06/26/18 04:58	06/27/18 07:15	7440-38-2	
Barium	160	mg/kg	0.84	0.25	1	06/26/18 04:58	06/27/18 07:15	7440-39-3	
Cadmium	0.097J	mg/kg	0.25	0.075	1	06/26/18 04:58	06/27/18 07:15	7440-43-9	
Chromium	39.4	mg/kg	1.0	0.31	1	06/26/18 04:58	06/27/18 07:15	7440-47-3	
Lead	7.7	mg/kg	1.1	0.32	1	06/26/18 04:58	06/27/18 07:15	7439-92-1	
Selenium	<0.56	mg/kg	1.9	0.56	1	06/26/18 04:58	06/27/18 07:15	7782-49-2	
Silver	<0.11	mg/kg	0.38	0.11	1	06/26/18 04:58	06/27/18 07:15	7440-22-4	
7471B Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.021J	mg/kg	0.038	0.011	1	06/25/18 07:21	06/28/18 18:09	7439-97-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	29.4	%	0.10	0.10	1		06/27/18 16:27		
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.58	ug/kg	1.9	0.58	1	06/25/18 06:31	06/26/18 20:44	83-32-9	
Acenaphthylene	<0.70	ug/kg	2.3	0.70	1	06/25/18 06:31	06/26/18 20:44	208-96-8	
Anthracene	<0.66	ug/kg	2.2	0.66	1	06/25/18 06:31	06/26/18 20:44	120-12-7	
Benzo(a)anthracene	<1.5	ug/kg	5.1	1.5	1	06/25/18 06:31	06/26/18 20:44	56-55-3	
Benzo(a)pyrene	<0.97	ug/kg	3.2	0.97	1	06/25/18 06:31	06/26/18 20:44	50-32-8	
Benzo(b)fluoranthene	<0.53	ug/kg	1.8	0.53	1	06/25/18 06:31	06/26/18 20:44	205-99-2	
Benzo(g,h,i)perylene	<0.90	ug/kg	3.0	0.90	1	06/25/18 06:31	06/26/18 20:44	191-24-2	
Benzo(k)fluoranthene	<1.2	ug/kg	4.0	1.2	1	06/25/18 06:31	06/26/18 20:44	207-08-9	
Chrysene	<1.9	ug/kg	6.4	1.9	1	06/25/18 06:31	06/26/18 20:44	218-01-9	
Dibenz(a,h)anthracene	<0.65	ug/kg	2.2	0.65	1	06/25/18 06:31	06/26/18 20:44	53-70-3	
Fluoranthene	<0.61	ug/kg	2.0	0.61	1	06/25/18 06:31	06/26/18 20:44	206-44-0	
Fluorene	<0.44	ug/kg	1.5	0.44	1	06/25/18 06:31	06/26/18 20:44	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.95	ug/kg	3.2	0.95	1	06/25/18 06:31	06/26/18 20:44	193-39-5	
Naphthalene	<1.1	ug/kg	3.6	1.1	1	06/25/18 06:31	06/26/18 20:44	91-20-3	
Phenanthrene	<2.7	ug/kg	9.0	2.7	1	06/25/18 06:31	06/26/18 20:44	85-01-8	
Pyrene	<2.2	ug/kg	7.2	2.2	1	06/25/18 06:31	06/26/18 20:44	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	75	%	42-125		1	06/25/18 06:31	06/26/18 20:44	321-60-8	
p-Terphenyl-d14 (S)	74	%	57-125		1	06/25/18 06:31	06/26/18 20:44	1718-51-0	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 20:18	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 20:18	591-78-6	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-4_6-7 **Lab ID: 10436863008** Collected: 06/22/18 08:55 Received: 06/22/18 20:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 20:18	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 20:18	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 20:18	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 20:18	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 20:18	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 20:18	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	108	%	57-148		1	06/28/18 11:30	06/28/18 20:18	1868-53-7	
Toluene-d8 (S)	93	%	58-142		1	06/28/18 11:30	06/28/18 20:18	2037-26-5	
4-Bromofluorobenzene (S)	80	%	48-130		1	06/28/18 11:30	06/28/18 20:18	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-5_0-1 **Lab ID:** 10436863009 Collected: 06/22/18 09:35 Received: 06/22/18 20:00 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
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Arsenic	5.1J	mg/kg	7.5	2.3	5	06/26/18 04:58	06/27/18 07:19	7440-38-2	D3
Barium	287	mg/kg	3.9	1.2	5	06/26/18 04:58	06/27/18 07:19	7440-39-3	
Cadmium	0.56J	mg/kg	1.2	0.35	5	06/26/18 04:58	06/27/18 07:19	7440-43-9	D3
Chromium	1850	mg/kg	9.5	2.9	10	06/26/18 04:58	06/27/18 07:20	7440-47-3	
Lead	88.2	mg/kg	10.0	3.0	10	06/26/18 04:58	06/27/18 07:20	7439-92-1	
Selenium	<5.2	mg/kg	17.4	5.2	10	06/26/18 04:58	06/27/18 07:20	7782-49-2	D3
Silver	1.1J	mg/kg	3.5	1.1	10	06/26/18 04:58	06/27/18 07:20	7440-22-4	D3
7471B Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.10	mg/kg	0.033	0.0098	1	06/25/18 07:21	06/28/18 18:11	7439-97-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	23.3	%	0.10	0.10	1		06/27/18 16:27		
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	6.9	ug/kg	1.8	0.53	1	06/25/18 06:31	06/26/18 21:07	83-32-9	
Acenaphthylene	3.4	ug/kg	2.1	0.64	1	06/25/18 06:31	06/26/18 21:07	208-96-8	
Anthracene	11.0	ug/kg	2.0	0.61	1	06/25/18 06:31	06/26/18 21:07	120-12-7	
Benzo(a)anthracene	77.8	ug/kg	4.7	1.4	1	06/25/18 06:31	06/26/18 21:07	56-55-3	
Benzo(a)pyrene	128	ug/kg	3.0	0.89	1	06/25/18 06:31	06/26/18 21:07	50-32-8	
Benzo(b)fluoranthene	162	ug/kg	1.6	0.49	1	06/25/18 06:31	06/26/18 21:07	205-99-2	
Benzo(g,h,i)perylene	116	ug/kg	2.7	0.82	1	06/25/18 06:31	06/26/18 21:07	191-24-2	
Benzo(k)fluoranthene	55.7	ug/kg	3.7	1.1	1	06/25/18 06:31	06/26/18 21:07	207-08-9	
Chrysene	98.1	ug/kg	5.9	1.8	1	06/25/18 06:31	06/26/18 21:07	218-01-9	
Dibenz(a,h)anthracene	32.5	ug/kg	2.0	0.60	1	06/25/18 06:31	06/26/18 21:07	53-70-3	
Fluoranthene	90.4	ug/kg	1.9	0.56	1	06/25/18 06:31	06/26/18 21:07	206-44-0	
Fluorene	2.5	ug/kg	1.4	0.41	1	06/25/18 06:31	06/26/18 21:07	86-73-7	
Indeno(1,2,3-cd)pyrene	94.4	ug/kg	2.9	0.87	1	06/25/18 06:31	06/26/18 21:07	193-39-5	
Naphthalene	4.3	ug/kg	3.3	1.0	1	06/25/18 06:31	06/26/18 21:07	91-20-3	
Phenanthrene	39.1	ug/kg	8.3	2.5	1	06/25/18 06:31	06/26/18 21:07	85-01-8	
Pyrene	75.2	ug/kg	6.6	2.0	1	06/25/18 06:31	06/26/18 21:07	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	77	%	42-125		1	06/25/18 06:31	06/26/18 21:07	321-60-8	
p-Terphenyl-d14 (S)	85	%	57-125		1	06/25/18 06:31	06/26/18 21:07	1718-51-0	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 20:40	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 20:40	591-78-6	W

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-5_0-1 **Lab ID: 10436863009** Collected: 06/22/18 09:35 Received: 06/22/18 20:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 20:40	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 20:40	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 20:40	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 20:40	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 20:40	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	127-18-4	W
Toluene	38.8J	ug/kg	78.3	32.6	1	06/28/18 11:30	06/28/18 20:40	108-88-3	
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 20:40	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	111	%	57-148		1	06/28/18 11:30	06/28/18 20:40	1868-53-7	
Toluene-d8 (S)	99	%	58-142		1	06/28/18 11:30	06/28/18 20:40	2037-26-5	
4-Bromofluorobenzene (S)	83	%	48-130		1	06/28/18 11:30	06/28/18 20:40	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-5_8-9 **Lab ID: 10436863010** Collected: 06/22/18 09:50 Received: 06/22/18 20:00 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
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Arsenic	3.4	mg/kg	1.6	0.47	1	06/26/18 04:58	06/27/18 07:22	7440-38-2	
Barium	173	mg/kg	0.82	0.25	1	06/26/18 04:58	06/27/18 07:22	7440-39-3	
Cadmium	<0.073	mg/kg	0.24	0.073	1	06/26/18 04:58	06/27/18 07:22	7440-43-9	
Chromium	42.0	mg/kg	1.0	0.30	1	06/26/18 04:58	06/27/18 07:22	7440-47-3	
Lead	8.4	mg/kg	1.0	0.31	1	06/26/18 04:58	06/27/18 07:22	7439-92-1	
Selenium	<0.54	mg/kg	1.8	0.54	1	06/26/18 04:58	06/27/18 07:22	7782-49-2	
Silver	<0.11	mg/kg	0.37	0.11	1	06/26/18 04:58	06/27/18 07:22	7440-22-4	
7471B Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.017J	mg/kg	0.032	0.0096	1	06/25/18 07:21	06/28/18 18:13	7439-97-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	28.1	%	0.10	0.10	1		06/27/18 16:28		
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.57	ug/kg	1.9	0.57	1	06/25/18 06:31	06/26/18 21:31	83-32-9	
Acenaphthylene	<0.69	ug/kg	2.3	0.69	1	06/25/18 06:31	06/26/18 21:31	208-96-8	
Anthracene	<0.65	ug/kg	2.2	0.65	1	06/25/18 06:31	06/26/18 21:31	120-12-7	
Benzo(a)anthracene	<1.5	ug/kg	5.0	1.5	1	06/25/18 06:31	06/26/18 21:31	56-55-3	
Benzo(a)pyrene	<0.95	ug/kg	3.2	0.95	1	06/25/18 06:31	06/26/18 21:31	50-32-8	
Benzo(b)fluoranthene	<0.52	ug/kg	1.7	0.52	1	06/25/18 06:31	06/26/18 21:31	205-99-2	
Benzo(g,h,i)perylene	<0.88	ug/kg	2.9	0.88	1	06/25/18 06:31	06/26/18 21:31	191-24-2	
Benzo(k)fluoranthene	<1.2	ug/kg	3.9	1.2	1	06/25/18 06:31	06/26/18 21:31	207-08-9	
Chrysene	<1.9	ug/kg	6.3	1.9	1	06/25/18 06:31	06/26/18 21:31	218-01-9	
Dibenz(a,h)anthracene	<0.64	ug/kg	2.1	0.64	1	06/25/18 06:31	06/26/18 21:31	53-70-3	
Fluoranthene	<0.59	ug/kg	2.0	0.59	1	06/25/18 06:31	06/26/18 21:31	206-44-0	
Fluorene	<0.43	ug/kg	1.4	0.43	1	06/25/18 06:31	06/26/18 21:31	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.93	ug/kg	3.1	0.93	1	06/25/18 06:31	06/26/18 21:31	193-39-5	
Naphthalene	<1.1	ug/kg	3.6	1.1	1	06/25/18 06:31	06/26/18 21:31	91-20-3	
Phenanthrene	<2.7	ug/kg	8.9	2.7	1	06/25/18 06:31	06/26/18 21:31	85-01-8	
Pyrene	<2.1	ug/kg	7.1	2.1	1	06/25/18 06:31	06/26/18 21:31	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	60	%	42-125		1	06/25/18 06:31	06/26/18 21:31	321-60-8	
p-Terphenyl-d14 (S)	74	%	57-125		1	06/25/18 06:31	06/26/18 21:31	1718-51-0	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 21:03	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 21:03	591-78-6	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-5_8-9 **Lab ID: 10436863010** Collected: 06/22/18 09:50 Received: 06/22/18 20:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 21:03	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 21:03	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 21:03	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 21:03	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 21:03	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 21:03	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	103	%	57-148		1	06/28/18 11:30	06/28/18 21:03	1868-53-7	
Toluene-d8 (S)	94	%	58-142		1	06/28/18 11:30	06/28/18 21:03	2037-26-5	
4-Bromofluorobenzene (S)	82	%	48-130		1	06/28/18 11:30	06/28/18 21:03	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: **SB-3_14.5-19.5** Lab ID: **10436863011** Collected: 06/22/18 11:20 Received: 06/22/18 20:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA Mod. 3510C									
Acenaphthene	<0.0043	ug/L	0.014	0.0043	1	06/26/18 14:37	06/27/18 17:24	83-32-9	
Acenaphthylene	<0.0063	ug/L	0.021	0.0063	1	06/26/18 14:37	06/27/18 17:24	208-96-8	
Anthracene	<0.0083	ug/L	0.028	0.0083	1	06/26/18 14:37	06/27/18 17:24	120-12-7	
Benzo(a)anthracene	<0.0053	ug/L	0.018	0.0053	1	06/26/18 14:37	06/27/18 17:24	56-55-3	
Benzo(a)pyrene	<0.0054	ug/L	0.018	0.0054	1	06/26/18 14:37	06/27/18 17:24	50-32-8	
Benzo(b)fluoranthene	<0.017	ug/L	0.057	0.017	1	06/26/18 14:37	06/27/18 17:24	205-99-2	
Benzo(g,h,i)perylene	<0.013	ug/L	0.044	0.013	1	06/26/18 14:37	06/27/18 17:24	191-24-2	
Benzo(k)fluoranthene	<0.014	ug/L	0.047	0.014	1	06/26/18 14:37	06/27/18 17:24	207-08-9	
Chrysene	<0.012	ug/L	0.041	0.012	1	06/26/18 14:37	06/27/18 17:24	218-01-9	
Dibenz(a,h)anthracene	<0.012	ug/L	0.041	0.012	1	06/26/18 14:37	06/27/18 17:24	53-70-3	
Fluoranthene	<0.025	ug/L	0.082	0.025	1	06/26/18 14:37	06/27/18 17:24	206-44-0	
Fluorene	<0.0080	ug/L	0.027	0.0080	1	06/26/18 14:37	06/27/18 17:24	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.018	ug/L	0.060	0.018	1	06/26/18 14:37	06/27/18 17:24	193-39-5	
Naphthalene	<0.0092	ug/L	0.031	0.0092	1	06/26/18 14:37	06/27/18 17:24	91-20-3	
Phenanthrene	<0.014	ug/L	0.047	0.014	1	06/26/18 14:37	06/27/18 17:24	85-01-8	
Pyrene	<0.020	ug/L	0.066	0.020	1	06/26/18 14:37	06/27/18 17:24	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	72	%	30-145		1	06/26/18 14:37	06/27/18 17:24	321-60-8	A5
p-Terphenyl-d14 (S)	88	%	30-149		1	06/26/18 14:37	06/27/18 17:24	1718-51-0	
8260B VOC									
Analytical Method: EPA 8260B									
Acetone	<9.2	ug/L	30.8	9.2	1		06/27/18 15:59	67-64-1	
Allyl chloride	<0.29	ug/L	0.97	0.29	1		06/27/18 15:59	107-05-1	
Benzene	<0.10	ug/L	0.34	0.10	1		06/27/18 15:59	71-43-2	
Bromobenzene	<0.21	ug/L	0.69	0.21	1		06/27/18 15:59	108-86-1	
Bromochloromethane	<0.27	ug/L	0.91	0.27	1		06/27/18 15:59	74-97-5	
Bromodichloromethane	<0.22	ug/L	0.72	0.22	1		06/27/18 15:59	75-27-4	
Bromoform	<0.80	ug/L	2.7	0.80	1		06/27/18 15:59	75-25-2	
Bromomethane	<1.8	ug/L	6.1	1.8	1		06/27/18 15:59	74-83-9	
2-Butanone (MEK)	<0.99	ug/L	3.3	0.99	1		06/27/18 15:59	78-93-3	
n-Butylbenzene	<0.24	ug/L	0.80	0.24	1		06/27/18 15:59	104-51-8	
sec-Butylbenzene	<0.15	ug/L	0.50	0.15	1		06/27/18 15:59	135-98-8	
tert-Butylbenzene	<0.15	ug/L	0.49	0.15	1		06/27/18 15:59	98-06-6	
Carbon tetrachloride	<0.19	ug/L	0.63	0.19	1		06/27/18 15:59	56-23-5	
Chlorobenzene	<0.17	ug/L	0.57	0.17	1		06/27/18 15:59	108-90-7	
Chloroethane	<0.49	ug/L	1.6	0.49	1		06/27/18 15:59	75-00-3	
Chloroform	<0.45	ug/L	1.5	0.45	1		06/27/18 15:59	67-66-3	
Chloromethane	<0.16	ug/L	0.52	0.16	1		06/27/18 15:59	74-87-3	
2-Chlorotoluene	<0.16	ug/L	0.54	0.16	1		06/27/18 15:59	95-49-8	
4-Chlorotoluene	<0.13	ug/L	0.45	0.13	1		06/27/18 15:59	106-43-4	
1,2-Dibromo-3-chloropropane	<1.7	ug/L	5.5	1.7	1		06/27/18 15:59	96-12-8	
Dibromochloromethane	<0.12	ug/L	0.41	0.12	1		06/27/18 15:59	124-48-1	
1,2-Dibromoethane (EDB)	<0.24	ug/L	0.80	0.24	1		06/27/18 15:59	106-93-4	
Dibromomethane	<0.16	ug/L	0.54	0.16	1		06/27/18 15:59	74-95-3	
1,2-Dichlorobenzene	<0.14	ug/L	0.46	0.14	1		06/27/18 15:59	95-50-1	
1,3-Dichlorobenzene	<0.16	ug/L	0.54	0.16	1		06/27/18 15:59	541-73-1	

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: **SB-3_14.5-19.5** Lab ID: **10436863011** Collected: 06/22/18 11:20 Received: 06/22/18 20:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC Analytical Method: EPA 8260B									
1,4-Dichlorobenzene	<0.17	ug/L	0.56	0.17	1		06/27/18 15:59	106-46-7	
Dichlorodifluoromethane	<0.23	ug/L	0.78	0.23	1		06/27/18 15:59	75-71-8	
1,1-Dichloroethane	<0.17	ug/L	0.57	0.17	1		06/27/18 15:59	75-34-3	
1,2-Dichloroethane	<0.22	ug/L	0.73	0.22	1		06/27/18 15:59	107-06-2	
1,1-Dichloroethene	<0.16	ug/L	0.53	0.16	1		06/27/18 15:59	75-35-4	
cis-1,2-Dichloroethene	<0.15	ug/L	0.51	0.15	1		06/27/18 15:59	156-59-2	
trans-1,2-Dichloroethene	<0.12	ug/L	0.39	0.12	1		06/27/18 15:59	156-60-5	
Dichlorofluoromethane	<0.14	ug/L	0.47	0.14	1		06/27/18 15:59	75-43-4	N2
1,2-Dichloropropane	<0.16	ug/L	0.55	0.16	1		06/27/18 15:59	78-87-5	
1,3-Dichloropropane	<0.070	ug/L	0.23	0.070	1		06/27/18 15:59	142-28-9	
2,2-Dichloropropane	<0.17	ug/L	0.57	0.17	1		06/27/18 15:59	594-20-7	
1,1-Dichloropropene	<0.20	ug/L	0.66	0.20	1		06/27/18 15:59	563-58-6	
cis-1,3-Dichloropropene	<0.20	ug/L	0.68	0.20	1		06/27/18 15:59	10061-01-5	
trans-1,3-Dichloropropene	<0.18	ug/L	0.61	0.18	1		06/27/18 15:59	10061-02-6	
Diethyl ether (Ethyl ether)	<0.095	ug/L	0.32	0.095	1		06/27/18 15:59	60-29-7	
Ethylbenzene	<0.14	ug/L	0.46	0.14	1		06/27/18 15:59	100-41-4	
Hexachloro-1,3-butadiene	<0.31	ug/L	1.0	0.31	1		06/27/18 15:59	87-68-3	
Isopropylbenzene (Cumene)	<0.18	ug/L	0.62	0.18	1		06/27/18 15:59	98-82-8	
p-Isopropyltoluene	<0.15	ug/L	0.51	0.15	1		06/27/18 15:59	99-87-6	
Methylene Chloride	<0.98	ug/L	3.3	0.98	1		06/27/18 15:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.42	ug/L	1.4	0.42	1		06/27/18 15:59	108-10-1	
Methyl-tert-butyl ether	<0.16	ug/L	0.54	0.16	1		06/27/18 15:59	1634-04-4	
Naphthalene	<0.48	ug/L	1.6	0.48	1		06/27/18 15:59	91-20-3	
n-Propylbenzene	<0.10	ug/L	0.34	0.10	1		06/27/18 15:59	103-65-1	
Styrene	<0.19	ug/L	0.62	0.19	1		06/27/18 15:59	100-42-5	
1,1,1,2-Tetrachloroethane	<0.20	ug/L	0.65	0.20	1		06/27/18 15:59	630-20-6	
1,1,2,2-Tetrachloroethane	<0.17	ug/L	0.57	0.17	1		06/27/18 15:59	79-34-5	
Tetrachloroethene	<0.17	ug/L	0.57	0.17	1		06/27/18 15:59	127-18-4	
Tetrahydrofuran	<2.2	ug/L	7.4	2.2	1		06/27/18 15:59	109-99-9	
Toluene	2.1	ug/L	0.28	0.083	1		06/27/18 15:59	108-88-3	
1,2,3-Trichlorobenzene	<0.21	ug/L	0.69	0.21	1		06/27/18 15:59	87-61-6	
1,2,4-Trichlorobenzene	<0.20	ug/L	0.66	0.20	1		06/27/18 15:59	120-82-1	
1,1,1-Trichloroethane	<0.14	ug/L	0.45	0.14	1		06/27/18 15:59	71-55-6	
1,1,2-Trichloroethane	<0.18	ug/L	0.60	0.18	1		06/27/18 15:59	79-00-5	
Trichloroethene	<0.15	ug/L	0.50	0.15	1		06/27/18 15:59	79-01-6	
Trichlorofluoromethane	<0.23	ug/L	0.77	0.23	1		06/27/18 15:59	75-69-4	
1,2,3-Trichloropropane	<0.26	ug/L	0.86	0.26	1		06/27/18 15:59	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.22	ug/L	0.72	0.22	1		06/27/18 15:59	76-13-1	
1,2,4-Trimethylbenzene	<0.20	ug/L	0.65	0.20	1		06/27/18 15:59	95-63-6	
1,3,5-Trimethylbenzene	<0.12	ug/L	0.41	0.12	1		06/27/18 15:59	108-67-8	
Vinyl chloride	<0.092	ug/L	0.31	0.092	1		06/27/18 15:59	75-01-4	
Xylene (Total)	<0.31	ug/L	1.0	0.31	1		06/27/18 15:59	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%	75-125		1		06/27/18 15:59	17060-07-0	
Toluene-d8 (S)	98	%	75-125		1		06/27/18 15:59	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1		06/27/18 15:59	460-00-4	

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: Trip Blank **Lab ID: 10436863012** Collected: 06/21/18 00:00 Received: 06/22/18 20:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC Analytical Method: EPA 8260B									
Acetone	<9.2	ug/L	30.8	9.2	1		06/27/18 15:42	67-64-1	
Allyl chloride	<0.29	ug/L	0.97	0.29	1		06/27/18 15:42	107-05-1	
Benzene	<0.10	ug/L	0.34	0.10	1		06/27/18 15:42	71-43-2	
Bromobenzene	<0.21	ug/L	0.69	0.21	1		06/27/18 15:42	108-86-1	
Bromochloromethane	<0.27	ug/L	0.91	0.27	1		06/27/18 15:42	74-97-5	
Bromodichloromethane	<0.22	ug/L	0.72	0.22	1		06/27/18 15:42	75-27-4	
Bromoform	<0.80	ug/L	2.7	0.80	1		06/27/18 15:42	75-25-2	
Bromomethane	<1.8	ug/L	6.1	1.8	1		06/27/18 15:42	74-83-9	
2-Butanone (MEK)	<0.99	ug/L	3.3	0.99	1		06/27/18 15:42	78-93-3	
n-Butylbenzene	<0.24	ug/L	0.80	0.24	1		06/27/18 15:42	104-51-8	
sec-Butylbenzene	<0.15	ug/L	0.50	0.15	1		06/27/18 15:42	135-98-8	
tert-Butylbenzene	<0.15	ug/L	0.49	0.15	1		06/27/18 15:42	98-06-6	
Carbon tetrachloride	<0.19	ug/L	0.63	0.19	1		06/27/18 15:42	56-23-5	
Chlorobenzene	<0.17	ug/L	0.57	0.17	1		06/27/18 15:42	108-90-7	
Chloroethane	<0.49	ug/L	1.6	0.49	1		06/27/18 15:42	75-00-3	
Chloroform	<0.45	ug/L	1.5	0.45	1		06/27/18 15:42	67-66-3	
Chloromethane	<0.16	ug/L	0.52	0.16	1		06/27/18 15:42	74-87-3	
2-Chlorotoluene	<0.16	ug/L	0.54	0.16	1		06/27/18 15:42	95-49-8	
4-Chlorotoluene	<0.13	ug/L	0.45	0.13	1		06/27/18 15:42	106-43-4	
1,2-Dibromo-3-chloropropane	<1.7	ug/L	5.5	1.7	1		06/27/18 15:42	96-12-8	
Dibromochloromethane	<0.12	ug/L	0.41	0.12	1		06/27/18 15:42	124-48-1	
1,2-Dibromoethane (EDB)	<0.24	ug/L	0.80	0.24	1		06/27/18 15:42	106-93-4	
Dibromomethane	<0.16	ug/L	0.54	0.16	1		06/27/18 15:42	74-95-3	
1,2-Dichlorobenzene	<0.14	ug/L	0.46	0.14	1		06/27/18 15:42	95-50-1	
1,3-Dichlorobenzene	<0.16	ug/L	0.54	0.16	1		06/27/18 15:42	541-73-1	
1,4-Dichlorobenzene	<0.17	ug/L	0.56	0.17	1		06/27/18 15:42	106-46-7	
Dichlorodifluoromethane	<0.23	ug/L	0.78	0.23	1		06/27/18 15:42	75-71-8	
1,1-Dichloroethane	<0.17	ug/L	0.57	0.17	1		06/27/18 15:42	75-34-3	
1,2-Dichloroethane	<0.22	ug/L	0.73	0.22	1		06/27/18 15:42	107-06-2	
1,1-Dichloroethene	<0.16	ug/L	0.53	0.16	1		06/27/18 15:42	75-35-4	
cis-1,2-Dichloroethene	<0.15	ug/L	0.51	0.15	1		06/27/18 15:42	156-59-2	
trans-1,2-Dichloroethene	<0.12	ug/L	0.39	0.12	1		06/27/18 15:42	156-60-5	
Dichlorofluoromethane	<0.14	ug/L	0.47	0.14	1		06/27/18 15:42	75-43-4	N2
1,2-Dichloropropane	<0.16	ug/L	0.55	0.16	1		06/27/18 15:42	78-87-5	
1,3-Dichloropropane	<0.070	ug/L	0.23	0.070	1		06/27/18 15:42	142-28-9	
2,2-Dichloropropane	<0.17	ug/L	0.57	0.17	1		06/27/18 15:42	594-20-7	
1,1-Dichloropropene	<0.20	ug/L	0.66	0.20	1		06/27/18 15:42	563-58-6	
cis-1,3-Dichloropropene	<0.20	ug/L	0.68	0.20	1		06/27/18 15:42	10061-01-5	
trans-1,3-Dichloropropene	<0.18	ug/L	0.61	0.18	1		06/27/18 15:42	10061-02-6	
Diethyl ether (Ethyl ether)	<0.095	ug/L	0.32	0.095	1		06/27/18 15:42	60-29-7	
Ethylbenzene	<0.14	ug/L	0.46	0.14	1		06/27/18 15:42	100-41-4	
Hexachloro-1,3-butadiene	<0.31	ug/L	1.0	0.31	1		06/27/18 15:42	87-68-3	
Isopropylbenzene (Cumene)	<0.18	ug/L	0.62	0.18	1		06/27/18 15:42	98-82-8	
p-Isopropyltoluene	<0.15	ug/L	0.51	0.15	1		06/27/18 15:42	99-87-6	
Methylene Chloride	<0.98	ug/L	3.3	0.98	1		06/27/18 15:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.42	ug/L	1.4	0.42	1		06/27/18 15:42	108-10-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: Trip Blank **Lab ID: 10436863012** Collected: 06/21/18 00:00 Received: 06/22/18 20:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC Analytical Method: EPA 8260B									
Methyl-tert-butyl ether	<0.16	ug/L	0.54	0.16	1		06/27/18 15:42	1634-04-4	
Naphthalene	<0.48	ug/L	1.6	0.48	1		06/27/18 15:42	91-20-3	
n-Propylbenzene	<0.10	ug/L	0.34	0.10	1		06/27/18 15:42	103-65-1	
Styrene	<0.19	ug/L	0.62	0.19	1		06/27/18 15:42	100-42-5	
1,1,1,2-Tetrachloroethane	<0.20	ug/L	0.65	0.20	1		06/27/18 15:42	630-20-6	
1,1,2,2-Tetrachloroethane	<0.17	ug/L	0.57	0.17	1		06/27/18 15:42	79-34-5	
Tetrachloroethene	<0.17	ug/L	0.57	0.17	1		06/27/18 15:42	127-18-4	
Tetrahydrofuran	<2.2	ug/L	7.4	2.2	1		06/27/18 15:42	109-99-9	
Toluene	<0.083	ug/L	0.28	0.083	1		06/27/18 15:42	108-88-3	
1,2,3-Trichlorobenzene	<0.21	ug/L	0.69	0.21	1		06/27/18 15:42	87-61-6	
1,2,4-Trichlorobenzene	<0.20	ug/L	0.66	0.20	1		06/27/18 15:42	120-82-1	
1,1,1-Trichloroethane	<0.14	ug/L	0.45	0.14	1		06/27/18 15:42	71-55-6	
1,1,2-Trichloroethane	<0.18	ug/L	0.60	0.18	1		06/27/18 15:42	79-00-5	
Trichloroethene	<0.15	ug/L	0.50	0.15	1		06/27/18 15:42	79-01-6	
Trichlorofluoromethane	<0.23	ug/L	0.77	0.23	1		06/27/18 15:42	75-69-4	
1,2,3-Trichloropropane	<0.26	ug/L	0.86	0.26	1		06/27/18 15:42	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.22	ug/L	0.72	0.22	1		06/27/18 15:42	76-13-1	
1,2,4-Trimethylbenzene	<0.20	ug/L	0.65	0.20	1		06/27/18 15:42	95-63-6	
1,3,5-Trimethylbenzene	<0.12	ug/L	0.41	0.12	1		06/27/18 15:42	108-67-8	
Vinyl chloride	<0.092	ug/L	0.31	0.092	1		06/27/18 15:42	75-01-4	
Xylene (Total)	<0.31	ug/L	1.0	0.31	1		06/27/18 15:42	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%	75-125		1		06/27/18 15:42	17060-07-0	
Toluene-d8 (S)	98	%	75-125		1		06/27/18 15:42	2037-26-5	
4-Bromofluorobenzene (S)	96	%	75-125		1		06/27/18 15:42	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: MeOH Trip Blank Lab ID: 10436863013 Collected: 06/21/18 00:00 Received: 06/22/18 20:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 17:17	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 17:17	591-78-6	W
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 17:17	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 17:17	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 17:17	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 17:17	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 17:17	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 17:17	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	110	%	57-148		1	06/28/18 11:30	06/28/18 17:17	1868-53-7	
Toluene-d8 (S)	102	%	58-142		1	06/28/18 11:30	06/28/18 17:17	2037-26-5	
4-Bromofluorobenzene (S)	94	%	48-130		1	06/28/18 11:30	06/28/18 17:17	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

QC Batch:	546627	Analysis Method:	EPA 7471B
QC Batch Method:	EPA 7471B	Analysis Description:	7471B Mercury Solids
Associated Lab Samples:	10436863001, 10436863002, 10436863003, 10436863004, 10436863005, 10436863006, 10436863007, 10436863008, 10436863009, 10436863010		

METHOD BLANK:	2972710	Matrix:	Solid
Associated Lab Samples:	10436863001, 10436863002, 10436863003, 10436863004, 10436863005, 10436863006, 10436863007, 10436863008, 10436863009, 10436863010		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.0080	0.027	06/28/18 17:42	

LABORATORY CONTROL SAMPLE: 2972711

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.47	0.46	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2972712 2972713

Parameter	Units	10436863001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.023J	.62	.62	0.63	0.64	97	98	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

QC Batch:	546886	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3050	Analysis Description:	6010D Solids
Associated Lab Samples:	10436863001, 10436863002, 10436863003, 10436863004, 10436863005, 10436863006, 10436863007, 10436863008, 10436863009, 10436863010		

METHOD BLANK:	2973660	Matrix:	Solid
Associated Lab Samples:	10436863001, 10436863002, 10436863003, 10436863004, 10436863005, 10436863006, 10436863007, 10436863008, 10436863009, 10436863010		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<0.35	1.2	06/27/18 06:51	
Barium	mg/kg	<0.18	0.60	06/27/18 06:51	
Cadmium	mg/kg	<0.054	0.18	06/27/18 06:51	
Chromium	mg/kg	<0.22	0.74	06/27/18 06:51	
Lead	mg/kg	<0.23	0.77	06/27/18 06:51	
Selenium	mg/kg	<0.40	1.3	06/27/18 06:51	
Silver	mg/kg	<0.082	0.27	06/27/18 06:51	

LABORATORY CONTROL SAMPLE: 2973661

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	48.7	97	80-120	
Barium	mg/kg	50	51.9	104	80-120	
Cadmium	mg/kg	50	50.8	102	80-120	
Chromium	mg/kg	50	52.0	104	80-120	
Lead	mg/kg	50	51.9	104	80-120	
Selenium	mg/kg	50	47.4	95	80-120	
Silver	mg/kg	25	25.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2973662 2973663

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10436863001 Result	Spike Conc.	Spike Conc.	MS Result						
Arsenic	mg/kg	3.1	67.7	67.7	50.0	54.7	69	75-125	9	20	M1
Barium	mg/kg	245	67.7	67.7	326	284	119	75-125	14	20	M1
Cadmium	mg/kg	<0.075	67.7	67.7	50.8	55.8	75	75-125	9	20	
Chromium	mg/kg	49.6	67.7	67.7	113	123	94	75-125	8	20	
Lead	mg/kg	10.5	67.7	67.7	70.8	78.8	89	75-125	11	20	
Selenium	mg/kg	0.56J	67.7	67.7	45.5	48.9	66	75-125	7	20	M1
Silver	mg/kg	<0.11	33.9	33.9	24.4	27.0	72	75-125	10	20	M1

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

QC Batch: 547426 Analysis Method: ASTM D2974
 QC Batch Method: ASTM D2974 Analysis Description: Dry Weight / %M by ASTM D2974
 Associated Lab Samples: 10436863001, 10436863002, 10436863003, 10436863004, 10436863005, 10436863006, 10436863007,
 10436863008, 10436863009, 10436863010

SAMPLE DUPLICATE: 2975910

Parameter	Units	10436863001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	27.6	27.4	1	30	

SAMPLE DUPLICATE: 2975911

Parameter	Units	10436863010 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	28.1	28.4	1	30	

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II
Pace Project No.: 10436863

QC Batch: 293184 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 10436863001, 10436863002, 10436863003, 10436863004, 10436863005, 10436863006, 10436863007, 10436863008, 10436863009, 10436863010, 10436863013

METHOD BLANK: 1714466 Matrix: Solid
Associated Lab Samples: 10436863001, 10436863002, 10436863003, 10436863004, 10436863005, 10436863006, 10436863007, 10436863008, 10436863009, 10436863010, 10436863013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	06/28/18 15:01	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	06/28/18 15:01	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	06/28/18 15:01	
1,1-Dichloroethane	ug/kg	<17.6	50.0	06/28/18 15:01	
1,1-Dichloroethene	ug/kg	<17.6	50.0	06/28/18 15:01	
1,2-Dichloroethane	ug/kg	<15.0	50.0	06/28/18 15:01	
1,2-Dichloropropane	ug/kg	<16.8	50.0	06/28/18 15:01	
2-Butanone (MEK)	ug/kg	<124	250	06/28/18 15:01	
2-Hexanone	ug/kg	<52.0	250	06/28/18 15:01	
4-Methyl-2-pentanone (MIBK)	ug/kg	<41.1	250	06/28/18 15:01	
Acetone	ug/kg	<98.6	250	06/28/18 15:01	
Benzene	ug/kg	<9.2	20.0	06/28/18 15:01	
Bromodichloromethane	ug/kg	<9.8	50.0	06/28/18 15:01	
Bromoform	ug/kg	<19.8	50.0	06/28/18 15:01	
Bromomethane	ug/kg	<69.9	250	06/28/18 15:01	
Carbon disulfide	ug/kg	<11.1	50.0	06/28/18 15:01	
Carbon tetrachloride	ug/kg	<12.1	50.0	06/28/18 15:01	
Chlorobenzene	ug/kg	<14.8	50.0	06/28/18 15:01	
Chloroethane	ug/kg	<67.0	250	06/28/18 15:01	
Chloroform	ug/kg	<46.4	250	06/28/18 15:01	
Chloromethane	ug/kg	<20.4	50.0	06/28/18 15:01	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	06/28/18 15:01	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	06/28/18 15:01	
Dibromochloromethane	ug/kg	<17.9	50.0	06/28/18 15:01	
Ethylbenzene	ug/kg	<12.4	50.0	06/28/18 15:01	
m&p-Xylene	ug/kg	<34.4	100	06/28/18 15:01	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	06/28/18 15:01	
Methylene Chloride	ug/kg	<16.2	50.0	06/28/18 15:01	
o-Xylene	ug/kg	<14.0	50.0	06/28/18 15:01	
Styrene	ug/kg	<9.0	50.0	06/28/18 15:01	
Tetrachloroethene	ug/kg	<12.9	50.0	06/28/18 15:01	
Toluene	ug/kg	<11.2	50.0	06/28/18 15:01	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	06/28/18 15:01	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	06/28/18 15:01	
Trichloroethene	ug/kg	<23.6	50.0	06/28/18 15:01	
Vinyl chloride	ug/kg	<21.1	50.0	06/28/18 15:01	
4-Bromofluorobenzene (S)	%	93	48-130	06/28/18 15:01	
Dibromofluoromethane (S)	%	116	57-148	06/28/18 15:01	
Toluene-d8 (S)	%	107	58-142	06/28/18 15:01	

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

LABORATORY CONTROL SAMPLE: 1714467

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2590	104	70-130	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2840	114	68-130	
1,1,2-Trichloroethane	ug/kg	2500	2610	104	70-130	
1,1-Dichloroethane	ug/kg	2500	2550	102	67-132	
1,1-Dichloroethene	ug/kg	2500	2740	110	67-128	
1,2-Dichloroethane	ug/kg	2500	2500	100	65-137	
1,2-Dichloropropane	ug/kg	2500	2820	113	75-126	
Benzene	ug/kg	2500	2470	99	70-130	
Bromodichloromethane	ug/kg	2500	2750	110	70-130	
Bromoform	ug/kg	2500	2310	92	57-117	
Bromomethane	ug/kg	2500	2360	94	48-135	
Carbon disulfide	ug/kg	2500	2580	103	66-143	
Carbon tetrachloride	ug/kg	2500	2650	106	65-133	
Chlorobenzene	ug/kg	2500	2590	103	70-130	
Chloroethane	ug/kg	2500	2500	100	37-165	
Chloroform	ug/kg	2500	2530	101	72-126	
Chloromethane	ug/kg	2500	1960	78	34-120	
cis-1,2-Dichloroethene	ug/kg	2500	2430	97	70-130	
cis-1,3-Dichloropropene	ug/kg	2500	2700	108	69-130	
Dibromochloromethane	ug/kg	2500	2610	104	68-130	
Ethylbenzene	ug/kg	2500	2630	105	79-121	
m&p-Xylene	ug/kg	5000	5260	105	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2370	95	66-129	
Methylene Chloride	ug/kg	2500	2580	103	68-129	
o-Xylene	ug/kg	2500	2670	107	70-130	
Styrene	ug/kg	2500	2660	107	70-130	
Tetrachloroethene	ug/kg	2500	2630	105	70-130	
Toluene	ug/kg	2500	2660	106	80-123	
trans-1,2-Dichloroethene	ug/kg	2500	2540	102	70-130	
trans-1,3-Dichloropropene	ug/kg	2500	2290	91	67-130	
Trichloroethene	ug/kg	2500	2720	109	70-130	
Vinyl chloride	ug/kg	2500	2080	83	52-122	
4-Bromofluorobenzene (S)	%			98	48-130	
Dibromofluoromethane (S)	%			105	57-148	
Toluene-d8 (S)	%			101	58-142	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1714468 1714469

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10436863004 Result	Spike Conc.	Spike Conc.	MS Result								
1,1,1-Trichloroethane	ug/kg	<25.0	1660	1660	1500	1440	90	87	62-130	4	20		
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	1660	1660	1670	1550	101	94	64-137	7	20		
1,1,2-Trichloroethane	ug/kg	<25.0	1660	1660	1650	1520	100	92	70-130	8	20		
1,1-Dichloroethane	ug/kg	<25.0	1660	1660	1590	1510	96	91	65-132	5	20		
1,1-Dichloroethene	ug/kg	<25.0	1660	1660	1460	1410	88	85	50-128	4	21		

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1714468 1714469											
Parameter	Units	10436863004 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
1,2-Dichloroethane	ug/kg	<25.0	1660	1660	1670	1570	101	95	65-139	6	20
1,2-Dichloropropane	ug/kg	<25.0	1660	1660	1790	1660	108	100	74-128	8	20
Benzene	ug/kg	<25.0	1660	1660	1550	1470	93	89	66-132	5	20
Bromodichloromethane	ug/kg	<25.0	1660	1660	1710	1650	103	99	69-130	4	20
Bromoform	ug/kg	<25.0	1660	1660	1600	1550	97	94	57-130	3	20
Bromomethane	ug/kg	<69.9	1660	1660	1330	1250	80	75	34-145	6	20
Carbon disulfide	ug/kg	<25.0	1660	1660	1320	1270	80	77	48-143	4	20
Carbon tetrachloride	ug/kg	<25.0	1660	1660	1480	1460	90	88	54-133	2	20
Chlorobenzene	ug/kg	<25.0	1660	1660	1670	1590	101	96	70-130	5	20
Chloroethane	ug/kg	<67.0	1660	1660	1370	1360	83	82	33-165	1	20
Chloroform	ug/kg	<46.4	1660	1660	1650	1570	99	95	72-128	5	20
Chloromethane	ug/kg	<25.0	1660	1660	836	777	50	47	20-120	7	20
cis-1,2-Dichloroethene	ug/kg	<25.0	1660	1660	1620	1480	98	90	69-130	9	20
cis-1,3-Dichloropropene	ug/kg	<25.0	1660	1660	1620	1500	98	91	65-130	7	20
Dibromochloromethane	ug/kg	<25.0	1660	1660	1620	1460	98	88	65-130	10	20
Ethylbenzene	ug/kg	<25.0	1660	1660	1590	1480	96	90	63-127	7	20
m&p-Xylene	ug/kg	<50.0	3310	3310	3250	3100	98	94	70-130	5	20
Methyl-tert-butyl ether	ug/kg	<25.0	1660	1660	1480	1390	89	84	62-135	6	20
Methylene Chloride	ug/kg	<25.0	1660	1660	1670	1560	101	94	68-129	7	20
o-Xylene	ug/kg	<25.0	1660	1660	1620	1530	98	92	69-130	6	20
Styrene	ug/kg	<25.0	1660	1660	1720	1580	104	96	70-130	8	20
Tetrachloroethene	ug/kg	<25.0	1660	1660	1570	1540	95	93	70-130	2	20
Toluene	ug/kg	<25.0	1660	1660	1680	1580	102	95	80-123	6	20
trans-1,2-Dichloroethene	ug/kg	<25.0	1660	1660	1590	1420	96	86	70-130	11	20
trans-1,3-Dichloropropene	ug/kg	<25.0	1660	1660	1460	1370	88	83	67-130	6	20
Trichloroethene	ug/kg	<25.0	1660	1660	1640	1590	99	96	70-130	3	20
Vinyl chloride	ug/kg	<25.0	1660	1660	928	899	56	54	39-122	3	20
4-Bromofluorobenzene (S)	%						97	90	48-130		
Dibromofluoromethane (S)	%						106	100	57-148		
Toluene-d8 (S)	%						102	96	58-142		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

QC Batch: 547301

Analysis Method: EPA 8260B

QC Batch Method: EPA 8260B

Analysis Description: 8260B MSV 465 W

Associated Lab Samples: 10436863011, 10436863012

METHOD BLANK: 2975400

Matrix: Water

Associated Lab Samples: 10436863011, 10436863012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.65	06/27/18 12:47	
1,1,1-Trichloroethane	ug/L	<0.14	0.45	06/27/18 12:47	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.57	06/27/18 12:47	
1,1,2-Trichloroethane	ug/L	<0.18	0.60	06/27/18 12:47	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	0.72	06/27/18 12:47	
1,1-Dichloroethane	ug/L	<0.17	0.57	06/27/18 12:47	
1,1-Dichloroethene	ug/L	<0.16	0.53	06/27/18 12:47	
1,1-Dichloropropene	ug/L	<0.20	0.66	06/27/18 12:47	
1,2,3-Trichlorobenzene	ug/L	<0.21	0.69	06/27/18 12:47	
1,2,3-Trichloropropane	ug/L	<0.26	0.86	06/27/18 12:47	
1,2,4-Trichlorobenzene	ug/L	<0.20	0.66	06/27/18 12:47	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.65	06/27/18 12:47	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	5.5	06/27/18 12:47	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.80	06/27/18 12:47	
1,2-Dichlorobenzene	ug/L	<0.14	0.46	06/27/18 12:47	
1,2-Dichloroethane	ug/L	<0.22	0.73	06/27/18 12:47	
1,2-Dichloropropane	ug/L	<0.16	0.55	06/27/18 12:47	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.41	06/27/18 12:47	
1,3-Dichlorobenzene	ug/L	<0.16	0.54	06/27/18 12:47	
1,3-Dichloropropane	ug/L	<0.070	0.23	06/27/18 12:47	
1,4-Dichlorobenzene	ug/L	<0.17	0.56	06/27/18 12:47	
2,2-Dichloropropane	ug/L	<0.17	0.57	06/27/18 12:47	
2-Butanone (MEK)	ug/L	<0.99	3.3	06/27/18 12:47	
2-Chlorotoluene	ug/L	<0.16	0.54	06/27/18 12:47	
4-Chlorotoluene	ug/L	<0.13	0.45	06/27/18 12:47	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	1.4	06/27/18 12:47	
Acetone	ug/L	<9.2	30.8	06/27/18 12:47	
Allyl chloride	ug/L	<0.29	0.97	06/27/18 12:47	
Benzene	ug/L	<0.10	0.34	06/27/18 12:47	
Bromobenzene	ug/L	<0.21	0.69	06/27/18 12:47	
Bromochloromethane	ug/L	<0.27	0.91	06/27/18 12:47	
Bromodichloromethane	ug/L	<0.22	0.72	06/27/18 12:47	
Bromoform	ug/L	<0.80	2.7	06/27/18 12:47	
Bromomethane	ug/L	<1.8	6.1	06/27/18 12:47	
Carbon tetrachloride	ug/L	<0.19	0.63	06/27/18 12:47	
Chlorobenzene	ug/L	<0.17	0.57	06/27/18 12:47	
Chloroethane	ug/L	<0.49	1.6	06/27/18 12:47	
Chloroform	ug/L	<0.45	1.5	06/27/18 12:47	
Chloromethane	ug/L	<0.16	0.52	06/27/18 12:47	
cis-1,2-Dichloroethene	ug/L	<0.15	0.51	06/27/18 12:47	
cis-1,3-Dichloropropene	ug/L	<0.20	0.68	06/27/18 12:47	

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

METHOD BLANK: 2975400

Matrix: Water

Associated Lab Samples: 10436863011, 10436863012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromochloromethane	ug/L	<0.12	0.41	06/27/18 12:47	
Dibromomethane	ug/L	<0.16	0.54	06/27/18 12:47	
Dichlorodifluoromethane	ug/L	<0.23	0.78	06/27/18 12:47	
Dichlorofluoromethane	ug/L	<0.14	0.47	06/27/18 12:47	N2
Diethyl ether (Ethyl ether)	ug/L	<0.095	0.32	06/27/18 12:47	
Ethylbenzene	ug/L	<0.14	0.46	06/27/18 12:47	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	06/27/18 12:47	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.62	06/27/18 12:47	
Methyl-tert-butyl ether	ug/L	<0.16	0.54	06/27/18 12:47	
Methylene Chloride	ug/L	<0.98	3.3	06/27/18 12:47	
n-Butylbenzene	ug/L	<0.24	0.80	06/27/18 12:47	
n-Propylbenzene	ug/L	<0.10	0.34	06/27/18 12:47	
Naphthalene	ug/L	<0.48	1.6	06/27/18 12:47	
p-Isopropyltoluene	ug/L	<0.15	0.51	06/27/18 12:47	
sec-Butylbenzene	ug/L	<0.15	0.50	06/27/18 12:47	
Styrene	ug/L	<0.19	0.62	06/27/18 12:47	
tert-Butylbenzene	ug/L	<0.15	0.49	06/27/18 12:47	
Tetrachloroethene	ug/L	<0.17	0.57	06/27/18 12:47	
Tetrahydrofuran	ug/L	<2.2	7.4	06/27/18 12:47	
Toluene	ug/L	<0.083	0.28	06/27/18 12:47	
trans-1,2-Dichloroethene	ug/L	<0.12	0.39	06/27/18 12:47	
trans-1,3-Dichloropropene	ug/L	<0.18	0.61	06/27/18 12:47	
Trichloroethene	ug/L	<0.15	0.50	06/27/18 12:47	
Trichlorofluoromethane	ug/L	<0.23	0.77	06/27/18 12:47	
Vinyl chloride	ug/L	<0.092	0.31	06/27/18 12:47	
Xylene (Total)	ug/L	<0.31	1.0	06/27/18 12:47	
1,2-Dichloroethane-d4 (S)	%	99	75-125	06/27/18 12:47	
4-Bromofluorobenzene (S)	%	96	75-125	06/27/18 12:47	
Toluene-d8 (S)	%	98	75-125	06/27/18 12:47	

LABORATORY CONTROL SAMPLE: 2975401

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	17.7	89	75-125	
1,1,1-Trichloroethane	ug/L	20	21.1	106	75-125	
1,1,2,2-Tetrachloroethane	ug/L	20	18.5	92	75-129	
1,1,2-Trichloroethane	ug/L	20	19.5	97	75-125	
1,1,2-Trichlorotrifluoroethane	ug/L	20	18.7	94	74-125	
1,1-Dichloroethane	ug/L	20	20.7	103	75-127	
1,1-Dichloroethene	ug/L	20	18.4	92	73-125	
1,1-Dichloropropene	ug/L	20	20.5	102	75-125	
1,2,3-Trichlorobenzene	ug/L	20	17.4	87	74-126	
1,2,3-Trichloropropane	ug/L	20	19.7	98	75-125	
1,2,4-Trichlorobenzene	ug/L	20	16.9	84	75-125	

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

LABORATORY CONTROL SAMPLE: 2975401

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	18.4	92	75-125	
1,2-Dibromo-3-chloropropane	ug/L	50	44.2	88	64-129	
1,2-Dibromoethane (EDB)	ug/L	20	18.3	92	75-125	
1,2-Dichlorobenzene	ug/L	20	18.8	94	75-125	
1,2-Dichloroethane	ug/L	20	19.8	99	74-125	
1,2-Dichloropropane	ug/L	20	20.6	103	75-125	
1,3,5-Trimethylbenzene	ug/L	20	18.7	93	75-125	
1,3-Dichlorobenzene	ug/L	20	18.6	93	75-125	
1,3-Dichloropropane	ug/L	20	19.5	98	75-125	
1,4-Dichlorobenzene	ug/L	20	18.1	91	75-125	
2,2-Dichloropropane	ug/L	20	21.0	105	70-125	
2-Butanone (MEK)	ug/L	100	106	106	57-130	
2-Chlorotoluene	ug/L	20	18.0	90	75-125	
4-Chlorotoluene	ug/L	20	18.3	92	75-125	
4-Methyl-2-pentanone (MIBK)	ug/L	100	103	103	69-137	
Acetone	ug/L	100	98.0	98	32-150	
Allyl chloride	ug/L	20	18.5	93	64-135	
Benzene	ug/L	20	19.6	98	75-126	
Bromobenzene	ug/L	20	20.0	100	75-125	
Bromochloromethane	ug/L	20	21.9	109	75-126	
Bromodichloromethane	ug/L	20	19.3	96	75-125	
Bromoform	ug/L	20	17.0	85	67-125	
Bromomethane	ug/L	20	14.1	71	30-150	
Carbon tetrachloride	ug/L	20	18.0	90	75-125	
Chlorobenzene	ug/L	20	19.8	99	75-125	
Chloroethane	ug/L	20	16.1	81	64-142	
Chloroform	ug/L	20	19.7	99	75-125	
Chloromethane	ug/L	20	15.9	80	40-150	
cis-1,2-Dichloroethene	ug/L	20	21.3	107	75-125	
cis-1,3-Dichloropropene	ug/L	20	17.5	87	75-125	
Dibromochloromethane	ug/L	20	17.6	88	75-125	
Dibromomethane	ug/L	20	19.5	97	75-125	
Dichlorodifluoromethane	ug/L	20	14.4	72	61-132	
Dichlorofluoromethane	ug/L	20	18.3	92	75-129	N2
Diethyl ether (Ethyl ether)	ug/L	20	20.1	101	74-125	
Ethylbenzene	ug/L	20	19.5	98	75-125	
Hexachloro-1,3-butadiene	ug/L	20	18.9	95	75-125	
Isopropylbenzene (Cumene)	ug/L	20	19.6	98	75-125	
Methyl-tert-butyl ether	ug/L	20	20.8	104	73-129	
Methylene Chloride	ug/L	20	19.9	99	72-125	
n-Butylbenzene	ug/L	20	16.8	84	75-125	
n-Propylbenzene	ug/L	20	18.4	92	75-125	
Naphthalene	ug/L	20	16.9	85	65-126	
p-Isopropyltoluene	ug/L	20	16.9	85	75-125	
sec-Butylbenzene	ug/L	20	17.9	89	75-125	
Styrene	ug/L	20	19.6	98	75-125	
tert-Butylbenzene	ug/L	20	18.3	92	75-125	

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

LABORATORY CONTROL SAMPLE: 2975401

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethane	ug/L	20	18.9	94	75-125	
Tetrahydrofuran	ug/L	200	206	103	30-150	
Toluene	ug/L	20	19.1	96	74-125	
trans-1,2-Dichloroethene	ug/L	20	19.9	99	70-126	
trans-1,3-Dichloropropene	ug/L	20	19.7	99	75-125	
Trichloroethene	ug/L	20	18.8	94	75-125	
Trichlorofluoromethane	ug/L	20	17.5	87	71-131	
Vinyl chloride	ug/L	20	18.1	90	65-137	
Xylene (Total)	ug/L	60	59.2	99	75-125	
1,2-Dichloroethane-d4 (S)	%			101	75-125	
4-Bromofluorobenzene (S)	%			96	75-125	
Toluene-d8 (S)	%			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2975423 2975424

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10436832003 Result	Spike Conc.	Spike Conc.	MS Result						
1,1,1,2-Tetrachloroethane	ug/L	<1.0	20	20	8.5	5.7	43	28	69-130	41	30 M1,R1
1,1,1-Trichloroethane	ug/L	<1.0	20	20	10.4	6.8	52	34	72-133	42	30 M1,R1
1,1,2,2-Tetrachloroethane	ug/L	<1.0	20	20	8.4	5.8	42	29	60-137	37	30 M1,R1
1,1,2-Trichloroethane	ug/L	<1.0	20	20	9.3	6.4	46	32	70-128	36	30 M1,R1
1,1,2-Trichlorotrifluoroethane	ug/L	<1.0	20	20	7.6	4.9	38	24	64-147	43	30 M1,R1
1,1-Dichloroethane	ug/L	<1.0	20	20	10.3	7.0	52	35	64-136	38	30 M1,R1
1,1-Dichloroethene	ug/L	<1.0	20	20	9.5	6.4	47	32	67-139	39	30 M1,R1
1,1-Dichloropropene	ug/L	<1.0	20	20	9.7	6.0	48	30	69-131	47	30 M1,R1
1,2,3-Trichlorobenzene	ug/L	<1.0	20	20	6.5	3.9	32	20	60-138	49	30 M1,R1
1,2,3-Trichloropropane	ug/L	<4.0	20	20	9.3	6.1	46	31	67-129	41	30 M1,R1
1,2,4-Trichlorobenzene	ug/L	<1.0	20	20	6.3	4.0	32	20	71-125	45	30 M1,R1
1,2,4-Trimethylbenzene	ug/L	<1.0	20	20	8.1	4.9	40	24	67-130	49	30 M1,R1
1,2-Dibromo-3-chloropropane	ug/L	<4.0	50	50	19.6	13.2	39	26	52-141	39	30 M1,R1
1,2-Dibromoethane (EDB)	ug/L	<1.0	20	20	8.7	6.1	43	31	66-130	34	30 M1,R1
1,2-Dichlorobenzene	ug/L	<1.0	20	20	8.2	5.2	41	26	72-126	44	30 M1,R1
1,2-Dichloroethane	ug/L	<1.0	20	20	9.5	6.9	47	35	64-125	32	30 M1,R1
1,2-Dichloropropane	ug/L	<4.0	20	20	9.9	6.9	50	34	65-128	37	30 M1,R1
1,3,5-Trimethylbenzene	ug/L	<1.0	20	20	8.0	4.8	40	24	63-139	51	30 M1,R1
1,3-Dichlorobenzene	ug/L	<1.0	20	20	7.9	4.9	39	24	70-128	47	30 M1,R1
1,3-Dichloropropane	ug/L	<1.0	20	20	9.2	6.3	46	31	70-131	38	30 M1,R1
1,4-Dichlorobenzene	ug/L	<1.0	20	20	7.6	5.0	38	25	74-125	42	30 M1,R1
2,2-Dichloropropane	ug/L	<4.0	20	20	10.9	7.5	55	37	58-137	38	30 M1,R1
2-Butanone (MEK)	ug/L	<5.0	100	100	50.6	35.1	51	35	45-132	36	30 M1,R1
2-Chlorotoluene	ug/L	<1.0	20	20	8.2	5.0	41	25	66-134	48	30 M1,R1
4-Chlorotoluene	ug/L	<1.0	20	20	7.9	4.9	40	25	70-132	46	30 M1,R1
4-Methyl-2-pentanone (MIBK)	ug/L	<5.0	100	100	49.1	33.6	49	34	54-143	38	30 M1,R1
Acetone	ug/L	<20.0	100	100	45.6	36.4	46	36	51-150	23	30 M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Parameter	Units	10436832003		2975423		2975424		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
Allyl chloride	ug/L	<4.0	20	20	8.9	6.7	45	34	52-150	28	30	M1	
Benzene	ug/L	<1.0	20	20	9.7	6.6	48	32	62-140	38	30	M1,R1	
Bromobenzene	ug/L	<1.0	20	20	9.3	5.9	47	29	70-128	45	30	M1,R1	
Bromochloromethane	ug/L	<1.0	20	20	10.6	7.2	53	36	65-131	38	30	M1,R1	
Bromodichloromethane	ug/L	<1.0	20	20	9.0	6.2	45	31	74-127	37	30	M1,R1	
Bromoform	ug/L	<4.0	20	20	7.6	5.4	38	27	59-125	34	30	M1,R1	
Bromomethane	ug/L	<4.0	20	20	9.8	5.8J	49	29	30-149	52	30	M1,R1	
Carbon tetrachloride	ug/L	<1.0	20	20	8.7	5.6	44	28	67-134	43	30	M1,R1	
Chlorobenzene	ug/L	<1.0	20	20	9.2	5.9	46	29	72-131	44	30	M1,R1	
Chloroethane	ug/L	<1.0	20	20	13.5	7.0	67	35	55-150	63	30	M1,R1	
Chloroform	ug/L	<1.0	20	20	9.3	6.4	47	32	67-125	38	30	M1,R1	
Chloromethane	ug/L	<4.0	20	20	13.3	7.3	67	37	43-148	58	30	M1,R1	
cis-1,2-Dichloroethene	ug/L	<1.0	20	20	10.3	7.0	51	35	62-132	38	30	M1,R1	
cis-1,3-Dichloropropene	ug/L	<4.0	20	20	8.1	5.6	41	28	63-129	37	30	M1,R1	
Dibromochloromethane	ug/L	<1.0	20	20	8.2	5.8	41	29	67-127	35	30	M1,R1	
Dibromomethane	ug/L	<4.0	20	20	9.2	6.4	46	32	68-132	36	30	M1,R1	
Dichlorodifluoromethane	ug/L	<1.0	20	20	12.6	5.6	63	28	59-144	76	30	M1,R1	
Dichlorofluoromethane	ug/L	<1.0	20	20	15.1	7.9	76	40	63-144	62	30	M1,N2,R1	
Diethyl ether (Ethyl ether)	ug/L	<4.0	20	20	9.8	6.8	49	34	52-139	36	30	M1,R1	
Ethylbenzene	ug/L	<1.0	20	20	9.5	5.9	45	28	75-131	46	30	M1,R1	
Hexachloro-1,3-butadiene	ug/L	<1.0	20	20	6.1	3.6	30	18	58-146	50	30	M1,R1	
Isopropylbenzene (Cumene)	ug/L	<1.0	20	20	8.9	5.2	45	26	71-132	52	30	M1,R1	
Methyl-tert-butyl ether	ug/L	<1.0	20	20	9.9	7.1	49	35	65-130	32	30	M1,R1	
Methylene Chloride	ug/L	<4.0	20	20	9.5	6.8	47	34	66-125	33	30	M1,R1	
n-Butylbenzene	ug/L	<1.0	20	20	6.1	3.7	30	18	57-141	49	30	M1,R1	
n-Propylbenzene	ug/L	<1.0	20	20	7.9	4.7	39	23	70-131	51	30	M1,R1	
Naphthalene	ug/L	<4.0	20	20	7.1	4.7	36	23	48-134	42	30	M1,R1	
p-Isopropyltoluene	ug/L	<1.0	20	20	6.9	4.0	34	20	66-136	52	30	M1,R1	
sec-Butylbenzene	ug/L	<1.0	20	20	7.5	4.1	37	20	69-134	58	30	M1,R1	
Styrene	ug/L	<1.0	20	20	8.9	5.5	44	28	65-134	46	30	M1,R1	
tert-Butylbenzene	ug/L	<1.0	20	20	8.3	4.7	41	23	71-130	56	30	M1,R1	
Tetrachloroethene	ug/L	<1.0	20	20	8.4	5.1	42	26	69-135	48	30	M1,R1	
Tetrahydrofuran	ug/L	<10.0	200	200	93.1	68.4	47	34	48-150	31	30	M1,R1	
Toluene	ug/L	<1.0	20	20	9.5	6.1	45	28	68-132	43	30	M1,R1	
trans-1,2-Dichloroethene	ug/L	<1.0	20	20	9.6	6.4	48	32	61-134	40	30	M1,R1	
trans-1,3-Dichloropropene	ug/L	<4.0	20	20	9.1	6.1	46	31	66-125	39	30	M1,R1	
Trichloroethene	ug/L	<0.40	20	20	9.1	6.0	45	30	64-136	41	30	M1,R1	
Trichlorofluoromethane	ug/L	<1.0	20	20	15.0	7.2	75	36	65-146	70	30	M1,R1	
Vinyl chloride	ug/L	<0.20	20	20	15.4	8.0	77	40	51-150	64	30	M1,R1	
Xylene (Total)	ug/L	<3.0	60	60	27.8	17.3	46	29	69-135	47	30	MS,RS	
1,2-Dichloroethane-d4 (S)	%						101	101	75-125				
4-Bromofluorobenzene (S)	%						95	96	75-125				
Toluene-d8 (S)	%						99	97	75-125				

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II
Pace Project No.: 10436863

QC Batch: 546641 Analysis Method: EPA 8270D by SIM
QC Batch Method: EPA 3550 Analysis Description: 8270D Solid PAH by SIM MSSV
Associated Lab Samples: 10436863001, 10436863002, 10436863003, 10436863004, 10436863005, 10436863006, 10436863007, 10436863008, 10436863009, 10436863010

METHOD BLANK: 2972761 Matrix: Solid
Associated Lab Samples: 10436863001, 10436863002, 10436863003, 10436863004, 10436863005, 10436863006, 10436863007, 10436863008, 10436863009, 10436863010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/kg	<0.41	1.4	06/26/18 11:44	
Acenaphthylene	ug/kg	<0.50	1.6	06/26/18 11:44	
Anthracene	ug/kg	<0.47	1.6	06/26/18 11:44	
Benzo(a)anthracene	ug/kg	<1.1	3.6	06/26/18 11:44	
Benzo(a)pyrene	ug/kg	<0.69	2.3	06/26/18 11:44	
Benzo(b)fluoranthene	ug/kg	<0.37	1.2	06/26/18 11:44	
Benzo(g,h,i)perylene	ug/kg	<0.63	2.1	06/26/18 11:44	
Benzo(k)fluoranthene	ug/kg	<0.84	2.8	06/26/18 11:44	
Chrysene	ug/kg	<1.4	4.5	06/26/18 11:44	
Dibenz(a,h)anthracene	ug/kg	<0.46	1.5	06/26/18 11:44	
Fluoranthene	ug/kg	<0.43	1.4	06/26/18 11:44	
Fluorene	ug/kg	<0.31	1.0	06/26/18 11:44	
Indeno(1,2,3-cd)pyrene	ug/kg	<0.67	2.2	06/26/18 11:44	
Naphthalene	ug/kg	<0.77	2.6	06/26/18 11:44	
Phenanthrene	ug/kg	<1.9	6.4	06/26/18 11:44	
Pyrene	ug/kg	<1.5	5.1	06/26/18 11:44	
2-Fluorobiphenyl (S)	%	60	42-125	06/26/18 11:44	
p-Terphenyl-d14 (S)	%	78	57-125	06/26/18 11:44	

LABORATORY CONTROL SAMPLE: 2972762

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/kg	33.3	21.4	64	52-125	
Acenaphthylene	ug/kg	33.3	21.9	66	50-125	
Anthracene	ug/kg	33.3	31.2	94	65-125	
Benzo(a)anthracene	ug/kg	33.3	36.2	109	60-125	
Benzo(a)pyrene	ug/kg	33.3	33.4	100	69-125	
Benzo(b)fluoranthene	ug/kg	33.3	39.3	118	61-125	
Benzo(g,h,i)perylene	ug/kg	33.3	34.6	104	60-125	
Benzo(k)fluoranthene	ug/kg	33.3	31.2	94	67-125	
Chrysene	ug/kg	33.3	37.4	112	67-125	
Dibenz(a,h)anthracene	ug/kg	33.3	31.2	94	63-125	
Fluoranthene	ug/kg	33.3	37.6	113	75-125	
Fluorene	ug/kg	33.3	24.5	74	54-125	
Indeno(1,2,3-cd)pyrene	ug/kg	33.3	33.6	101	63-125	
Naphthalene	ug/kg	33.3	22.6	68	49-125	
Phenanthrene	ug/kg	33.3	28.6	86	65-125	
Pyrene	ug/kg	33.3	32.2	97	64-125	

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

LABORATORY CONTROL SAMPLE: 2972762

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Fluorobiphenyl (S)	%.			67	42-125	
p-Terphenyl-d14 (S)	%.			80	57-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2972763 2972764

Parameter	Units	10436821003		MSD		MSD		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Acenaphthene	ug/kg	ND	39.3	39.3	45.3	38.3	115	98	30-125		30		
Acenaphthylene	ug/kg	ND	39.3	39.3	36.1	28.8	92	73	30-133		30		
Anthracene	ug/kg	ND	39.3	39.3	<5.5	<5.5	0	0	30-150		30	M6	
Benzo(a)anthracene	ug/kg	ND	39.3	39.3	34.2J	33.1J	87	84	30-150		30		
Benzo(a)pyrene	ug/kg	ND	39.3	39.3	33.9	33.6	86	86	30-150		30		
Benzo(b)fluoranthene	ug/kg	ND	39.3	39.3	30.6	28.9	78	74	30-150		30		
Benzo(g,h,i)perylene	ug/kg	ND	39.3	39.3	32.5	32.0	82	81	30-150		30		
Benzo(k)fluoranthene	ug/kg	ND	39.3	39.3	37.3	31.1J	95	79	30-150		30		
Chrysene	ug/kg	ND	39.3	39.3	35.4J	37.2J	90	95	30-150		30		
Dibenz(a,h)anthracene	ug/kg	ND	39.3	39.3	31.4	29.4	80	75	30-131		30		
Fluoranthene	ug/kg	ND	39.3	39.3	36.6	35.1	93	89	30-150		30		
Fluorene	ug/kg	ND	39.3	39.3	32.3	28.1	82	72	30-147		30		
Indeno(1,2,3-cd)pyrene	ug/kg	ND	39.3	39.3	32.4	31.0	82	79	30-150		30		
Naphthalene	ug/kg	ND	39.3	39.3	28.8J	24.2J	73	62	30-131		30		
Phenanthrene	ug/kg	ND	39.3	39.3	51.6J	44.7J	131	114	30-150		30		
Pyrene	ug/kg	ND	39.3	39.3	60.3	53.6J	153	136	30-150		30	M6	
2-Fluorobiphenyl (S)	%.						0	0	42-125			D3,S4	
p-Terphenyl-d14 (S)	%.						0	0	57-125			S4	

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II
Pace Project No.: 10436863

QC Batch: 547072 Analysis Method: EPA 8270D by SIM
QC Batch Method: EPA Mod. 3510C Analysis Description: 8270D PAH by SIM MSSV
Associated Lab Samples: 10436863011

METHOD BLANK: 2974269 Matrix: Water
Associated Lab Samples: 10436863011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/L	<0.0032	0.011	06/27/18 09:55	
Acenaphthylene	ug/L	<0.0046	0.015	06/27/18 09:55	
Anthracene	ug/L	<0.0062	0.021	06/27/18 09:55	
Benzo(a)anthracene	ug/L	<0.0039	0.013	06/27/18 09:55	
Benzo(a)pyrene	ug/L	<0.0040	0.013	06/27/18 09:55	
Benzo(b)fluoranthene	ug/L	<0.013	0.042	06/27/18 09:55	
Benzo(g,h,i)perylene	ug/L	<0.0098	0.033	06/27/18 09:55	
Benzo(k)fluoranthene	ug/L	<0.010	0.035	06/27/18 09:55	
Chrysene	ug/L	<0.0092	0.031	06/27/18 09:55	
Dibenz(a,h)anthracene	ug/L	<0.0092	0.031	06/27/18 09:55	
Fluoranthene	ug/L	<0.018	0.061	06/27/18 09:55	
Fluorene	ug/L	<0.0059	0.020	06/27/18 09:55	
Indeno(1,2,3-cd)pyrene	ug/L	<0.013	0.044	06/27/18 09:55	
Naphthalene	ug/L	<0.0068	0.023	06/27/18 09:55	
Phenanthrene	ug/L	<0.010	0.035	06/27/18 09:55	
Pyrene	ug/L	<0.015	0.049	06/27/18 09:55	
2-Fluorobiphenyl (S)	%	76	30-145	06/27/18 09:55	
p-Terphenyl-d14 (S)	%	91	30-149	06/27/18 09:55	

LABORATORY CONTROL SAMPLE: 2974270

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/L	1	0.70	70	50-125	
Acenaphthylene	ug/L	1	0.72	72	47-125	
Anthracene	ug/L	1	0.93	93	65-125	
Benzo(a)anthracene	ug/L	1	0.91	91	60-125	
Benzo(a)pyrene	ug/L	1	0.92	92	67-125	
Benzo(b)fluoranthene	ug/L	1	0.88	88	64-125	
Benzo(g,h,i)perylene	ug/L	1	0.83	83	53-125	
Benzo(k)fluoranthene	ug/L	1	0.88	88	61-125	
Chrysene	ug/L	1	0.91	91	68-125	
Dibenz(a,h)anthracene	ug/L	1	0.75	75	45-125	
Fluoranthene	ug/L	1	0.91	91	73-125	
Fluorene	ug/L	1	0.72	72	53-125	
Indeno(1,2,3-cd)pyrene	ug/L	1	0.83	83	62-125	
Naphthalene	ug/L	1	0.74	74	46-125	
Phenanthrene	ug/L	1	0.81	81	66-125	
Pyrene	ug/L	1	0.89	89	65-125	
2-Fluorobiphenyl (S)	%			75	30-145	
p-Terphenyl-d14 (S)	%			94	30-149	

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2974271		2974272		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		10436884010 Result	MS Spike Conc.	MSD Spike Conc.									
Acenaphthene	ug/L	ND	.95	.95	0.65	0.63	69	67	53-125	3	30		
Acenaphthylene	ug/L	ND	.95	.95	0.67	0.66	70	70	48-125	1	30		
Anthracene	ug/L	ND	.95	.95	0.88	0.89	92	94	66-125	2	30		
Benzo(a)anthracene	ug/L	ND	.95	.95	0.86	0.82	90	86	57-125	5	30		
Benzo(a)pyrene	ug/L	ND	.95	.95	0.84	0.87	89	91	62-125	2	30		
Benzo(b)fluoranthene	ug/L	ND	.95	.95	0.78	0.91	82	96	50-125	16	30		
Benzo(g,h,i)perylene	ug/L	ND	.95	.95	0.73	0.76	76	81	34-125	5	30		
Benzo(k)fluoranthene	ug/L	ND	.95	.95	0.80	0.77	84	81	50-125	4	30		
Chrysene	ug/L	ND	.95	.95	0.90	0.87	95	92	65-125	4	30		
Dibenz(a,h)anthracene	ug/L	ND	.95	.95	0.71	0.74	75	78	31-127	4	30		
Fluoranthene	ug/L	ND	.95	.95	0.88	0.90	92	95	70-125	2	30		
Fluorene	ug/L	ND	.95	.95	0.69	0.68	73	72	53-125	1	30		
Indeno(1,2,3-cd)pyrene	ug/L	ND	.95	.95	0.74	0.77	78	81	45-125	4	30		
Naphthalene	ug/L	ND	.95	.95	0.57	0.65	60	69	34-125	13	30		
Phenanthrene	ug/L	ND	.95	.95	0.78	0.79	82	84	61-125	1	30		
Pyrene	ug/L	ND	.95	.95	0.88	0.84	92	89	60-125	4	30		
2-Fluorobiphenyl (S)	%.						69	69	30-145				
p-Terphenyl-d14 (S)	%.						98	96	30-149				

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QUALIFIERS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

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

PASI-M Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

- A5 Greater than 5% sediment in sample determined by visual observation. Aqueous portion decanted from the sediment and extracted. The sample container could not be rinsed with solvent per the method requirement.
- D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
- MS Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.
- N2 The lab does not hold NELAC/TNI accreditation for this parameter.
- R1 RPD value was outside control limits.
- RS The RPD value in one of the constituent analytes was outside the control limits.
- S4 Surrogate recovery not evaluated against control limits due to sample dilution.
- W Non-detect results are reported on a wet weight basis.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10436863001	SB-1_2-3	EPA 3050	546886	EPA 6010D	547086
10436863002	SB-1_12-13	EPA 3050	546886	EPA 6010D	547086
10436863003	SB-2_0-1	EPA 3050	546886	EPA 6010D	547086
10436863004	SB-2_6-7	EPA 3050	546886	EPA 6010D	547086
10436863005	SB-3_0-2	EPA 3050	546886	EPA 6010D	547086
10436863006	SB-3_8-9	EPA 3050	546886	EPA 6010D	547086
10436863007	SB-4_0-2	EPA 3050	546886	EPA 6010D	547086
10436863008	SB-4_6-7	EPA 3050	546886	EPA 6010D	547086
10436863009	SB-5_0-1	EPA 3050	546886	EPA 6010D	547086
10436863010	SB-5_8-9	EPA 3050	546886	EPA 6010D	547086
10436863001	SB-1_2-3	EPA 7471B	546627	EPA 7471B	546772
10436863002	SB-1_12-13	EPA 7471B	546627	EPA 7471B	546772
10436863003	SB-2_0-1	EPA 7471B	546627	EPA 7471B	546772
10436863004	SB-2_6-7	EPA 7471B	546627	EPA 7471B	546772
10436863005	SB-3_0-2	EPA 7471B	546627	EPA 7471B	546772
10436863006	SB-3_8-9	EPA 7471B	546627	EPA 7471B	546772
10436863007	SB-4_0-2	EPA 7471B	546627	EPA 7471B	546772
10436863008	SB-4_6-7	EPA 7471B	546627	EPA 7471B	546772
10436863009	SB-5_0-1	EPA 7471B	546627	EPA 7471B	546772
10436863010	SB-5_8-9	EPA 7471B	546627	EPA 7471B	546772
10436863001	SB-1_2-3	ASTM D2974	547426		
10436863002	SB-1_12-13	ASTM D2974	547426		
10436863003	SB-2_0-1	ASTM D2974	547426		
10436863004	SB-2_6-7	ASTM D2974	547426		
10436863005	SB-3_0-2	ASTM D2974	547426		
10436863006	SB-3_8-9	ASTM D2974	547426		
10436863007	SB-4_0-2	ASTM D2974	547426		
10436863008	SB-4_6-7	ASTM D2974	547426		
10436863009	SB-5_0-1	ASTM D2974	547426		
10436863010	SB-5_8-9	ASTM D2974	547426		
10436863001	SB-1_2-3	EPA 3550	546641	EPA 8270D by SIM	546989
10436863002	SB-1_12-13	EPA 3550	546641	EPA 8270D by SIM	546989
10436863003	SB-2_0-1	EPA 3550	546641	EPA 8270D by SIM	546989
10436863004	SB-2_6-7	EPA 3550	546641	EPA 8270D by SIM	546989
10436863005	SB-3_0-2	EPA 3550	546641	EPA 8270D by SIM	546989
10436863006	SB-3_8-9	EPA 3550	546641	EPA 8270D by SIM	546989
10436863007	SB-4_0-2	EPA 3550	546641	EPA 8270D by SIM	546989
10436863008	SB-4_6-7	EPA 3550	546641	EPA 8270D by SIM	546989
10436863009	SB-5_0-1	EPA 3550	546641	EPA 8270D by SIM	546989
10436863010	SB-5_8-9	EPA 3550	546641	EPA 8270D by SIM	546989
10436863011	SB-3_14.5-19.5	EPA Mod. 3510C	547072	EPA 8270D by SIM	547275
10436863001	SB-1_2-3	EPA 5035/5030B	293184	EPA 8260	293187
10436863002	SB-1_12-13	EPA 5035/5030B	293184	EPA 8260	293187
10436863003	SB-2_0-1	EPA 5035/5030B	293184	EPA 8260	293187
10436863004	SB-2_6-7	EPA 5035/5030B	293184	EPA 8260	293187
10436863005	SB-3_0-2	EPA 5035/5030B	293184	EPA 8260	293187

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10436863006	SB-3_8-9	EPA 5035/5030B	293184	EPA 8260	293187
10436863007	SB-4_0-2	EPA 5035/5030B	293184	EPA 8260	293187
10436863008	SB-4_6-7	EPA 5035/5030B	293184	EPA 8260	293187
10436863009	SB-5_0-1	EPA 5035/5030B	293184	EPA 8260	293187
10436863010	SB-5_8-9	EPA 5035/5030B	293184	EPA 8260	293187
10436863013	MeOH Trip Blank	EPA 5035/5030B	293184	EPA 8260	293187
10436863011	SB-3_14.5-19.5	EPA 8260B	547301		
10436863012	Trip Blank	EPA 8260B	547301		

REPORT OF LABORATORY ANALYSIS

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Barr Engineering Co. Chain of Custody

Sample Origination State:

- Ann Arbor Duluth Hibbing Minneapolis
 Bismarck Grand Rapids Jefferson City Salt Lake City

- KS MO UT
 MI ND WI
 MN SD Other: _____

Analysis Requested		COC Number: 58003
Water	Soil	COC ? of 2
		Matrix Code: _____ Preservative Code: _____

REPORT TO

Company: *Barr Engineering*

Address: *325 S. Lake Ave. Duluth*

Name: *Lynette Carney*

email: *LML@barr.com*

Copy to: *datamgt@barr.com*

Project Name: *Husky phase II*

INVOICE TO

Company: *Barr*

Address: _____

Name: _____

email: _____

PO: _____

Barr Project No: *49161423.00*

WO#: 10436863



- Matrix Code:**
 GW = Groundwater
 SW = Surface Water
 WW = Waste Water
 DW = Drinking Water
 S = Soil/Solid
 SD = Sediment
 O = Other
- Preservative Code:**
 A = None
 B = HCl
 C = HNO₃
 D = H₂SO₄
 E = NaOH
 F = MeOH
 G = NaHSO₄
 H = Na₂S₂O₃
 I = Ascorbic Acid
 J = NH₄Cl
 K = Zn Acetate
 O = Other

Location	Sample Depth			Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix Code	Perform MS/MS	Total Number	Analysis Requested			Preservative Code	Field Filtered Y/N	
	Start	Stop	Unit (m./ft. or in.)						Water	Soil	VOCs			PAHs
1. SB-1	2	3	ft	6/21/18	1405	S	N4							001
2. SB-1	12	13			1430									002
3. SB-2	0	1			1515									003
4. SB-2	6	7			1530									004
5. SB-3	0	2			1620									005
6. SB-3	8	9			1635									006
7. SB-4	0	2		6/22/18	0840									007
8. SB-4	6	7			0855									008
9. SB-5	0	1			0935									009
10. SB-5	8	9			0950									010

BARR USE ONLY

Sampled by: *MAB*

Barr Proj. Manager: *LML*

Barr DQ Manager: *JET*

Lab Name: *Pace*

Lab Location: *MPLS*

Relinquished by: *[Signature]* On Ice? Y N Date: *6/22/18* Time: *1435*

Relinquished by: *[Signature]* On Ice? Y N Date: *6/22/18* Time: *1700*

Sample Shipped VIA: Courier Federal Express Sampler Other: _____ Air Bill Number: _____

Lab WO: _____ Temperature on Receipt (°C): *25* Custody Seal Intact? Y N None

Requested Due Date: Standard Turn Around Time Rush _____ (mm/dd/yyyy)

HRIG\STDFORMS\Chain of Custody Form 2015 RLG Rev. 01/02/18

Barr Engineering Co. Chain of Custody



- Ann Arbor Duluth Jefferson City
 Bismarck Hibbing Minneapolis

Sample Origination State:

- KS MO WI
 MI ND Other:
 MN SD

COC Number: **No 47625**

COC 2 of 2

- Matrix Code:**
 GW = Groundwater
 SW = Surface Water
 WW = Waste Water
 DW = Drinking Water
 S = Soil/Solid
 SD = Sediment
 O = Other
- Preservative Code:**
 A = None
 B = HCl
 C = HNO₃
 D = H₂SO₄
 E = NaOH
 F = MeOH
 G = NaHSO₄
 H = Na₂S₂O₃
 I = Ascorbic Acid
 J = NH₄Cl
 K = Zn Acetate
 O = Other

REPORT TO		INVOICE TO	
Company: <u>Barr Engineering</u>	Company: <u>Barr</u>	Address: <u>325 S. Lake Ave. Duluth</u>	Address:
Name: <u>Lynette Carney</u>	Name:	email: <u>LMC@barr.com</u>	email:
Copy to: <u>datamgt@barr.com</u>	P.O.	Project Name: <u>Hwy Phase II</u>	Barr Project No: <u>49161423.00</u>

Location	Sample Depth			Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix Code	Perform MS/MSD Y/N	Total Number Of Containers	Analysis Requested		% Solids
	Start	Stop	Unit (m./ft. or in.)						Water	Soil	
1. SB-3	14.5	19.5	ft	6/22/18	1120	GW	N	43	1		
2. Trip Blank	-	-	-	-	-	-	N	32		1	
3. MEATY Trip Blank											
4. 6/22/18 SD											
5.											
6.											
7.											
8.											
9.											
10.											

BARR USE ONLY		Relinquished by: <u>[Signature]</u>	On Ice? <input checked="" type="checkbox"/> N	Date: <u>6/22/18</u>	Time: <u>1435</u>	Received by: <u>[Signature]</u>	Date: <u>6/22/18</u>	Time: <u>14:35</u>
Sampled by: <u>MAB</u>	Barr Proj. Manager: <u>LMC</u>	Relinquished by: <u>[Signature]</u>	On Ice? <input checked="" type="checkbox"/> N	Date: <u>6/22/18</u>	Time: <u>1700</u>	Received by: <u>[Signature]</u>	Date: <u>6-22-18</u>	Time: <u>1700</u>
Barr DQ Manager: <u>JET</u>	Lab Name: <u>Pau</u>	Samples Shipped VIA: <input type="checkbox"/> Courier <input type="checkbox"/> Federal Express <input checked="" type="checkbox"/> Sampler	Air Bill Number:		Requested Due Date: <input checked="" type="checkbox"/> Standard Turn Around Time <input type="checkbox"/> Rush (mm/dd/yyyy)			
Lab Location: <u>MPLS</u>	Lab WO:	Temperature on Receipt (°C): <u>2.5</u>	Custody Seal Intact? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> None					

Distribution - White-Original: Accompanies Shipment to Laboratory; Yellow Copy: Include in Field Documents; Pink Copy: Send to Data Management Administrators.

RCL 6-22-18 20:00 [Signature] 6/22/18 2000 To 2.5



Document Name:
Sample Condition Upon Receipt Form

Document No.:
F-MN-L-213-rev.23

Document Revised: 02May2018
Page 1 of 2

Issuing Authority:
Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Barr

Project #:

WO# : 10436863

PM: AA1

Due Date: 07/02/18

CLIENT: BARR

Courier: Fed Ex UPS USPS Client
 Commercial Pace SpeedDee Other: _____

Tracking Number: _____

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No

Optional: Proj. Due Date: Proj. Name:

Packing Material: Bubble Wrap Bubble Bags None Other: _____ Temp Blank? Yes No

Thermometer G87A9170600254 Type of Ice: Wet Blue None Dry Melted
 Used: G87A9155100842

Cooler Temp Read (°C): 2.7 Cooler Temp Corrected (°C): 2.8 Biological Tissue Frozen? Yes No N/A
 Temp should be above freezing to 6°C Correction Factor: +0.1 Date and Initials of Person Examining Contents: rev 6/2/18

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: AL, AR, 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 (F-MN-Q-338) and include with SCUR/COC paperwork.

	COMMENTS:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Filled Out? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Chain of Custody Relinquished? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.
Sampler Name and/or 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.
Short Hold Time Analysis (<72 hr)? <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 type="checkbox"/> No	8.
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	
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. Note if sediment is visible in the dissolved container
Is sufficient information available to reconcile the samples to the COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Matrix: <u>WT SL</u>	12.
All containers needing acid/base preservation have been checked? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH Positive for Res. Chlorine? Y N
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ <2pH, NaOH >9 Sulfide, NaOH >12 Cyanide) <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Sample #
Exceptions: <u>VOA</u> Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Initial when completed: Lot # of added preservative:
Headspace in VOA Vials (>6mm)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14. Trip Blank 2 1/2 headspace 5cm
Trip Blank Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.
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>HCL: 159185, MeOH: 040518-3</u>	

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? Yes No

Person Contacted: _____

Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Amanda J Albrecht

Date: 6/25/18

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).

Chain of Custody

557

40171636

Samples were sent directly to the Subcontracting Laboratory.

State Of Origin: WI



Workorder: 10436863

Workorder Name: 49161423.00 Husky Phase II

Owner Received Date: 6/22/2018

Results Requested By: 7/3/2018

Report To		Subcontract To					Requested Analysis													
Amanda Albrecht Pace Analytical Minnesota 1700 Elm Street Suite 200 Minneapolis, MN 55414 Phone (612)607-6382		Pace Analytical Green Bay 1241 Bellevue Street Suite 9 Green Bay, WI 54302 Phone (920)469-2436					VOC by 8260 (Pace-Green Bay)													
																Preserved Containers				
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	MeOH										LAB USE ONLY				
1	SB-1_2-3	PS	6/21/2018 14:05	10436863001	Solid	2								X		001				
2	SB-1_12-13	PS	6/21/2018 14:30	10436863002	Solid	2								X		002				
3	SB-2_0-1	PS	6/21/2018 15:15	10436863003	Solid	2								X		003				
4	SB-2_6-7	PS	6/21/2018 15:30	10436863004	Solid	2								X		004				
5	SB-3_0-2	PS	6/21/2018 16:20	10436863005	Solid	2								X		005				
6	SB-3_8-9	PS	6/21/2018 16:35	10436863006	Solid	2								X		006				
7	SB-4_0-2	PS	6/22/2018 08:40	10436863007	Solid	2								X		007				
8	SB-4_6-7	PS	6/22/2018 08:55	10436863008	Solid	2								X		008				
9	SB-5_0-1	PS	6/22/2018 09:35	10436863009	Solid	2								X		009				
10	SB-5_8-9	PS	6/22/2018 09:50	10436863010	Solid	2								X		010				
11	MeOH Trip Blank	PS	6/21/2018 00:00	10436863013	Solid	1								X		011				

Transfers			Released By	Date/Time	Received By	Date/Time	Comments
1		<i>[Signature]</i>		6/27/18 17:17			
2		<i>[Signature]</i>		6/28/18 08:55	<i>[Signature]</i>	6/28/18 08:55	
3							

Cooler Temperature on Receipt 5.5°C Custody Seal or N Received on Ice or N Samples Intact or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
 This chain of custody is considered complete as is since this information is available in the owner laboratory.

Client Name: Pace, MN

Sample Preservation Receipt Form

Project # 40171436

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

Lab Lot# of pH paper:

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


Initial when completed:

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:	

 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 25Apr2018
	Document No.: F-GB-C-031-Rev.07	Issuing Authority: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Client Name: Pace, MN Project #: _____
 Courier: CS Logistics Fed Ex Speedee UPS Walto
 Client Pace Other: _____

WO# : 40171636



40171636

Tracking #: 1760825
 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 - 9 Type of Ice: Wet Blue Dry None Samples on ice, cooling process has begun
 Cooler Temperature: Uncorr: 3 /Corr: 5.5

Temp Blank Present: yes no **Biological Tissue is Frozen:** yes no
 Temp should be above freezing to 6°C.
 Biota Samples may be received at ≤ 0°C.

Person examining contents:
 Date: 6/28/18
 Initials: [Signature]

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 type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	4. <u>IRWO</u>
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 checked="" type="checkbox"/> Yes <input 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 checked="" type="checkbox"/> N/A	<u>007 - 2wals, 008 - 1wial, 009 - 2wals</u> <u>covered for weight</u> <u>SSM 6/28/18</u>
-Pace IR Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input 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>W</u>		
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <u>MEDH</u>
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>[Signature]</u>
Pace Trip Blank Lot # (if purchased):		<u>62818</u>

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

Project Manager Review: [Signature] Date: 6/28/18

Attachment B

Work plan

Soil Investigation Work Plan

To: John Sager, Wisconsin Department of Natural Resources
From: Lynette Carney and Ryan Erickson
Subject: Superior Water, Light & Power Nemadji Substation Investigation Work Plan
Date: December 18, 2019
Location: Superior Refining Company, Superior, WI
Cc: Mark Darby and Matt Turner, Superior Refining Company
Mike French, LHB Contract Project Manager for MN Power

Dear Mr. Sager:

The following Work Plan is for a soil investigation at the Superior Refining Company (SRC) property that is leased by Superior Water Light & Power (SWL&P) for construction and operation of a new electrical substation (Nemadji Substation). The property is located at 2407 Stinson Ave, Superior, Wisconsin (Property; Figure 1).

Project Background

In 2018, SWL&P leased the Property from SRC to construct and operate an electrical substation. Prior to the lease, Barr Engineering Co. (Barr) had conducted a Phase I Environmental Site Assessment (2018) and a Phase II Investigation (2018) to document the condition of the Property prior to construction. No evidence of contamination was identified during these activities.

During substation construction earthwork activities in November 2019, SWL&P contractors encountered contaminated soil in two separate locations (Figure 1). SWL&P directed the excavation of the identified contaminated soil during their project work. The contaminated soil was characterized and transported offsite for disposal at Shamrock Landfill. SWL&P subsequently indicated that the identified contaminated soil had been remediated through excavation; however, no field screening or analytical confirmation samples were collected from the excavation extents to document final site conditions. SWL&P did report the discovery of contaminated soil to the Wisconsin Department of Natural Resources (WDNR).

The purpose of this proposed investigation is to document the soil conditions at the site following remedial actions through:

- determining whether residual soil impacts remain beneath the locations where impacted soil was excavated by SWL&P
- evaluating soil conditions laterally around the areas where impacted soil was excavated by SWL&P, and
- evaluating soil conditions on portions of the Property that have not been sampled to date.

Proposed Scope of Work

Borings advanced with a push-probe rig are proposed to evaluate the soil conditions at the site. The proposed soil boring locations were selected based on site features and previous boring locations (Barr, 2018), and are depicted on Figure 1.

Barr will prepare a project-specific health and safety plan (PHASP) and coordinate the investigation field work with SRC, SWL&P, and WDNR. Twenty-four (24) soil push-probe borings will be advanced to a depth of approximately 10 feet below ground surface (bgs) with continuous soil sample collection. Final boring locations and depths may vary depending on utility locations, accessibility in the field, depth to groundwater, soil conditions encountered, and the depth of identified contamination (if any). If contamination is identified, soil borings will be advanced to a minimum depth of 5 feet below the deepest level of contamination, as measured through field headspace screening. Soil will be classified as contaminated if it has a headspace reading >10 parts per million (ppm) or if clear evidence of contamination (e.g., hydrocarbon odor, sheen, free-product) is identified. All borings will be abandoned by the driller per Wisconsin regulatory requirements.

A Barr geoscientist will be on site to direct the advancement of the borings and will perform the field tasks and documentation in accordance with Barr's standard operating procedures (SOPs) applicable to the project. Soil samples will be screened for organic vapors using a photoionization detector (PID) with a 10.6 eV lamp. Soil samples will be classified in accordance with the Unified Soil Classification System (USCS) - ASTM D-2488, Standard Practice for Description and Identification of Soils (Visual/Manual Method) and any additional geologic information will be documented.

At least one confirmation/characterization analytical soil sample will be collected from insitu native soils from each boring and will be submitted to an approved certified laboratory for analysis of diesel range organic compounds (DRO), petroleum volatile organic compounds (PVOCs) and naphthalene. Soil samples submitted for laboratory analysis will be collected from 2-3 feet bgs and/or 6-7 feet bgs. The upper sample interval will be adjusted as necessary to ensure that soil is collected from below any recently placed fill or road base material. The lower soil sample interval will be adjusted based on the highest PID reading and/or interval with the most significant discoloration, odor or staining. A proposed soil sampling matrix and rationale has been provided in the attached Table 1. A duplicate sample will not be collected. One trip blank and one equipment blank will be collected.

A letter report will be prepared that summarizes investigation activities, findings and results. Recommendations for potential further actions will be included in the event that residual impacted soils are discovered at the Property.

ATTACHMENTS

Table 1	Boring and Sample Matrix Summary
Figure 1	Proposed Soil Boring Locations

TABLE 1
BORING AND SAMPLE MATRIX SUMMARY
COMPLETED AND PROPOSED BORINGS / WELLS
Site Investigation Work Plan
Nemadji Substation Lease Property

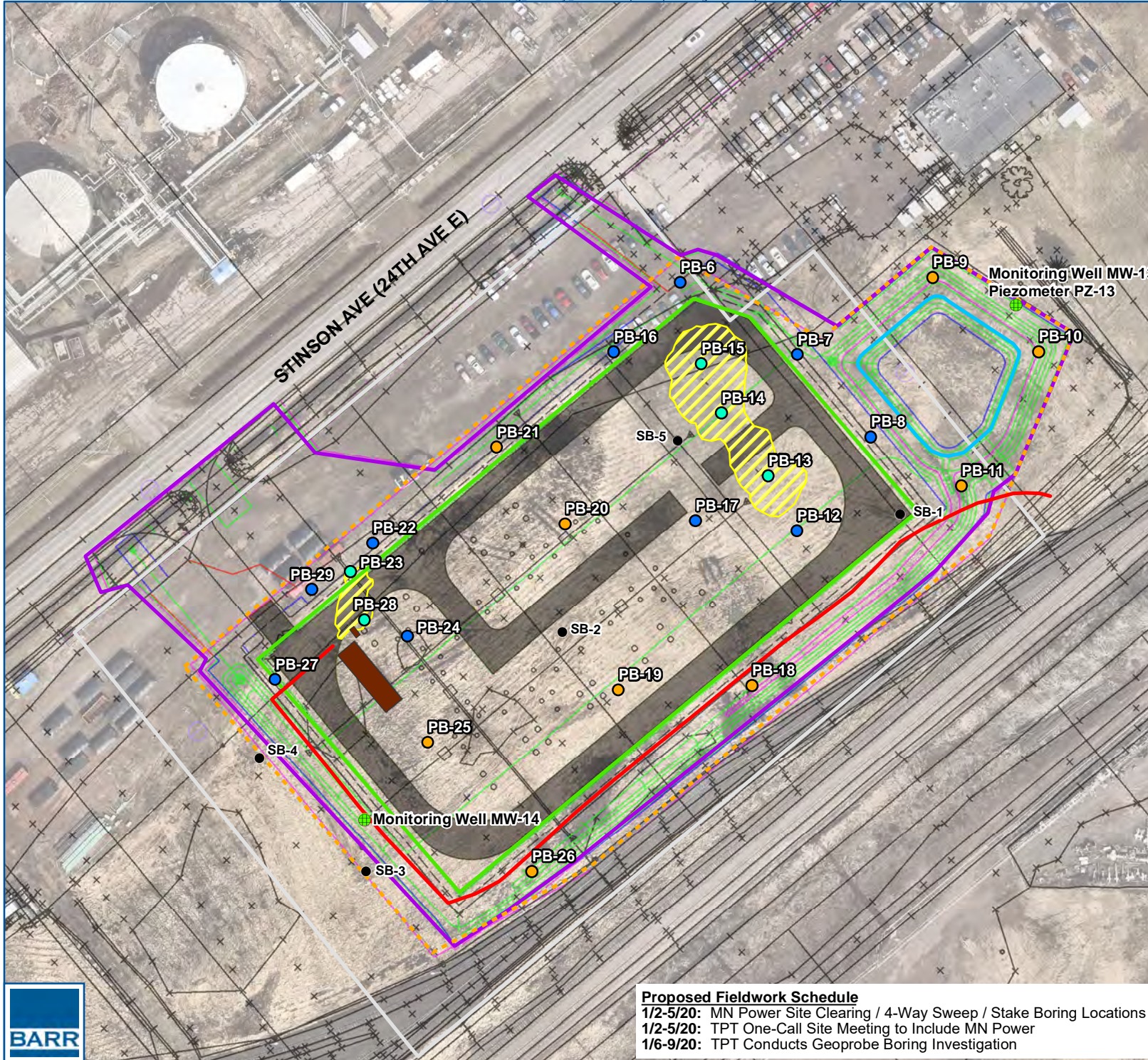
Boring or Well ID	Completed (C) or Proposed (P)	Rationale			Sample Target		Total Depth (ft)	Targeted Soil Sample Depths (ft bgs) ¹	Soil Sampling Parameters					Anticipated Groundwater Depth (ft bgs ⁺)	Groundwater Sampling Parameters		
		Characterization	Delineation	Combined	Excavation Sidewall	Below Engineered Fill			PVOC + Naphthalene	DRO	RCRA Metals ²	VOCs	PAHs		PVOC + Naph	VOCs	PAHs
MW-13	C	X					20	NA						5-10	1		
MW-14	C	X					20	NA						5-10	1		
SB-1	C	X			X	X	15	2-3 12-13			2	2	2	5-10			
SB-2	C	X				X	15	0-1 6-7			2	2	2	5-10			
SB-3	C	X			X	X	15	0-2 8-9			2	2	2	5-10		1	1
SB-4	C	X			X	X	15	0-2 6-7			2	2	2	5-10			
SB-5	C	X				X	15	0-1 8-9			2	2	2	5-10			
PB-6	P			X	X	X	10	2-3 6-7	2	2				5-10			
PB-7	P			X	X	X	10	2-3 6-7	2	2				5-10			
PB-8	P			X	X	X	10	2-3 6-7	2	2				5-10			
PB-9	P	X				X	10	6-7	1	1				5-10			
PB-10	P	X				X	10	6-7	1	1				5-10			
PB-11	P	X				X	10	6-7	1	1				5-10			
PB-12	P			X		X	10	6-7	1	1				5-10			
PB-13	P		X			X	10	6-7	1	1				5-10			
PB-14	P		X			X	10	6-7	1	1				5-10			
PB-15	P		X			X	10	6-7	1	1				5-10			
PB-16	P			X	X	X	10	2-3 6-7	2	2				5-10			
PB-17	P			X		X	10	6-7	1	1				5-10			
PB-18	P	X			X	X	10	2-3 6-7	2	2				5-10			
PB-19	P	X				X	10	6-7	1	1				5-10			
PB-20	P	X				X	10	6-7	1	1				5-10			
PB-21	P	X			X	X	10	2-3 6-7	2	2				5-10			
PB-22	P			X	X	X	10	2-3 6-7	2	2				5-10			
PB-23	P		X			X	10	6-7	1	1				5-10			
PB-24	P			X		X	10	6-7	1	1				5-10			
PB-25	P	X				X	10	6-7	1	1				5-10			
PB-26	P	X			X	X	10	2-3 6-7	2	2				5-10			
PB-27	P			X	X	X	10	2-3 6-7	2	2				5-10			
PB-28	P		X			X	10	6-7	1	1				5-10			
PB-29	P			X	X	X	10	2-3 6-7	2	2				5-10			
									34	34	10	10	10		2	1	1
Analytical Methods									EPA 8260B	WI MOD DRO 8015D (C10-C28)	USEPA 6010C / 7471B	EPA 8260B	EPA 8270D		EPA 8260B	EPA 8260B	EPA 8270D

¹Actual soil sampling intervals will be adjusted based on observations of fill vs. native material and/or obvious signs of contamination.

²RCRA Metals will include arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver.

+ Below ground surface.

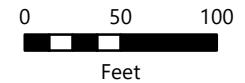
Shaded cells represent locations previously sampled.



- Characterization Boring (9)
- Remedial Action
- Delineation (Confirmation) Boring (5)
- Combined Delineation/ Characterization Boring (10)

Note: final boring locations may be modified due to field conditions but will continue to meet stated investigation objectives.

- Monitoring Well
- Previous Soil Boring Location, Barr 2018
- Property Line
- Underground Electrical
- Construction Limits
- Proposed Substation Fenceline
- ▨ SWL&P-Confirmed Remedial Excavation Area
- Gravel Surfacing
- Foundations
- Proposed Pond
- 2018 Phase II Property Boundary



1 inch = 100 feet

Imagery: Nearmap, 4/25/2019

Proposed Fieldwork Schedule
 1/2-5/20: MN Power Site Clearing / 4-Way Sweep / Stake Boring Locations
 1/2-5/20: TPT One-Call Site Meeting to Include MN Power
 1/6-9/20: TPT Conducts Geoprobe Boring Investigation

PROPOSED SOIL BORING LOCATIONS
 SWL&P Nemadji Substation
 Superior, WI
FIGURE 1



Attachment C

Representative Photographs



Photo 1: Preparing to drill at SB-10 on the edge of the pond.



Photo 2: Drilling at SB-20.



Photo 3: SB-18 offset 16 feet from original location. The original boring location is on the right side of the photo and the offset location is on the left.



Photo 4: Slag like material in the 0.6-2 foot interval of SB-10.

Attachment D

Soil Boring Logs

Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-06	
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing			Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 657.2 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 20.2"		Local Grid Location	
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 10.8"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 40.8		0	Silty gravel; fine; gray; moist; angular; (fill).	GM			0.1						
				2	Fat clay; stiff; red-brown; moist; high plasticity; black discoloration; faint tar odor, trace wood chips and fibers. Fat clay; stiff; red-brown; moist; high plasticity.	CH			0.1					
EOPROBE	60 60		6		CH			0.1						
				8				0.2						
			10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-6_1.5-2 ft: PVOC + Naphthalene, DRO SB-6_5-6 ft: PVOC + Naphthalene, DRO Field blank collected: 1/6/2020, 1520				0.2						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Sehart</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-07		
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing			Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020		
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level		
					Surface Elevation 657.6 Feet		
					Borehole Diameter 2.3 inches		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 19.8"		Local Grid Location		
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 9.6"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W		
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 41.4		0	Silty gravel; fine; gray; moist; angular; (fill); 0.6 feet of ice/snow.	GM									
				Poorly graded sand; dense; fine; red-tan; moist; rounded; (fill).	SP		0.4							
EOPROBE	60 60		2	Fat clay; stiff; red-brown; moist; high plasticity.	CH			0.4						
								0.4						
								0.4						
			6					0.4						
			8					0.5						
			10					0.5						
				End of Boring at 10 feet below ground surface. Analytical samples collected: SB-7_2-4 ft: PVOC + Naphthalene, DRO SB-7_6-8 ft: PVOC + Naphthalene, DRO										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-08		
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing			Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020		
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level		
					Surface Elevation 657.1 Feet		
					Borehole Diameter 2.3 inches		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/> State Plane N, E S/C/N			Lat 46° 41' 19.1"		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E		
SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 8.7"		<input type="checkbox"/> S <input type="checkbox"/> W		
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 34.8		0	Poorly graded sand with silt; dark brown; moist; with wood fibers and trace organics; (fill); 0.5 feet of ice/snow.	SP-SM									
				Poorly graded sand with silt and gravel; coarse; dark brown; angular; (fill). Fat clay; stiff; red-brown; moist; high plasticity.	SP-SM			0.1						
EOPROBE	60 60		2		CH									
			4											
			6											
			8											
			10											
				End of Boring at 10 feet below ground surface. Analytical samples collected: SB-8_2-4 ft: PVOC + Naphthalene, DRO SB-8_6-8 ft: PVOC + Naphthalene, DRO										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-09	
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing			Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 656.9 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 20.3"		Local Grid Location	
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 8.1"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60		0	Poorly graded sand with silt; fine; dark brown; moist; trace organics; (fill); 0.4 feet of ice/snow.	SP-SM			0.3						
	42			Fat clay; stiff; red-brown; moist; high plasticity.										
EOPROBE	60		6	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-9_6-8 ft: PVOC + Naphthalene, DRO	CH			0.3						
	60													

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Sekrt</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation		License/Permit/Monitoring Number 816009590		Boring Number SB-10	
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing		Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020	
WI Unique Well No.		DNR Well ID No.		Common Well Name	
Final Static Water Level		Surface Elevation 657.1 Feet		Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>		State Plane N, E S/C/N		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W		Lat 46° 41' 19.8" Long -92° 4' 6.9"			
Facility ID		County Douglas		County Code	
				Civil Town/City/ or Village Superior	


Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 34.8		0	Poorly graded sand with silt; dark-brown; moist; trace organics; (fill); 0.1 feet of ice/snow.	SP-SM									
				Fat clay; stiff; red-brown; moist; high plasticity. Apparent slag, vesicular, gray, metallic luster at 0.6 feet. Apparent slag, vesicular, gray, metallic luster from 1.3-2 feet.				0.6						
EOPROBE	60 60		2											
			4											
			6		CH									
			8											
			10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-10_1-2 ft: PVOC + Naphthalene, DRO SB-10_5-6 ft: PVOC + Naphthalene, DRO SB-10_6-8 ft: PVOC + Naphthalene, DRO										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Sekrt</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-11	
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing			Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 656.3 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 18.8"		Local Grid Location	
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 7.8"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	Soil Properties						RQD/ Comments													
								PID (ppm)	Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index														
EOPROBE	60		0	Poorly graded sand with silt; fine; dark brown; moist; (fill); 0.2 feet of ice/snow.	SP-SM																						
	30			Fat clay; very stiff; red-brown; moist; high plasticity.																							
EOPROBE	60		2		CH																						
	60																										
	60																										
	60																										
			10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-11_2-4 ft: PVOC + Naphthalene, DRO SB-11_6-8 ft: PVOC + Naphthalene, DRO																							

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-12	
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing			Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 657.2 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 18.5"		Local Grid Location	
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 9.5"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 54		0-2	Silty gravel; fine; gray; moist; angular; (fill); 0.2 feet of ice/snow.	GM			0.1						
			2-4	Poorly graded sand; dense; fine; red-tan; moist; rounded; (fill).	SP			0.2						
EOPROBE	60 60		4-6	Fat clay; stiff; red-brown; moist; high plasticity.	CH			0.2						
			6-8					0.4						
			8-10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-12_6-8 ft: PVOC + Naphthalene, DRO				0.4						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-13	
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing			Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 657.7 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 18.9"		Local Grid Location	
State Plane N, E S/C/N			Long -92° 4' 9.8"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W						
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 40.8		0	Silty gravel; fine; gray; moist; angular; (fill); 0.8 feet of ice/snow.	GM			0.1						
				2	large gravel clast at 1.4 feet. Poorly graded sand; dense; fine; red-tan; moist; rounded; (fill)	SP			0.1					
EOPROBE	60 62.4		6	Fat clay; stiff; red-brown; moist; high plasticity.	CH			0.1						
			10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-13_6-8 ft: PVOC + Naphthalene, DRO				0.2						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Schrt</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-14	
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing			Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 658.4 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/> State Plane N, E S/C/N			Lat 46° 41' 19.3"		Local Grid Location	
SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 10.3"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 49.2		0	Silty gravel; fine; gray; moist; angular; with sand; (fill).	GM			0.1						
			2	Poorly graded sand; medium dense; red-tan; moist; rounded; (fill).	SP			0.1						
EOPROBE	60 26.4		4	Fat clay; soft; red-brown; wet; high plasticity.	CH			0.1						
			6				0.2							
			8					0.3						
			10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-14_6-8 ft: PVOC + Naphthalene, DRO										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Secht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-15		
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing			Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020		
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level		
					Surface Elevation 658.2 Feet		
					Borehole Diameter 2.3 inches		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/> State Plane N, E S/C/N			Lat 46° 41' 19.6"		Local Grid Location		
SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 10.6"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W		
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 42		0 2	Silty gravel; fine; gray; moist; angular; (fill)	GM			0.1						
				Poorly graded sand; dense; fine; red-tan; moist; rounded; (fill)	SP				0.1					
EOPROBE	60 56.4		6 8 10	Fat clay; soft; red-brown; moist; high plasticity.	CH			0.1 0.2 0.2						
				End of Boring at 10 feet below ground surface. Analytical samples collected: SB-15_6-8 ft: PVOC + Naphthalene, DRO										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-16		
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing			Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020		
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level		
					Surface Elevation 658.5 Feet		
					Borehole Diameter 2.3 inches		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 19.7"		Local Grid Location		
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 11.5"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W		
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 42		0-2	Silty gravel; dense; fine; gray; moist; angular; (fill).	GM			0.4						
				Poorly graded sand; dense; fine; red-tan; moist; (fill).	SP			0.5						
EOPROBE	60 60		6-10	Fat clay; very stiff; red-brown; moist; high plasticity.	CH			1.2						
				End of Boring at 10 feet below ground surface. Analytical samples collected: SB-16_6-8 ft: PVOC + Naphthalene, DRO				1.7						
								1.8						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-17		
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020		
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level		
					Surface Elevation 657.9 Feet		
					Borehole Diameter 2.3 inches		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 18.5"		Local Grid Location		
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 10.6"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W		
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 48		0	Silty gravel; fine; gray; moist; angular; (fill).	GM			0.2						
				Poorly graded sand; fine; red-tan; rounded; (fill).	SP		0.3							
EOPROBE	60 60		4	Fat clay; medium stiff; red-brown; moist; high plasticity.	CH			0.2						
							0.4							
			10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-17_6-8 ft: PVOC + Naphthalene, DRO				0.3						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-18	
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 657.4 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 17.5"		Local Grid Location	
State Plane N, E S/C/N			Long -92° 4' 10.1"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W						
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 42		0-2	Silty gravel; fine to coarse; gray; dry to moist; angular; (fill).	GM			0.7						
				Poorly graded sand; dense; fine; red-tan; moist; rounded; (fill). Fat clay; stiff; red-brown; moist; high plasticity.	SP			1.0						
EOPROBE	60 60		2-6		CH			1.1						
								1.1						
								1.1						
			10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-18_2-4 ft: PVOC + Naphthalene, DRO SB-18_6-8 ft: PVOC + Naphthalene, DRO										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-19		
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020		
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level		
					Surface Elevation 657.2 Feet		
					Borehole Diameter 2.3 inches		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 17.3"		Local Grid Location		
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 11.3"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W		
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 45.6		0-2	Silty gravel; fine to coarse; gray; moist; angular; (fill).	GM									
				Poorly graded sand; dense; fine; red-tan; moist; rounded; (fill).	SP			0.6						
EOPROBE	60 60		4-6	Fat clay; very stiff; red-brown; moist; high plasticity.	CH									
								0.7						
			6-10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-19_6-8 ft: PVOC + Naphthalene, DRO										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-20	
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 658.4 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/> State Plane N, E S/C/N			Lat 46° 41' 18.5"		Local Grid Location	
SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 11.9"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 50.4		0	Silty gravel; fine; gray; dry to moist; angular; (fill).	GM			0.3						
				Poorly graded sand; dense; fine; red-tan; moist; rounded; (fill).	SP									
EOPROBE	60 60		4	Fat clay; stiff; red-brown; moist; high plasticity.	CH			0.6						
			10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-20_6-8 ft: PVOC + Naphthalene, DRO				0.6						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Sehn</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-21	
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing			Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 658.4 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 19.0"		Local Grid Location	
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 12.7"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 38.4		0 2 4 6 8 10	Silty gravel; dense; fine; gray; moist; angular; (fill).	GM									
				Poorly graded sand; dense; fine; red-brown; moist; (fill).	SP			0.4						
				Fat clay; stiff; red-brown; moist; high plasticity.	CH			0.3						
EOPROBE	60 60			End of Boring at 10 feet below ground surface. Analytical samples collected: SB-21_2-4 ft: PVOc + Naphthalene, DRO SB-21_6-8 ft: PVOc + Naphthalene, DRO					0.4					

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-22		
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020		
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level		
					Surface Elevation 658.4 Feet		
					Borehole Diameter 2.3 inches		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/> State Plane N, E S/C/N			Lat 46° 41' 18.3"		Local Grid Location		
SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 14.0"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W		
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments						
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index							
EOPROBE	60 52.8		0	Silty gravel; fine to medium; gray; dry; angular; (fill).	GM															
				Poorly graded sand with silt; dark brown; dry to moist; angular; (fill).	SP-SM		0.4													
EOPROBE	60 60		2	Fat clay; stiff; red-brown; moist; high plasticity.	CH			0.4												
															0.5					
				End of Boring at 10 feet below ground surface. Analytical samples collected: SB-22_2-4 ft: PVOC + Naphthalene, DRO SB-22_6-8 ft: PVOC + Naphthalene, DRO																

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-23	
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 659.0 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 18.1"			Local Grid Location
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 14.2"			<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W
Facility ID		County Douglas		County Code	Civil Town/City/ or Village Superior	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 45.6		0 2	Silty gravel; fine to medium; gray; dry to moist; angular; (fill).	GM			0.1						
				Poorly graded sand; dense; red-tan; dry to moist; rounded (fill).	SP			0.1						
EOPROBE	60 60		6 8 10	Fat clay; medium stiff; red-brown; dry to moist; high plasticity.	CH			0.2 0.2 0.3						
				End of Boring at 10 feet below ground surface. Analytical samples collected: SB-23_6-8 ft: PVOC + Naphthalene, DRO										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature *Christina J. Seht* Firm **Barr Engineering CO** Tel: Fax:

Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-24	
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 657.7 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 17.6"		Local Grid Location	
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 13.6"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 50.4		0	Silty gravel; fine; gray; moist; angular; (fill).	GM			0.6						
			2	Poorly graded sand with silt; fine; red-brown; moist; subrounded to rounded; (fill).	SP-SM			0.7						
EOPROBE	60 48		4	Fat clay; very stiff; red-brown; moist to wet; high plasticity.	CH			0.9						
			6					0.9						
			8					1.0						
			10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-24_6-8 ft: PVOC + Naphthalene, DRO										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-25	
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 657.9 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 16.9"		Local Grid Location	
State Plane N, E S/C/N			Long -92° 4' 13.3"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W						
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 54		0	Silty gravel; fine; gray; dry to moist; angular; (fill)	GM			0.9						
			2	Poorly graded sand with silt; fine; red-brown; dry to moist (fill).	SP-SM			1.1						
EOPROBE	60 60		4	Fat clay, stiff, red-brown, moist, high plasticity.	CH			1.2						
			6				1.1							
			8					1.2						
			10	End of Boring at 10 feet below ground surface.<<CR> Analytical samples collected: Analytical samples collected: SB-25_6-8 ft: PVOC + Naphthalene, DRO										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-26	
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 656.9 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/> State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Lat 46° 41' 16.1" Long -92° 4' 12.4"		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments	
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index		
EOPROBE	60 40.8		0	Silty gravel; fine; gray; dry to moist; angular; (fill); 0.5 feet of ice/snow.	GM										
				Fat clay; stiff; red-brown; dry to moist; high plasticity.											
EOPROBE	60 60		2					1.0							
EOPROBE	60 60		4					1.0							
EOPROBE	60 60		6					1.1							
EOPROBE	60 60		8					1.0							
EOPROBE	60 60		10					1.1							
				End of Boring at 10 feet below ground surface. Analytical samples collected: Analytical samples collected: SB-26_2-4 ft: PVOC + Naphthalene, DRO SB-26_6-8 ft: PVOC + Naphthalene, DRO											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-27	
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 658.7 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 17.3"		Local Grid Location	
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 14.9"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 48		0-2	Silty gravel; fine; gray; moist; angular; (fill).	GM			1.2						
				Poorly graded sand; fine; red-tan; moist; rounded; (fill).	SP									
EOPROBE	60 60		2-6	Fat clay; very stiff; red-brown; moist; high plasticity.	CH			1.2						
								1.5						
								1.5						
			6-10	Wet from 9-10 feet.				1.4						
				End of Boring at 10 feet below ground surface. Analytical samples collected: SB-27_2-4 ft: PVOc + Naphthalene, DRO SB-27_6-8 ft: PVOc + Naphthalene, DRO										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature *Christina J. Secht* Firm **Barr Engineering CO** Tel: _____ Fax: _____

Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-28	
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 658.5 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 17.7"		Local Grid Location	
State Plane N, E S/C/N			Long -92° 4' 14.0"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			County Douglas		County Code	
Facility ID			Civil Town/City/ or Village Superior			

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60	51.6	0	Silty gravel; fine; gray; moist; angular; (fill).	GM			0.6						
	51.6			Poorly graded sand with silt; fine; red-brown; wet; rounded; (fill).	SP-SM									
EOPROBE	60	60	6	Fat clay; soft; red-brown; moist; high plasticity.	CH			1.1						
			10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-28_6-8 ft: PVOc + Naphthalene, DRO				1.0						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Secht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-29	
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 658.8 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 17.9"		Local Grid Location	
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 14.6"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 49.2		0-2	Silty gravel with sand; fine; gray; dry; angular; (fill).	GM			0.9						
				2-6	Fat clay; stiff; red-brown; moist; high plasticity.	CH			0.8					
EOPROBE	60 60		6-10	End of Boring at 10 feet below ground surface. SB-29_2-4 ft: PVOC + Naphthalene, DRO SB-29_6-8 ft: PVOC + Naphthalene, DRO				0.8 1.0 0.9						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature *Christina J. Seibt* Firm **Barr Engineering CO** Tel:
Fax:

Attachment E

Soil Laboratory Analytical Reports

January 24, 2020

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

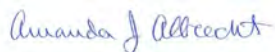
RE: Project: 49161477.00 Nemadji PH II
Pace Project No.: 10504984

Dear Jim Taraldsen:

Enclosed are the analytical results for sample(s) received by the laboratory on January 10, 2020. 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,



Amanda Albrecht
amanda.albrecht@pacelabs.com
(612)607-6382
Project Manager

Enclosures

cc: BarrDM, Barr Engineering Company
Data Management, Barr Engineering
Accounts Payable, Barr Engineering



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Pace Analytical Services Minneapolis

A2LA Certification #: 2926.01	Minnesota Dept of Ag Certification #: via MN 027-053-137
Alabama Certification #: 40770	Minnesota Petrofund Certification #: 1240
Alaska Contaminated Sites Certification #: 17-009	Mississippi Certification #: MN00064
Alaska DW Certification #: MN00064	Missouri Certification #: 10100
Arizona Certification #: AZ0014	Montana Certification #: CERT0092
Arkansas DW Certification #: MN00064	Nebraska Certification #: NE-OS-18-06
Arkansas WW Certification #: 88-0680	Nevada Certification #: MN00064
California Certification #: 2929	New Hampshire Certification #: 2081
CNMI Saipan Certification #: MP0003	New Jersey Certification #: MN002
Colorado Certification #: MN00064	New York Certification #: 11647
Connecticut Certification #: PH-0256	North Carolina DW Certification #: 27700
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137	North Carolina WW Certification #: 530
Florida Certification #: E87605	North Dakota Certification #: R-036
Georgia Certification #: 959	Ohio DW Certification #: 41244
Guam EPA Certification #: MN00064	Ohio VAP Certification #: CL101
Hawaii Certification #: MN00064	Oklahoma Certification #: 9507
Idaho Certification #: MN00064	Oregon Primary Certification #: MN300001
Illinois Certification #: 200011	Oregon Secondary Certification #: MN200001
Indiana Certification #: C-MN-01	Pennsylvania Certification #: 68-00563
Iowa Certification #: 368	Puerto Rico Certification #: MN00064
Kansas Certification #: E-10167	South Carolina Certification #: 74003001
Kentucky DW Certification #: 90062	Tennessee Certification #: TN02818
Kentucky WW Certification #: 90062	Texas Certification #: T104704192
Louisiana DEQ Certification #: 03086	Utah Certification #: MN00064
Louisiana DW Certification #: MN00064	Vermont Certification #: VT-027053137
Maine Certification #: MN00064	Virginia Certification #: 460163
Maryland Certification #: 322	Washington Certification #: C486
Massachusetts Certification #: M-MN064	West Virginia DEP Certification #: 382
Massachusetts DWP Certification #: via MN 027-053-137	West Virginia DW Certification #: 9952 C
Michigan Certification #: 9909	Wisconsin Certification #: 999407970
Minnesota Certification #: 027-053-137	Wyoming UST Certification #: via A2LA 2926.01

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10504984001	SB-14_6-8	Solid	01/06/20 10:50	01/10/20 08:50
10504984002	SB-15_6-8	Solid	01/06/20 11:10	01/10/20 08:50
10504984003	SB-13_6-8	Solid	01/06/20 11:40	01/10/20 08:50
10504984004	SB-12_6-8	Solid	01/06/20 12:10	01/10/20 08:50
10504984005	SB-8_2-4	Solid	01/06/20 12:20	01/10/20 08:50
10504984006	SB-8_6-8	Solid	01/06/20 12:40	01/10/20 08:50
10504984007	SB-11_2-4	Solid	01/06/20 13:05	01/10/20 08:50
10504984008	SB-11_6-8	Solid	01/06/20 13:10	01/10/20 08:50
10504984009	SB-10_6-8	Solid	01/06/20 13:20	01/10/20 08:50
10504984010	SB-10_5-6	Solid	01/06/20 13:40	01/10/20 08:50
10504984011	SB-10_1-2	Solid	01/06/20 13:45	01/10/20 08:50
10504984012	SB-9_6-8	Solid	01/06/20 14:00	01/10/20 08:50
10504984013	SB-7_2-4	Solid	01/06/20 14:30	01/10/20 08:50
10504984014	SB-7_6-8	Solid	01/06/20 14:40	01/10/20 08:50
10504984015	SB-16_6-8	Solid	01/06/20 14:55	01/10/20 08:50
10504984016	SB-6_1.5-2	Solid	01/06/20 15:10	01/10/20 08:50
10504984017	SB-6_5-6	Solid	01/06/20 15:15	01/10/20 08:50
10504984018	SB-21_2-4	Solid	01/06/20 15:40	01/10/20 08:50
10504984019	SB-21_6-8	Solid	01/06/20 15:50	01/10/20 08:50
10504984020	Field Blank	Solid	01/06/20 15:20	01/10/20 08:50
10504984021	SB-22_2-4	Solid	01/07/20 09:15	01/10/20 08:50
10504984022	SB-22_6-8	Solid	01/07/20 09:25	01/10/20 08:50
10504984023	SB-23_6-8	Solid	01/07/20 09:50	01/10/20 08:50
10504984024	SB-29_2-4	Solid	01/07/20 10:20	01/10/20 08:50
10504984025	SB-29_6-8	Solid	01/07/20 10:25	01/10/20 08:50
10504984026	SB-27_2-4	Solid	01/07/20 10:40	01/10/20 08:50
10504984027	SB-27_6-8	Solid	01/07/20 10:45	01/10/20 08:50
10504984028	SB-28_6-8	Solid	01/07/20 11:00	01/10/20 08:50
10504984029	SB-24_6-8	Solid	01/07/20 11:20	01/10/20 08:50
10504984030	SB-25_6-8	Solid	01/07/20 11:45	01/10/20 08:50
10504984031	SB-26_2-4	Solid	01/07/20 12:35	01/10/20 08:50
10504984032	SB-26_6-8	Solid	01/07/20 12:45	01/10/20 08:50
10504984033	SB-19_6-8	Solid	01/07/20 13:10	01/10/20 08:50
10504984034	SB-18_2-4	Solid	01/07/20 13:30	01/10/20 08:50
10504984035	SB-18_6-8	Solid	01/07/20 13:40	01/10/20 08:50
10504984036	SB-17_6-8	Solid	01/07/20 14:05	01/10/20 08:50
10504984037	SB-20_6-8	Solid	01/07/20 14:20	01/10/20 08:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10504984038	Trip Blank	Solid	01/07/20 00:00	01/10/20 08:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10504984001	SB-14_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984002	SB-15_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984003	SB-13_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984004	SB-12_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984005	SB-8_2-4	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984006	SB-8_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984007	SB-11_2-4	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984008	SB-11_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984009	SB-10_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984010	SB-10_5-6	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984011	SB-10_1-2	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984012	SB-9_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984013	SB-7_2-4	WI MOD DRO	JVM	2	PASI-M

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 49161477.00 Nemadji PH II
Pace Project No.: 10504984

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10504984014	SB-7_6-8	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
10504984015	SB-16_6-8	EPA 8260B	AB2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
10504984016	SB-6_1.5-2	EPA 8260B	AB2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
10504984017	SB-6_5-6	EPA 8260B	AB2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
10504984018	SB-21_2-4	EPA 8260B	AB2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984019	SB-21_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984020	Field Blank	EPA 8260B	AB2	11	PASI-M
10504984021	SB-22_2-4	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	11	PASI-M
10504984022	SB-22_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	11	PASI-M
10504984023	SB-23_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	11	PASI-M
10504984024	SB-29_2-4	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	11	PASI-M
10504984025	SB-29_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	11	PASI-M
10504984026	SB-27_2-4	WI MOD DRO	JVM	2	PASI-M

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SAMPLE ANALYTE COUNT

Project: 49161477.00 Nemadji PH II
Pace Project No.: 10504984

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10504984027	SB-27_6-8	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
10504984028	SB-28_6-8	EPA 8260B	CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	11	PASI-M
10504984029	SB-24_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
10504984030	SB-25_6-8	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
10504984031	SB-26_2-4	EPA 8260B	AB2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2, CD2	11	PASI-M
10504984032	SB-26_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2, CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
10504984033	SB-19_6-8	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2, CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
10504984034	SB-18_2-4	EPA 8260B	AB2, CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2, CD2	11	PASI-M
10504984035	SB-18_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2, CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
10504984036	SB-17_6-8	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2, CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
10504984037	SB-20_6-8	EPA 8260B	AB2, CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2, CD2	11	PASI-M
10504984038	Trip Blank	EPA 8260B	CD2	11	PASI-M

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-14_6-8 **Lab ID: 10504984001** Collected: 01/06/20 10:50 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	6.0J	mg/kg	17.9	5.4	1	01/10/20 15:03	01/12/20 16:47		
Surrogates									
n-Triacontane (S)	86	%	50-150		1	01/10/20 15:03	01/12/20 16:47	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	33.9	%	0.10	0.10	1		01/14/20 12:27		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<4.9	ug/kg	16.3	4.9	1	01/10/20 19:00	01/14/20 06:46	71-43-2	
Ethylbenzene	<4.7	ug/kg	15.7	4.7	1	01/10/20 19:00	01/14/20 06:46	100-41-4	
Methyl-tert-butyl ether	<10.3	ug/kg	34.4	10.3	1	01/10/20 19:00	01/14/20 06:46	1634-04-4	
Naphthalene	<81.2	ug/kg	270	81.2	1	01/10/20 19:00	01/14/20 06:46	91-20-3	
Toluene	<21.2	ug/kg	70.5	21.2	1	01/10/20 19:00	01/14/20 06:46	108-88-3	
1,2,4-Trimethylbenzene	<17.4	ug/kg	57.8	17.4	1	01/10/20 19:00	01/14/20 06:46	95-63-6	
1,3,5-Trimethylbenzene	<13.8	ug/kg	46.0	13.8	1	01/10/20 19:00	01/14/20 06:46	108-67-8	
Xylene (Total)	<20.1	ug/kg	67.0	20.1	1	01/10/20 19:00	01/14/20 06:46	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	75-125		1	01/10/20 19:00	01/14/20 06:46	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/10/20 19:00	01/14/20 06:46	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/10/20 19:00	01/14/20 06:46	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-15_6-8 **Lab ID: 10504984002** Collected: 01/06/20 11:10 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<5.0	mg/kg	16.6	5.0	1	01/10/20 15:03	01/12/20 16:54		
Surrogates									
n-Triacontane (S)	85	%	50-150		1	01/10/20 15:03	01/12/20 16:54	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	35.5	%	0.10	0.10	1		01/14/20 12:28		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<4.4	ug/kg	14.6	4.4	1	01/10/20 19:00	01/14/20 07:05	71-43-2	
Ethylbenzene	<4.2	ug/kg	14.0	4.2	1	01/10/20 19:00	01/14/20 07:05	100-41-4	
Methyl-tert-butyl ether	<9.2	ug/kg	30.7	9.2	1	01/10/20 19:00	01/14/20 07:05	1634-04-4	
Naphthalene	<72.6	ug/kg	242	72.6	1	01/10/20 19:00	01/14/20 07:05	91-20-3	
Toluene	<18.9	ug/kg	63.0	18.9	1	01/10/20 19:00	01/14/20 07:05	108-88-3	
1,2,4-Trimethylbenzene	<15.5	ug/kg	51.6	15.5	1	01/10/20 19:00	01/14/20 07:05	95-63-6	
1,3,5-Trimethylbenzene	<12.4	ug/kg	41.2	12.4	1	01/10/20 19:00	01/14/20 07:05	108-67-8	
Xylene (Total)	<18.0	ug/kg	59.9	18.0	1	01/10/20 19:00	01/14/20 07:05	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%	75-125		1	01/10/20 19:00	01/14/20 07:05	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/10/20 19:00	01/14/20 07:05	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/10/20 19:00	01/14/20 07:05	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-13_6-8 **Lab ID: 10504984003** Collected: 01/06/20 11:40 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<4.8	mg/kg	15.8	4.8	1	01/10/20 15:03	01/12/20 17:01		
Surrogates									
n-Triacontane (S)	87	%	50-150		1	01/10/20 15:03	01/12/20 17:01	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	24.7	%	0.10	0.10	1		01/14/20 12:28		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.9	ug/kg	12.9	3.9	1	01/10/20 19:00	01/14/20 04:34	71-43-2	
Ethylbenzene	<3.7	ug/kg	12.4	3.7	1	01/10/20 19:00	01/14/20 04:34	100-41-4	
Methyl-tert-butyl ether	<8.1	ug/kg	27.1	8.1	1	01/10/20 19:00	01/14/20 04:34	1634-04-4	
Naphthalene	<64.0	ug/kg	213	64.0	1	01/10/20 19:00	01/14/20 04:34	91-20-3	
Toluene	<16.7	ug/kg	55.6	16.7	1	01/10/20 19:00	01/14/20 04:34	108-88-3	
1,2,4-Trimethylbenzene	<13.7	ug/kg	45.6	13.7	1	01/10/20 19:00	01/14/20 04:34	95-63-6	
1,3,5-Trimethylbenzene	<10.9	ug/kg	36.3	10.9	1	01/10/20 19:00	01/14/20 04:34	108-67-8	
Xylene (Total)	<15.9	ug/kg	52.9	15.9	1	01/10/20 19:00	01/14/20 04:34	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%	75-125		1	01/10/20 19:00	01/14/20 04:34	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/10/20 19:00	01/14/20 04:34	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	01/10/20 19:00	01/14/20 04:34	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-12_6-8 **Lab ID: 10504984004** Collected: 01/06/20 12:10 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.0	mg/kg	16.6	5.0	1	01/10/20 15:03	01/12/20 17:08		
Surrogates									
n-Triacontane (S)	85	%	50-150		1	01/10/20 15:03	01/12/20 17:08	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	23.9	%	0.10	0.10	1		01/14/20 12:28		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.9	ug/kg	12.8	3.9	1	01/13/20 10:56	01/14/20 08:40	71-43-2	
Ethylbenzene	<3.7	ug/kg	12.4	3.7	1	01/13/20 10:56	01/14/20 08:40	100-41-4	
Methyl-tert-butyl ether	<8.1	ug/kg	27.1	8.1	1	01/13/20 10:56	01/14/20 08:40	1634-04-4	
Naphthalene	<63.9	ug/kg	213	63.9	1	01/13/20 10:56	01/14/20 08:40	91-20-3	
Toluene	<16.7	ug/kg	55.5	16.7	1	01/13/20 10:56	01/14/20 08:40	108-88-3	
1,2,4-Trimethylbenzene	<13.7	ug/kg	45.5	13.7	1	01/13/20 10:56	01/14/20 08:40	95-63-6	
1,3,5-Trimethylbenzene	<10.9	ug/kg	36.2	10.9	1	01/13/20 10:56	01/14/20 08:40	108-67-8	
Xylene (Total)	<15.8	ug/kg	52.7	15.8	1	01/13/20 10:56	01/14/20 08:40	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	75-125		1	01/13/20 10:56	01/14/20 08:40	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/13/20 10:56	01/14/20 08:40	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1	01/13/20 10:56	01/14/20 08:40	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-8_2-4 **Lab ID: 10504984005** Collected: 01/06/20 12:20 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	8.2J	mg/kg	15.6	4.7	1	01/10/20 15:03	01/12/20 16:33		
Surrogates									
n-Triacontane (S)	86	%	50-150		1	01/10/20 15:03	01/12/20 16:33	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	26.6	%	0.10	0.10	1		01/14/20 12:28		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<4.0	ug/kg	13.3	4.0	1	01/13/20 10:56	01/14/20 08:59	71-43-2	
Ethylbenzene	<3.9	ug/kg	12.8	3.9	1	01/13/20 10:56	01/14/20 08:59	100-41-4	
Methyl-tert-butyl ether	<8.4	ug/kg	28.1	8.4	1	01/13/20 10:56	01/14/20 08:59	1634-04-4	
Naphthalene	<66.3	ug/kg	221	66.3	1	01/13/20 10:56	01/14/20 08:59	91-20-3	
Toluene	<17.3	ug/kg	57.6	17.3	1	01/13/20 10:56	01/14/20 08:59	108-88-3	
1,2,4-Trimethylbenzene	<14.2	ug/kg	47.2	14.2	1	01/13/20 10:56	01/14/20 08:59	95-63-6	
1,3,5-Trimethylbenzene	<11.3	ug/kg	37.6	11.3	1	01/13/20 10:56	01/14/20 08:59	108-67-8	
Xylene (Total)	<16.4	ug/kg	54.7	16.4	1	01/13/20 10:56	01/14/20 08:59	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	75-125		1	01/13/20 10:56	01/14/20 08:59	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/13/20 10:56	01/14/20 08:59	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1	01/13/20 10:56	01/14/20 08:59	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-8_6-8 **Lab ID: 10504984006** Collected: 01/06/20 12:40 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<4.8	mg/kg	15.9	4.8	1	01/10/20 15:03	01/12/20 17:15		
Surrogates									
n-Triacontane (S)	81	%	50-150		1	01/10/20 15:03	01/12/20 17:15	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	27.3	%	0.10	0.10	1		01/14/20 12:28		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.9	ug/kg	12.8	3.9	1	01/13/20 10:56	01/14/20 09:18	71-43-2	
Ethylbenzene	<3.7	ug/kg	12.4	3.7	1	01/13/20 10:56	01/14/20 09:18	100-41-4	
Methyl-tert-butyl ether	<8.1	ug/kg	27.1	8.1	1	01/13/20 10:56	01/14/20 09:18	1634-04-4	
Naphthalene	<63.9	ug/kg	213	63.9	1	01/13/20 10:56	01/14/20 09:18	91-20-3	
Toluene	<16.7	ug/kg	55.5	16.7	1	01/13/20 10:56	01/14/20 09:18	108-88-3	
1,2,4-Trimethylbenzene	<13.7	ug/kg	45.5	13.7	1	01/13/20 10:56	01/14/20 09:18	95-63-6	
1,3,5-Trimethylbenzene	<10.9	ug/kg	36.3	10.9	1	01/13/20 10:56	01/14/20 09:18	108-67-8	
Xylene (Total)	<15.8	ug/kg	52.8	15.8	1	01/13/20 10:56	01/14/20 09:18	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%	75-125		1	01/13/20 10:56	01/14/20 09:18	17060-07-0	
Toluene-d8 (S)	102	%	75-125		1	01/13/20 10:56	01/14/20 09:18	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1	01/13/20 10:56	01/14/20 09:18	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II
Pace Project No.: 10504984

Sample: SB-11_2-4 **Lab ID: 10504984007** Collected: 01/06/20 13:05 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	19.5J	mg/kg	20.5	6.2	1	01/10/20 15:03	01/12/20 16:40		T6
Surrogates									
n-Triacontane (S)	101	%	50-150		1	01/10/20 15:03	01/12/20 16:40	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	36.3	%	0.10	0.10	1		01/14/20 12:28		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<5.3	ug/kg	17.7	5.3	1	01/13/20 10:56	01/14/20 14:23	71-43-2	
Ethylbenzene	<5.1	ug/kg	17.1	5.1	1	01/13/20 10:56	01/14/20 14:23	100-41-4	
Methyl-tert-butyl ether	<11.2	ug/kg	37.4	11.2	1	01/13/20 10:56	01/14/20 14:23	1634-04-4	
Naphthalene	<88.4	ug/kg	294	88.4	1	01/13/20 10:56	01/14/20 14:23	91-20-3	
Toluene	<23.0	ug/kg	76.7	23.0	1	01/13/20 10:56	01/14/20 14:23	108-88-3	
1,2,4-Trimethylbenzene	<18.9	ug/kg	62.9	18.9	1	01/13/20 10:56	01/14/20 14:23	95-63-6	
1,3,5-Trimethylbenzene	<15.0	ug/kg	50.1	15.0	1	01/13/20 10:56	01/14/20 14:23	108-67-8	
Xylene (Total)	<21.9	ug/kg	72.9	21.9	1	01/13/20 10:56	01/14/20 14:23	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	75-125		1	01/13/20 10:56	01/14/20 14:23	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1	01/13/20 10:56	01/14/20 14:23	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-125		1	01/13/20 10:56	01/14/20 14:23	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-11_6-8 **Lab ID: 10504984008** Collected: 01/06/20 13:10 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.3	mg/kg	17.8	5.3	1	01/10/20 15:03	01/12/20 17:22		
Surrogates									
n-Triacontane (S)	85	%	50-150		1	01/10/20 15:03	01/12/20 17:22	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	27.7	%	0.10	0.10	1		01/14/20 12:28		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.9	ug/kg	13.0	3.9	1	01/13/20 10:56	01/14/20 14:41	71-43-2	
Ethylbenzene	<3.8	ug/kg	12.5	3.8	1	01/13/20 10:56	01/14/20 14:41	100-41-4	
Methyl-tert-butyl ether	<8.2	ug/kg	27.3	8.2	1	01/13/20 10:56	01/14/20 14:41	1634-04-4	
Naphthalene	<64.6	ug/kg	215	64.6	1	01/13/20 10:56	01/14/20 14:41	91-20-3	
Toluene	<16.8	ug/kg	56.1	16.8	1	01/13/20 10:56	01/14/20 14:41	108-88-3	
1,2,4-Trimethylbenzene	<13.8	ug/kg	46.0	13.8	1	01/13/20 10:56	01/14/20 14:41	95-63-6	
1,3,5-Trimethylbenzene	<11.0	ug/kg	36.6	11.0	1	01/13/20 10:56	01/14/20 14:41	108-67-8	
Xylene (Total)	<16.0	ug/kg	53.3	16.0	1	01/13/20 10:56	01/14/20 14:41	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 14:41	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/13/20 10:56	01/14/20 14:41	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-125		1	01/13/20 10:56	01/14/20 14:41	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-10_6-8 **Lab ID: 10504984009** Collected: 01/06/20 13:20 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.3	mg/kg	17.7	5.3	1	01/10/20 15:03	01/12/20 17:29		
Surrogates									
n-Triacontane (S)	82	%	50-150		1	01/10/20 15:03	01/12/20 17:29	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	26.4	%	0.10	0.10	1		01/14/20 12:29		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.9	ug/kg	13.1	3.9	1	01/13/20 10:56	01/14/20 15:00	71-43-2	
Ethylbenzene	<3.8	ug/kg	12.7	3.8	1	01/13/20 10:56	01/14/20 15:00	100-41-4	
Methyl-tert-butyl ether	<8.3	ug/kg	27.7	8.3	1	01/13/20 10:56	01/14/20 15:00	1634-04-4	
Naphthalene	<65.5	ug/kg	218	65.5	1	01/13/20 10:56	01/14/20 15:00	91-20-3	
Toluene	<17.1	ug/kg	56.9	17.1	1	01/13/20 10:56	01/14/20 15:00	108-88-3	
1,2,4-Trimethylbenzene	<14.0	ug/kg	46.6	14.0	1	01/13/20 10:56	01/14/20 15:00	95-63-6	
1,3,5-Trimethylbenzene	<11.2	ug/kg	37.1	11.2	1	01/13/20 10:56	01/14/20 15:00	108-67-8	
Xylene (Total)	<16.2	ug/kg	54.1	16.2	1	01/13/20 10:56	01/14/20 15:00	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 15:00	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 15:00	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 15:00	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-10_5-6 **Lab ID: 10504984010** Collected: 01/06/20 13:40 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.4	mg/kg	18.1	5.4	1	01/10/20 15:03	01/12/20 17:36		
Surrogates									
n-Triacontane (S)	86	%	50-150		1	01/10/20 15:03	01/12/20 17:36	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	27.7	%	0.10	0.10	1		01/14/20 12:29		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<4.0	ug/kg	13.3	4.0	1	01/13/20 10:56	01/14/20 15:19	71-43-2	
Ethylbenzene	<3.9	ug/kg	12.9	3.9	1	01/13/20 10:56	01/14/20 15:19	100-41-4	
Methyl-tert-butyl ether	<8.5	ug/kg	28.1	8.5	1	01/13/20 10:56	01/14/20 15:19	1634-04-4	
Naphthalene	<66.5	ug/kg	221	66.5	1	01/13/20 10:56	01/14/20 15:19	91-20-3	
Toluene	<17.3	ug/kg	57.7	17.3	1	01/13/20 10:56	01/14/20 15:19	108-88-3	
1,2,4-Trimethylbenzene	<14.2	ug/kg	47.3	14.2	1	01/13/20 10:56	01/14/20 15:19	95-63-6	
1,3,5-Trimethylbenzene	<11.3	ug/kg	37.7	11.3	1	01/13/20 10:56	01/14/20 15:19	108-67-8	
Xylene (Total)	<16.5	ug/kg	54.9	16.5	1	01/13/20 10:56	01/14/20 15:19	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	75-125		1	01/13/20 10:56	01/14/20 15:19	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 15:19	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 15:19	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-10_1-2 **Lab ID: 10504984011** Collected: 01/06/20 13:45 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	121J	mg/kg	149	44.8	10	01/10/20 15:03	01/12/20 16:12		T6
Surrogates									
n-Triacontane (S)	0	%	50-150		10	01/10/20 15:03	01/12/20 16:12	638-68-6	S4
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	23.1	%	0.10	0.10	1		01/14/20 12:29		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.7	ug/kg	12.3	3.7	1	01/13/20 10:56	01/14/20 15:38	71-43-2	
Ethylbenzene	<3.6	ug/kg	11.9	3.6	1	01/13/20 10:56	01/14/20 15:38	100-41-4	
Methyl-tert-butyl ether	<7.8	ug/kg	26.1	7.8	1	01/13/20 10:56	01/14/20 15:38	1634-04-4	
Naphthalene	<61.5	ug/kg	205	61.5	1	01/13/20 10:56	01/14/20 15:38	91-20-3	
Toluene	<16.0	ug/kg	53.4	16.0	1	01/13/20 10:56	01/14/20 15:38	108-88-3	
1,2,4-Trimethylbenzene	<13.2	ug/kg	43.8	13.2	1	01/13/20 10:56	01/14/20 15:38	95-63-6	
1,3,5-Trimethylbenzene	<10.5	ug/kg	34.9	10.5	1	01/13/20 10:56	01/14/20 15:38	108-67-8	
Xylene (Total)	<15.3	ug/kg	50.8	15.3	1	01/13/20 10:56	01/14/20 15:38	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	75-125		1	01/13/20 10:56	01/14/20 15:38	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/13/20 10:56	01/14/20 15:38	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 15:38	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-9_6-8 **Lab ID: 10504984012** Collected: 01/06/20 14:00 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<5.1	mg/kg	16.9	5.1	1	01/10/20 15:03	01/12/20 17:43		
Surrogates									
n-Triacontane (S)	95	%	50-150		1	01/10/20 15:03	01/12/20 17:43	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	27.3	%	0.10	0.10	1		01/14/20 12:29		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<4.0	ug/kg	13.4	4.0	1	01/13/20 10:56	01/14/20 16:17	71-43-2	
Ethylbenzene	<3.9	ug/kg	12.9	3.9	1	01/13/20 10:56	01/14/20 16:17	100-41-4	
Methyl-tert-butyl ether	<8.5	ug/kg	28.3	8.5	1	01/13/20 10:56	01/14/20 16:17	1634-04-4	
Naphthalene	<66.8	ug/kg	222	66.8	1	01/13/20 10:56	01/14/20 16:17	91-20-3	
Toluene	<17.4	ug/kg	58.0	17.4	1	01/13/20 10:56	01/14/20 16:17	108-88-3	
1,2,4-Trimethylbenzene	<14.3	ug/kg	47.5	14.3	1	01/13/20 10:56	01/14/20 16:17	95-63-6	
1,3,5-Trimethylbenzene	<11.4	ug/kg	37.9	11.4	1	01/13/20 10:56	01/14/20 16:17	108-67-8	
Xylene (Total)	<16.6	ug/kg	55.1	16.6	1	01/13/20 10:56	01/14/20 16:17	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	75-125		1	01/13/20 10:56	01/14/20 16:17	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 16:17	2037-26-5	
4-Bromofluorobenzene (S)	99	%	75-125		1	01/13/20 10:56	01/14/20 16:17	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-7_2-4 **Lab ID: 10504984013** Collected: 01/06/20 14:30 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<4.8	mg/kg	15.8	4.8	1	01/10/20 15:03	01/12/20 17:50		
Surrogates									
n-Triacontane (S)	84	%	50-150		1	01/10/20 15:03	01/12/20 17:50	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	23.0	%	0.10	0.10	1		01/14/20 12:29		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.7	ug/kg	12.3	3.7	1	01/13/20 10:56	01/14/20 15:58	71-43-2	
Ethylbenzene	<3.6	ug/kg	11.9	3.6	1	01/13/20 10:56	01/14/20 15:58	100-41-4	
Methyl-tert-butyl ether	<7.8	ug/kg	26.0	7.8	1	01/13/20 10:56	01/14/20 15:58	1634-04-4	
Naphthalene	<61.3	ug/kg	204	61.3	1	01/13/20 10:56	01/14/20 15:58	91-20-3	
Toluene	<16.0	ug/kg	53.2	16.0	1	01/13/20 10:56	01/14/20 15:58	108-88-3	
1,2,4-Trimethylbenzene	<13.1	ug/kg	43.6	13.1	1	01/13/20 10:56	01/14/20 15:58	95-63-6	
1,3,5-Trimethylbenzene	<10.4	ug/kg	34.8	10.4	1	01/13/20 10:56	01/14/20 15:58	108-67-8	
Xylene (Total)	<15.2	ug/kg	50.6	15.2	1	01/13/20 10:56	01/14/20 15:58	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	75-125		1	01/13/20 10:56	01/14/20 15:58	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 15:58	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-125		1	01/13/20 10:56	01/14/20 15:58	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-7_6-8 **Lab ID: 10504984014** Collected: 01/06/20 14:40 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.1	mg/kg	16.9	5.1	1	01/10/20 15:03	01/12/20 17:57		
Surrogates									
n-Triacontane (S)	84	%	50-150		1	01/10/20 15:03	01/12/20 17:57	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	27.2	%	0.10	0.10	1		01/14/20 12:30		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<4.0	ug/kg	13.4	4.0	1	01/13/20 10:56	01/14/20 16:35	71-43-2	
Ethylbenzene	<3.9	ug/kg	13.0	3.9	1	01/13/20 10:56	01/14/20 16:35	100-41-4	
Methyl-tert-butyl ether	<8.5	ug/kg	28.4	8.5	1	01/13/20 10:56	01/14/20 16:35	1634-04-4	
Naphthalene	<67.0	ug/kg	223	67.0	1	01/13/20 10:56	01/14/20 16:35	91-20-3	
Toluene	<17.5	ug/kg	58.2	17.5	1	01/13/20 10:56	01/14/20 16:35	108-88-3	
1,2,4-Trimethylbenzene	<14.3	ug/kg	47.7	14.3	1	01/13/20 10:56	01/14/20 16:35	95-63-6	
1,3,5-Trimethylbenzene	<11.4	ug/kg	38.0	11.4	1	01/13/20 10:56	01/14/20 16:35	108-67-8	
Xylene (Total)	<16.6	ug/kg	55.3	16.6	1	01/13/20 10:56	01/14/20 16:35	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%	75-125		1	01/13/20 10:56	01/14/20 16:35	17060-07-0	
Toluene-d8 (S)	102	%	75-125		1	01/13/20 10:56	01/14/20 16:35	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 16:35	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-16_6-8 **Lab ID: 10504984015** Collected: 01/06/20 14:55 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	26.5	mg/kg	16.9	5.1	1	01/10/20 15:03	01/12/20 16:26		T6
Surrogates									
n-Triacontane (S)	90	%	50-150		1	01/10/20 15:03	01/12/20 16:26	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	25.4	%	0.10	0.10	1		01/14/20 12:30		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.9	ug/kg	13.1	3.9	1	01/13/20 10:56	01/14/20 16:54	71-43-2	
Ethylbenzene	<3.8	ug/kg	12.6	3.8	1	01/13/20 10:56	01/14/20 16:54	100-41-4	
Methyl-tert-butyl ether	<8.3	ug/kg	27.6	8.3	1	01/13/20 10:56	01/14/20 16:54	1634-04-4	
Naphthalene	<65.2	ug/kg	217	65.2	1	01/13/20 10:56	01/14/20 16:54	91-20-3	
Toluene	<17.0	ug/kg	56.6	17.0	1	01/13/20 10:56	01/14/20 16:54	108-88-3	
1,2,4-Trimethylbenzene	<13.9	ug/kg	46.4	13.9	1	01/13/20 10:56	01/14/20 16:54	95-63-6	
1,3,5-Trimethylbenzene	<11.1	ug/kg	37.0	11.1	1	01/13/20 10:56	01/14/20 16:54	108-67-8	
Xylene (Total)	<16.2	ug/kg	53.8	16.2	1	01/13/20 10:56	01/14/20 16:54	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	75-125		1	01/13/20 10:56	01/14/20 16:54	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/13/20 10:56	01/14/20 16:54	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 16:54	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-6_1.5-2 **Lab ID: 10504984016** Collected: 01/06/20 15:10 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	23.6	mg/kg	17.9	5.4	1	01/10/20 15:03	01/12/20 16:19		T6
Surrogates									
n-Triacontane (S)	85	%	50-150		1	01/10/20 15:03	01/12/20 16:19	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	24.1	%	0.10	0.10	1		01/14/20 12:56		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	39.9	ug/kg	12.5	3.8	1	01/13/20 10:56	01/14/20 17:13	71-43-2	
Ethylbenzene	<3.6	ug/kg	12.1	3.6	1	01/13/20 10:56	01/14/20 17:13	100-41-4	
Methyl-tert-butyl ether	<7.9	ug/kg	26.4	7.9	1	01/13/20 10:56	01/14/20 17:13	1634-04-4	
Naphthalene	166J	ug/kg	208	62.4	1	01/13/20 10:56	01/14/20 17:13	91-20-3	
Toluene	51.2J	ug/kg	54.1	16.3	1	01/13/20 10:56	01/14/20 17:13	108-88-3	
1,2,4-Trimethylbenzene	<13.3	ug/kg	44.4	13.3	1	01/13/20 10:56	01/14/20 17:13	95-63-6	
1,3,5-Trimethylbenzene	<10.6	ug/kg	35.4	10.6	1	01/13/20 10:56	01/14/20 17:13	108-67-8	
Xylene (Total)	<15.5	ug/kg	51.5	15.5	1	01/13/20 10:56	01/14/20 17:13	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	75-125		1	01/13/20 10:56	01/14/20 17:13	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 17:13	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/13/20 10:56	01/14/20 17:13	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-6_5-6 **Lab ID: 10504984017** Collected: 01/06/20 15:15 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<4.9	mg/kg	16.3	4.9	1	01/10/20 15:03	01/12/20 18:19		
Surrogates									
n-Triacontane (S)	83	%	50-150		1	01/10/20 15:03	01/12/20 18:19	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	26.4	%	0.10	0.10	1		01/14/20 12:57		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<4.0	ug/kg	13.2	4.0	1	01/14/20 10:02	01/15/20 14:30	71-43-2	
Ethylbenzene	<3.8	ug/kg	12.7	3.8	1	01/14/20 10:02	01/15/20 14:30	100-41-4	
Methyl-tert-butyl ether	<8.4	ug/kg	27.9	8.4	1	01/14/20 10:02	01/15/20 14:30	1634-04-4	
Naphthalene	<65.8	ug/kg	219	65.8	1	01/14/20 10:02	01/15/20 14:30	91-20-3	
Toluene	<17.2	ug/kg	57.2	17.2	1	01/14/20 10:02	01/15/20 14:30	108-88-3	
1,2,4-Trimethylbenzene	<14.1	ug/kg	46.9	14.1	1	01/14/20 10:02	01/15/20 14:30	95-63-6	
1,3,5-Trimethylbenzene	<11.2	ug/kg	37.3	11.2	1	01/14/20 10:02	01/15/20 14:30	108-67-8	
Xylene (Total)	<16.3	ug/kg	54.3	16.3	1	01/14/20 10:02	01/15/20 14:30	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%	75-125		1	01/14/20 10:02	01/15/20 14:30	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1	01/14/20 10:02	01/15/20 14:30	2037-26-5	
4-Bromofluorobenzene (S)	99	%	75-125		1	01/14/20 10:02	01/15/20 14:30	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-21_2-4 **Lab ID: 10504984018** Collected: 01/06/20 15:40 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<6.0	mg/kg	19.9	6.0	1	01/10/20 15:03	01/12/20 18:05		
Surrogates									
n-Triacontane (S)	86	%	50-150		1	01/10/20 15:03	01/12/20 18:05	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	24.8	%	0.10	0.10	1		01/14/20 12:57		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.6	ug/kg	12.1	3.6	1	01/14/20 10:02	01/17/20 04:57	71-43-2	
Ethylbenzene	<3.5	ug/kg	11.7	3.5	1	01/14/20 10:02	01/17/20 04:57	100-41-4	
Methyl-tert-butyl ether	<7.7	ug/kg	25.6	7.7	1	01/14/20 10:02	01/17/20 04:57	1634-04-4	
Naphthalene	<60.5	ug/kg	201	60.5	1	01/14/20 10:02	01/17/20 04:57	91-20-3	
Toluene	<15.8	ug/kg	52.5	15.8	1	01/14/20 10:02	01/17/20 04:57	108-88-3	
1,2,4-Trimethylbenzene	<12.9	ug/kg	43.0	12.9	1	01/14/20 10:02	01/17/20 04:57	95-63-6	
1,3,5-Trimethylbenzene	<10.3	ug/kg	34.3	10.3	1	01/14/20 10:02	01/17/20 04:57	108-67-8	
Xylene (Total)	<15.0	ug/kg	49.9	15.0	1	01/14/20 10:02	01/17/20 04:57	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	75-125		1	01/14/20 10:02	01/17/20 04:57	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/14/20 10:02	01/17/20 04:57	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	01/14/20 10:02	01/17/20 04:57	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-21_6-8 **Lab ID: 10504984019** Collected: 01/06/20 15:50 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<4.9	mg/kg	16.2	4.9	1	01/10/20 15:03	01/12/20 18:12		
Surrogates									
n-Triacontane (S)	89	%	50-150		1	01/10/20 15:03	01/12/20 18:12	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	25.2	%	0.10	0.10	1		01/14/20 12:57		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.8	ug/kg	12.8	3.8	1	01/14/20 10:02	01/17/20 04:38	71-43-2	
Ethylbenzene	<3.7	ug/kg	12.3	3.7	1	01/14/20 10:02	01/17/20 04:38	100-41-4	
Methyl-tert-butyl ether	<8.1	ug/kg	26.9	8.1	1	01/14/20 10:02	01/17/20 04:38	1634-04-4	
Naphthalene	<63.6	ug/kg	212	63.6	1	01/14/20 10:02	01/17/20 04:38	91-20-3	
Toluene	<16.6	ug/kg	55.2	16.6	1	01/14/20 10:02	01/17/20 04:38	108-88-3	
1,2,4-Trimethylbenzene	<13.6	ug/kg	45.3	13.6	1	01/14/20 10:02	01/17/20 04:38	95-63-6	
1,3,5-Trimethylbenzene	<10.8	ug/kg	36.1	10.8	1	01/14/20 10:02	01/17/20 04:38	108-67-8	
Xylene (Total)	<15.8	ug/kg	52.5	15.8	1	01/14/20 10:02	01/17/20 04:38	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	75-125		1	01/14/20 10:02	01/17/20 04:38	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/14/20 10:02	01/17/20 04:38	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-125		1	01/14/20 10:02	01/17/20 04:38	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: Field Blank **Lab ID: 10504984020** Collected: 01/06/20 15:20 Received: 01/10/20 08:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<2.8	ug/kg	9.4	2.8	1	01/14/20 10:02	01/15/20 06:26	71-43-2	
Ethylbenzene	<2.7	ug/kg	9.1	2.7	1	01/14/20 10:02	01/15/20 06:26	100-41-4	
Methyl-tert-butyl ether	<6.0	ug/kg	19.8	6.0	1	01/14/20 10:02	01/15/20 06:26	1634-04-4	
Naphthalene	<46.8	ug/kg	156	46.8	1	01/14/20 10:02	01/15/20 06:26	91-20-3	
Toluene	<12.2	ug/kg	40.6	12.2	1	01/14/20 10:02	01/15/20 06:26	108-88-3	
1,2,4-Trimethylbenzene	<10.0	ug/kg	33.3	10.0	1	01/14/20 10:02	01/15/20 06:26	95-63-6	
1,3,5-Trimethylbenzene	<8.0	ug/kg	26.5	8.0	1	01/14/20 10:02	01/15/20 06:26	108-67-8	
Xylene (Total)	<11.6	ug/kg	38.6	11.6	1	01/14/20 10:02	01/15/20 06:26	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	75-125		1	01/14/20 10:02	01/15/20 06:26	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/14/20 10:02	01/15/20 06:26	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	01/14/20 10:02	01/15/20 06:26	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II
Pace Project No.: 10504984

Sample: SB-22_2-4 **Lab ID: 10504984021** Collected: 01/07/20 09:15 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<4.5	mg/kg	14.9	4.5	1	01/10/20 15:03	01/12/20 18:26		
Surrogates									
n-Triacontane (S)	88	%	50-150		1	01/10/20 15:03	01/12/20 18:26	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	24.3	%	0.10	0.10	1		01/14/20 12:57		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.7	ug/kg	12.2	3.7	1	01/15/20 11:36	01/18/20 02:41	71-43-2	
Ethylbenzene	<3.5	ug/kg	11.8	3.5	1	01/15/20 11:36	01/18/20 02:41	100-41-4	
Methyl-tert-butyl ether	<7.7	ug/kg	25.8	7.7	1	01/15/20 11:36	01/18/20 02:41	1634-04-4	
Naphthalene	<60.9	ug/kg	203	60.9	1	01/15/20 11:36	01/18/20 02:41	91-20-3	
Toluene	<15.9	ug/kg	52.9	15.9	1	01/15/20 11:36	01/18/20 02:41	108-88-3	
1,2,4-Trimethylbenzene	<13.0	ug/kg	43.3	13.0	1	01/15/20 11:36	01/16/20 02:08	95-63-6	
1,3,5-Trimethylbenzene	<10.4	ug/kg	34.5	10.4	1	01/15/20 11:36	01/18/20 02:41	108-67-8	
Xylene (Total)	<15.1	ug/kg	50.3	15.1	1	01/15/20 11:36	01/18/20 02:41	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 02:41	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 02:41	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/15/20 11:36	01/18/20 02:41	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-22_6-8 **Lab ID: 10504984022** Collected: 01/07/20 09:25 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.6	mg/kg	18.8	5.6	1	01/10/20 15:42	01/12/20 13:53		
Surrogates									
n-Triacontane (S)	83	%	50-150		1	01/10/20 15:42	01/12/20 13:53	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	25.2	%	0.10	0.10	1		01/14/20 12:57		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.7	ug/kg	12.4	3.7	1	01/15/20 11:36	01/18/20 03:00	71-43-2	
Ethylbenzene	<3.6	ug/kg	11.9	3.6	1	01/15/20 11:36	01/18/20 03:00	100-41-4	
Methyl-tert-butyl ether	<7.8	ug/kg	26.1	7.8	1	01/15/20 11:36	01/18/20 03:00	1634-04-4	
Naphthalene	<61.7	ug/kg	206	61.7	1	01/15/20 11:36	01/18/20 03:00	91-20-3	
Toluene	<16.1	ug/kg	53.6	16.1	1	01/15/20 11:36	01/18/20 03:00	108-88-3	
1,2,4-Trimethylbenzene	<13.2	ug/kg	43.9	13.2	1	01/15/20 11:36	01/16/20 02:27	95-63-6	
1,3,5-Trimethylbenzene	<10.5	ug/kg	35.0	10.5	1	01/15/20 11:36	01/18/20 03:00	108-67-8	
Xylene (Total)	<15.3	ug/kg	51.0	15.3	1	01/15/20 11:36	01/18/20 03:00	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	75-125		1	01/15/20 11:36	01/18/20 03:00	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 03:00	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/15/20 11:36	01/18/20 03:00	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-23_6-8 **Lab ID: 10504984023** Collected: 01/07/20 09:50 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<4.4	mg/kg	14.7	4.4	1	01/10/20 15:42	01/12/20 13:39		
Surrogates									
n-Triacontane (S)	85	%	50-150		1	01/10/20 15:42	01/12/20 13:39	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	23.4	%	0.10	0.10	1		01/14/20 12:57		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.7	ug/kg	12.5	3.7	1	01/15/20 11:36	01/18/20 03:19	71-43-2	
Ethylbenzene	<3.6	ug/kg	12.0	3.6	1	01/15/20 11:36	01/18/20 03:19	100-41-4	
Methyl-tert-butyl ether	<7.9	ug/kg	26.3	7.9	1	01/15/20 11:36	01/18/20 03:19	1634-04-4	
Naphthalene	<62.1	ug/kg	207	62.1	1	01/15/20 11:36	01/18/20 03:19	91-20-3	
Toluene	<16.2	ug/kg	53.9	16.2	1	01/15/20 11:36	01/18/20 03:19	108-88-3	
1,2,4-Trimethylbenzene	<13.3	ug/kg	44.2	13.3	1	01/15/20 11:36	01/16/20 02:46	95-63-6	
1,3,5-Trimethylbenzene	<10.6	ug/kg	35.2	10.6	1	01/15/20 11:36	01/18/20 03:19	108-67-8	
Xylene (Total)	<15.4	ug/kg	51.3	15.4	1	01/15/20 11:36	01/18/20 03:19	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	75-125		1	01/15/20 11:36	01/18/20 03:19	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 03:19	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/15/20 11:36	01/18/20 03:19	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-29_2-4 **Lab ID: 10504984024** Collected: 01/07/20 10:20 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	14.0J	mg/kg	15.4	4.6	1	01/10/20 15:42	01/12/20 13:46		
Surrogates									
n-Triacontane (S)	84	%	50-150		1	01/10/20 15:42	01/12/20 13:46	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	24.0	%	0.10	0.10	1		01/14/20 12:57		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.6	ug/kg	12.0	3.6	1	01/15/20 11:36	01/18/20 03:38	71-43-2	
Ethylbenzene	<3.5	ug/kg	11.6	3.5	1	01/15/20 11:36	01/18/20 03:38	100-41-4	
Methyl-tert-butyl ether	<7.6	ug/kg	25.4	7.6	1	01/15/20 11:36	01/18/20 03:38	1634-04-4	
Naphthalene	<60.0	ug/kg	200	60.0	1	01/15/20 11:36	01/18/20 03:38	91-20-3	
Toluene	<15.6	ug/kg	52.1	15.6	1	01/15/20 11:36	01/18/20 03:38	108-88-3	
1,2,4-Trimethylbenzene	<12.8	ug/kg	42.7	12.8	1	01/15/20 11:36	01/16/20 03:24	95-63-6	
1,3,5-Trimethylbenzene	<10.2	ug/kg	34.0	10.2	1	01/15/20 11:36	01/18/20 03:38	108-67-8	
Xylene (Total)	<14.9	ug/kg	49.5	14.9	1	01/15/20 11:36	01/18/20 03:38	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	75-125		1	01/15/20 11:36	01/18/20 03:38	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 03:38	2037-26-5	
4-Bromofluorobenzene (S)	99	%	75-125		1	01/15/20 11:36	01/18/20 03:38	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-29_6-8 **Lab ID: 10504984025** Collected: 01/07/20 10:25 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.3	mg/kg	17.7	5.3	1	01/10/20 15:42	01/12/20 14:00		
Surrogates									
n-Triacontane (S)	88	%	50-150		1	01/10/20 15:42	01/12/20 14:00	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	29.3	%	0.10	0.10	1		01/14/20 12:57		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.9	ug/kg	12.9	3.9	1	01/15/20 11:36	01/18/20 03:57	71-43-2	
Ethylbenzene	<3.7	ug/kg	12.4	3.7	1	01/15/20 11:36	01/18/20 03:57	100-41-4	
Methyl-tert-butyl ether	<8.2	ug/kg	27.1	8.2	1	01/15/20 11:36	01/18/20 03:57	1634-04-4	
Naphthalene	<64.1	ug/kg	213	64.1	1	01/15/20 11:36	01/18/20 03:57	91-20-3	
Toluene	<16.7	ug/kg	55.7	16.7	1	01/15/20 11:36	01/18/20 03:57	108-88-3	
1,2,4-Trimethylbenzene	<13.7	ug/kg	45.6	13.7	1	01/15/20 11:36	01/16/20 03:05	95-63-6	
1,3,5-Trimethylbenzene	<10.9	ug/kg	36.4	10.9	1	01/15/20 11:36	01/18/20 03:57	108-67-8	
Xylene (Total)	<15.9	ug/kg	52.9	15.9	1	01/15/20 11:36	01/18/20 03:57	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	75-125		1	01/15/20 11:36	01/18/20 03:57	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 03:57	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1	01/15/20 11:36	01/18/20 03:57	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-27_2-4 **Lab ID: 10504984026** Collected: 01/07/20 10:40 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.0	mg/kg	16.8	5.0	1	01/10/20 15:42	01/12/20 14:07		
Surrogates									
n-Triacontane (S)	91	%	50-150		1	01/10/20 15:42	01/12/20 14:07	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	25.8	%	0.10	0.10	1		01/14/20 12:58		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.7	ug/kg	12.3	3.7	1	01/15/20 11:36	01/18/20 04:16	71-43-2	
Ethylbenzene	<3.6	ug/kg	11.9	3.6	1	01/15/20 11:36	01/18/20 04:16	100-41-4	
Methyl-tert-butyl ether	<7.8	ug/kg	26.0	7.8	1	01/15/20 11:36	01/18/20 04:16	1634-04-4	
Naphthalene	<61.3	ug/kg	204	61.3	1	01/15/20 11:36	01/18/20 04:16	91-20-3	
Toluene	<16.0	ug/kg	53.2	16.0	1	01/15/20 11:36	01/18/20 04:16	108-88-3	
1,2,4-Trimethylbenzene	<13.1	ug/kg	43.6	13.1	1	01/15/20 11:36	01/16/20 03:43	95-63-6	
1,3,5-Trimethylbenzene	<10.4	ug/kg	34.8	10.4	1	01/15/20 11:36	01/18/20 04:16	108-67-8	
Xylene (Total)	<15.2	ug/kg	50.6	15.2	1	01/15/20 11:36	01/18/20 04:16	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 04:16	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 04:16	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1	01/15/20 11:36	01/18/20 04:16	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-27_6-8 **Lab ID: 10504984027** Collected: 01/07/20 10:45 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<4.8	mg/kg	16.1	4.8	1	01/10/20 15:42	01/12/20 14:14		
Surrogates									
n-Triacontane (S)	85	%	50-150		1	01/10/20 15:42	01/12/20 14:14	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	26.4	%	0.10	0.10	1		01/14/20 12:58		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.8	ug/kg	12.5	3.8	1	01/15/20 11:36	01/18/20 04:35	71-43-2	
Ethylbenzene	<3.6	ug/kg	12.1	3.6	1	01/15/20 11:36	01/18/20 04:35	100-41-4	
Methyl-tert-butyl ether	<7.9	ug/kg	26.4	7.9	1	01/15/20 11:36	01/18/20 04:35	1634-04-4	
Naphthalene	<62.4	ug/kg	208	62.4	1	01/15/20 11:36	01/18/20 04:35	91-20-3	
Toluene	<16.3	ug/kg	54.2	16.3	1	01/15/20 11:36	01/18/20 04:35	108-88-3	
1,2,4-Trimethylbenzene	<13.3	ug/kg	44.4	13.3	1	01/15/20 11:36	01/16/20 04:02	95-63-6	
1,3,5-Trimethylbenzene	<10.6	ug/kg	35.4	10.6	1	01/15/20 11:36	01/18/20 04:35	108-67-8	
Xylene (Total)	<15.5	ug/kg	51.5	15.5	1	01/15/20 11:36	01/18/20 04:35	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	75-125		1	01/15/20 11:36	01/18/20 04:35	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 04:35	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/15/20 11:36	01/18/20 04:35	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-28_6-8 **Lab ID: 10504984028** Collected: 01/07/20 11:00 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.1	mg/kg	17.0	5.1	1	01/10/20 15:42	01/12/20 14:21		
Surrogates									
n-Triacontane (S)	84	%	50-150		1	01/10/20 15:42	01/12/20 14:21	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	27.1	%	0.10	0.10	1		01/14/20 12:58		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.7	ug/kg	12.3	3.7	1	01/15/20 11:36	01/18/20 04:54	71-43-2	
Ethylbenzene	<3.6	ug/kg	11.8	3.6	1	01/15/20 11:36	01/18/20 04:54	100-41-4	
Methyl-tert-butyl ether	<7.8	ug/kg	25.9	7.8	1	01/15/20 11:36	01/18/20 04:54	1634-04-4	
Naphthalene	<61.2	ug/kg	204	61.2	1	01/15/20 11:36	01/18/20 04:54	91-20-3	
Toluene	<16.0	ug/kg	53.1	16.0	1	01/15/20 11:36	01/18/20 04:54	108-88-3	
1,2,4-Trimethylbenzene	<13.1	ug/kg	43.5	13.1	1	01/15/20 11:36	01/16/20 04:21	95-63-6	
1,3,5-Trimethylbenzene	<10.4	ug/kg	34.7	10.4	1	01/15/20 11:36	01/18/20 04:54	108-67-8	
Xylene (Total)	<15.2	ug/kg	50.5	15.2	1	01/15/20 11:36	01/18/20 04:54	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 04:54	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 04:54	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/15/20 11:36	01/18/20 04:54	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-24_6-8 **Lab ID: 10504984029** Collected: 01/07/20 11:20 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<4.9	mg/kg	16.4	4.9	1	01/10/20 15:42	01/12/20 13:10		
Surrogates									
n-Triacontane (S)	84	%	50-150		1	01/10/20 15:42	01/12/20 13:10	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	23.6	%	0.10	0.10	1		01/14/20 12:58		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.7	ug/kg	12.4	3.7	1	01/15/20 11:36	01/18/20 05:13	71-43-2	
Ethylbenzene	<3.6	ug/kg	12.0	3.6	1	01/15/20 11:36	01/18/20 05:13	100-41-4	
Methyl-tert-butyl ether	<7.9	ug/kg	26.2	7.9	1	01/15/20 11:36	01/18/20 05:13	1634-04-4	
Naphthalene	<62.0	ug/kg	206	62.0	1	01/15/20 11:36	01/18/20 05:13	91-20-3	
Toluene	<16.2	ug/kg	53.8	16.2	1	01/15/20 11:36	01/18/20 05:13	108-88-3	
1,2,4-Trimethylbenzene	<13.2	ug/kg	44.1	13.2	1	01/15/20 11:36	01/16/20 04:39	95-63-6	
1,3,5-Trimethylbenzene	<10.6	ug/kg	35.1	10.6	1	01/15/20 11:36	01/18/20 05:13	108-67-8	
Xylene (Total)	<15.4	ug/kg	51.1	15.4	1	01/15/20 11:36	01/18/20 05:13	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	75-125		1	01/15/20 11:36	01/18/20 05:13	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 05:13	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1	01/15/20 11:36	01/18/20 05:13	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-25_6-8 **Lab ID: 10504984030** Collected: 01/07/20 11:45 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	15.5J	mg/kg	18.4	5.5	1	01/10/20 15:42	01/12/20 13:32		
Surrogates									
n-Triacontane (S)	79	%	50-150		1	01/10/20 15:42	01/12/20 13:32	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	34.5	%	0.10	0.10	1		01/14/20 12:58		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<4.6	ug/kg	15.2	4.6	1	01/17/20 09:57	01/18/20 05:32	71-43-2	
Ethylbenzene	<4.4	ug/kg	14.7	4.4	1	01/17/20 09:57	01/18/20 05:32	100-41-4	
Methyl-tert-butyl ether	<9.7	ug/kg	32.1	9.7	1	01/17/20 09:57	01/18/20 05:32	1634-04-4	
Naphthalene	<75.9	ug/kg	253	75.9	1	01/17/20 09:57	01/18/20 05:32	91-20-3	
Toluene	<19.8	ug/kg	65.9	19.8	1	01/17/20 09:57	01/18/20 05:32	108-88-3	
1,2,4-Trimethylbenzene	<16.2	ug/kg	54.0	16.2	1	01/17/20 09:57	01/18/20 05:32	95-63-6	
1,3,5-Trimethylbenzene	<12.9	ug/kg	43.1	12.9	1	01/17/20 09:57	01/18/20 05:32	108-67-8	
Xylene (Total)	<18.8	ug/kg	62.7	18.8	1	01/17/20 09:57	01/18/20 05:32	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	75-125		1	01/17/20 09:57	01/18/20 05:32	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1	01/17/20 09:57	01/18/20 05:32	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1	01/17/20 09:57	01/18/20 05:32	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-26_2-4 **Lab ID: 10504984031** Collected: 01/07/20 12:35 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<4.8	mg/kg	16.1	4.8	1	01/10/20 15:42	01/12/20 14:28		
Surrogates									
n-Triacontane (S)	85	%	50-150		1	01/10/20 15:42	01/12/20 14:28	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	25.5	%	0.10	0.10	1		01/14/20 12:58		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.9	ug/kg	13.0	3.9	1	01/15/20 11:36	01/18/20 05:50	71-43-2	
Ethylbenzene	<3.8	ug/kg	12.6	3.8	1	01/15/20 11:36	01/18/20 05:50	100-41-4	
Methyl-tert-butyl ether	<8.3	ug/kg	27.5	8.3	1	01/15/20 11:36	01/18/20 05:50	1634-04-4	
Naphthalene	<64.9	ug/kg	216	64.9	1	01/15/20 11:36	01/18/20 05:50	91-20-3	
Toluene	<16.9	ug/kg	56.4	16.9	1	01/15/20 11:36	01/18/20 05:50	108-88-3	
1,2,4-Trimethylbenzene	<13.9	ug/kg	46.2	13.9	1	01/15/20 11:36	01/16/20 05:17	95-63-6	
1,3,5-Trimethylbenzene	<11.1	ug/kg	36.8	11.1	1	01/15/20 11:36	01/18/20 05:50	108-67-8	
Xylene (Total)	<16.1	ug/kg	53.6	16.1	1	01/15/20 11:36	01/18/20 05:50	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 05:50	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 05:50	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/15/20 11:36	01/18/20 05:50	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-26_6-8 **Lab ID: 10504984032** Collected: 01/07/20 12:45 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.3	mg/kg	17.6	5.3	1	01/10/20 15:42	01/12/20 14:35		
Surrogates									
n-Triacontane (S)	89	%	50-150		1	01/10/20 15:42	01/12/20 14:35	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	29.5	%	0.10	0.10	1		01/14/20 12:59		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.9	ug/kg	13.0	3.9	1	01/15/20 11:36	01/18/20 06:09	71-43-2	
Ethylbenzene	<3.8	ug/kg	12.5	3.8	1	01/15/20 11:36	01/18/20 06:09	100-41-4	
Methyl-tert-butyl ether	<8.2	ug/kg	27.4	8.2	1	01/15/20 11:36	01/18/20 06:09	1634-04-4	
Naphthalene	<64.7	ug/kg	215	64.7	1	01/15/20 11:36	01/18/20 06:09	91-20-3	
Toluene	<16.9	ug/kg	56.2	16.9	1	01/15/20 11:36	01/18/20 06:09	108-88-3	
1,2,4-Trimethylbenzene	<13.8	ug/kg	46.0	13.8	1	01/15/20 11:36	01/16/20 05:36	95-63-6	
1,3,5-Trimethylbenzene	<11.0	ug/kg	36.7	11.0	1	01/15/20 11:36	01/18/20 06:09	108-67-8	
Xylene (Total)	<16.0	ug/kg	53.4	16.0	1	01/15/20 11:36	01/18/20 06:09	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 06:09	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1	01/15/20 11:36	01/18/20 06:09	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/15/20 11:36	01/18/20 06:09	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-19_6-8 **Lab ID: 10504984033** Collected: 01/07/20 13:10 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<5.0	mg/kg	16.7	5.0	1	01/10/20 15:42	01/12/20 14:56		
Surrogates									
n-Triacontane (S)	82	%	50-150		1	01/10/20 15:42	01/12/20 14:56	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	24.5	%	0.10	0.10	1		01/14/20 12:59		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.9	ug/kg	12.9	3.9	1	01/15/20 11:36	01/18/20 06:28	71-43-2	
Ethylbenzene	<3.7	ug/kg	12.5	3.7	1	01/15/20 11:36	01/18/20 06:28	100-41-4	
Methyl-tert-butyl ether	<8.2	ug/kg	27.3	8.2	1	01/15/20 11:36	01/18/20 06:28	1634-04-4	
Naphthalene	<64.4	ug/kg	214	64.4	1	01/15/20 11:36	01/18/20 06:28	91-20-3	
Toluene	<16.8	ug/kg	55.9	16.8	1	01/15/20 11:36	01/18/20 06:28	108-88-3	
1,2,4-Trimethylbenzene	<13.8	ug/kg	45.8	13.8	1	01/15/20 11:36	01/16/20 05:55	95-63-6	
1,3,5-Trimethylbenzene	<11.0	ug/kg	36.5	11.0	1	01/15/20 11:36	01/18/20 06:28	108-67-8	
Xylene (Total)	<16.0	ug/kg	53.1	16.0	1	01/15/20 11:36	01/18/20 06:28	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 06:28	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 06:28	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1	01/15/20 11:36	01/18/20 06:28	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-18_2-4 **Lab ID: 10504984034** Collected: 01/07/20 13:30 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<5.1	mg/kg	16.9	5.1	1	01/10/20 15:42	01/12/20 15:03		
Surrogates									
n-Triacontane (S)	88	%	50-150		1	01/10/20 15:42	01/12/20 15:03	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	24.8	%	0.10	0.10	1		01/14/20 12:59		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.8	ug/kg	12.6	3.8	1	01/15/20 11:36	01/18/20 06:47	71-43-2	
Ethylbenzene	<3.6	ug/kg	12.2	3.6	1	01/15/20 11:36	01/18/20 06:47	100-41-4	
Methyl-tert-butyl ether	<8.0	ug/kg	26.6	8.0	1	01/15/20 11:36	01/18/20 06:47	1634-04-4	
Naphthalene	<62.8	ug/kg	209	62.8	1	01/15/20 11:36	01/18/20 06:47	91-20-3	
Toluene	<16.4	ug/kg	54.5	16.4	1	01/15/20 11:36	01/18/20 06:47	108-88-3	
1,2,4-Trimethylbenzene	<13.4	ug/kg	44.7	13.4	1	01/15/20 11:36	01/16/20 06:13	95-63-6	
1,3,5-Trimethylbenzene	<10.7	ug/kg	35.6	10.7	1	01/15/20 11:36	01/18/20 06:47	108-67-8	
Xylene (Total)	<15.6	ug/kg	51.8	15.6	1	01/15/20 11:36	01/18/20 06:47	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 06:47	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1	01/15/20 11:36	01/18/20 06:47	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1	01/15/20 11:36	01/18/20 06:47	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-18_6-8 **Lab ID: 10504984035** Collected: 01/07/20 13:40 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<5.1	mg/kg	17.1	5.1	1	01/10/20 15:42	01/12/20 15:10		
Surrogates									
n-Triacontane (S)	85	%	50-150		1	01/10/20 15:42	01/12/20 15:10	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	27.2	%	0.10	0.10	1		01/14/20 12:59		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.9	ug/kg	12.9	3.9	1	01/15/20 11:36	01/18/20 07:06	71-43-2	
Ethylbenzene	<3.7	ug/kg	12.5	3.7	1	01/15/20 11:36	01/18/20 07:06	100-41-4	
Methyl-tert-butyl ether	<8.2	ug/kg	27.3	8.2	1	01/15/20 11:36	01/18/20 07:06	1634-04-4	
Naphthalene	<64.4	ug/kg	214	64.4	1	01/15/20 11:36	01/18/20 07:06	91-20-3	
Toluene	<16.8	ug/kg	55.9	16.8	1	01/15/20 11:36	01/18/20 07:06	108-88-3	
1,2,4-Trimethylbenzene	<13.8	ug/kg	45.8	13.8	1	01/15/20 11:36	01/16/20 06:32	95-63-6	
1,3,5-Trimethylbenzene	<11.0	ug/kg	36.5	11.0	1	01/15/20 11:36	01/18/20 07:06	108-67-8	
Xylene (Total)	<16.0	ug/kg	53.2	16.0	1	01/15/20 11:36	01/18/20 07:06	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%	75-125		1	01/15/20 11:36	01/18/20 07:06	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 07:06	2037-26-5	
4-Bromofluorobenzene (S)	96	%	75-125		1	01/15/20 11:36	01/18/20 07:06	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-17_6-8 **Lab ID: 10504984036** Collected: 01/07/20 14:05 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.1	mg/kg	17.1	5.1	1	01/10/20 15:42	01/12/20 15:17		
Surrogates									
n-Triacontane (S)	88	%	50-150		1	01/10/20 15:42	01/12/20 15:17	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	26.2	%	0.10	0.10	1		01/15/20 10:12		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.8	ug/kg	12.8	3.8	1	01/15/20 11:36	01/18/20 07:25	71-43-2	
Ethylbenzene	<3.7	ug/kg	12.4	3.7	1	01/15/20 11:36	01/18/20 07:25	100-41-4	
Methyl-tert-butyl ether	<8.1	ug/kg	27.0	8.1	1	01/15/20 11:36	01/18/20 07:25	1634-04-4	
Naphthalene	<63.9	ug/kg	213	63.9	1	01/15/20 11:36	01/18/20 07:25	91-20-3	
Toluene	<16.7	ug/kg	55.5	16.7	1	01/15/20 11:36	01/18/20 07:25	108-88-3	
1,2,4-Trimethylbenzene	<13.6	ug/kg	45.5	13.6	1	01/15/20 11:36	01/16/20 06:51	95-63-6	
1,3,5-Trimethylbenzene	<10.9	ug/kg	36.2	10.9	1	01/15/20 11:36	01/18/20 07:25	108-67-8	
Xylene (Total)	<15.8	ug/kg	52.7	15.8	1	01/15/20 11:36	01/18/20 07:25	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 07:25	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 07:25	2037-26-5	
4-Bromofluorobenzene (S)	96	%	75-125		1	01/15/20 11:36	01/18/20 07:25	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-20_6-8 **Lab ID: 10504984037** Collected: 01/07/20 14:20 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<4.9	mg/kg	16.4	4.9	1	01/10/20 15:42	01/12/20 14:42		
Surrogates									
n-Triacontane (S)	82	%	50-150		1	01/10/20 15:42	01/12/20 14:42	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	25.7	%	0.10	0.10	1		01/15/20 10:12		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.7	ug/kg	12.4	3.7	1	01/15/20 11:36	01/18/20 07:44	71-43-2	
Ethylbenzene	<3.6	ug/kg	11.9	3.6	1	01/15/20 11:36	01/18/20 07:44	100-41-4	
Methyl-tert-butyl ether	<7.8	ug/kg	26.1	7.8	1	01/15/20 11:36	01/18/20 07:44	1634-04-4	
Naphthalene	<61.7	ug/kg	205	61.7	1	01/15/20 11:36	01/18/20 07:44	91-20-3	
Toluene	<16.1	ug/kg	53.5	16.1	1	01/15/20 11:36	01/18/20 07:44	108-88-3	
1,2,4-Trimethylbenzene	<13.2	ug/kg	43.9	13.2	1	01/15/20 11:36	01/16/20 07:10	95-63-6	
1,3,5-Trimethylbenzene	<10.5	ug/kg	35.0	10.5	1	01/15/20 11:36	01/18/20 07:44	108-67-8	
Xylene (Total)	<15.3	ug/kg	50.9	15.3	1	01/15/20 11:36	01/18/20 07:44	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 07:44	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 07:44	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/15/20 11:36	01/18/20 07:44	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: Trip Blank **Lab ID:** 10504984038 Collected: 01/07/20 00:00 Received: 01/10/20 08:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<2.8	ug/kg	9.4	2.8	1	01/15/20 11:36	01/18/20 02:04	71-43-2	
Ethylbenzene	<2.7	ug/kg	9.1	2.7	1	01/15/20 11:36	01/18/20 02:04	100-41-4	
Methyl-tert-butyl ether	<6.0	ug/kg	19.8	6.0	1	01/15/20 11:36	01/18/20 02:04	1634-04-4	
Naphthalene	<46.8	ug/kg	156	46.8	1	01/15/20 11:36	01/18/20 02:04	91-20-3	
Toluene	<12.2	ug/kg	40.6	12.2	1	01/15/20 11:36	01/18/20 02:04	108-88-3	
1,2,4-Trimethylbenzene	<10.0	ug/kg	33.3	10.0	1	01/15/20 11:36	01/16/20 01:49	95-63-6	
1,3,5-Trimethylbenzene	<8.0	ug/kg	26.5	8.0	1	01/15/20 11:36	01/18/20 02:04	108-67-8	
Xylene (Total)	<11.6	ug/kg	38.6	11.6	1	01/15/20 11:36	01/18/20 02:04	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 02:04	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 02:04	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 02:04	460-00-4	

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

QC Batch:	654419	Analysis Method:	ASTM D2974
QC Batch Method:	ASTM D2974	Analysis Description:	Dry Weight / %M by ASTM D2974
Associated Lab Samples:	10504984001, 10504984002, 10504984003, 10504984004, 10504984005, 10504984006, 10504984007, 10504984008, 10504984009, 10504984010, 10504984011, 10504984012, 10504984013, 10504984014, 10504984015		

SAMPLE DUPLICATE: 3518067

Parameter	Units	10504984015 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	25.4	25.0	2	30	N2

SAMPLE DUPLICATE: 3518350

Parameter	Units	10504967006 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.3	16.2	0	30	N2

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

QC Batch: 654420

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight / %M by ASTM D2974

Associated Lab Samples: 10504984016, 10504984017, 10504984018, 10504984019, 10504984021, 10504984022, 10504984023, 10504984024, 10504984025, 10504984026, 10504984027, 10504984028, 10504984029, 10504984030, 10504984031, 10504984032, 10504984033, 10504984034, 10504984035

SAMPLE DUPLICATE: 3518069

Parameter	Units	10504984016 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	24.1	26.0	7	30	N2

SAMPLE DUPLICATE: 3518070

Parameter	Units	10504984035 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	27.2	25.9	5	30	N2

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

QC Batch: 654665

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight / %M by ASTM D2974

Associated Lab Samples: 10504984036, 10504984037

SAMPLE DUPLICATE: 3519132

Parameter	Units	10505286001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.8	17.4	4	30	N2

SAMPLE DUPLICATE: 3519254

Parameter	Units	10504984037 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	25.7	27.4	7	30	N2

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

QC Batch: 654083 Analysis Method: EPA 8260B
QC Batch Method: EPA 5035/5030B Analysis Description: 8260B MSV UST
Associated Lab Samples: 10504984001, 10504984002, 10504984003

METHOD BLANK: 3516236 Matrix: Solid

Associated Lab Samples: 10504984001, 10504984002, 10504984003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<10.0	33.3	01/13/20 14:24	
1,3,5-Trimethylbenzene	ug/kg	<8.0	26.5	01/13/20 14:24	
Benzene	ug/kg	<2.8	9.4	01/13/20 14:24	
Ethylbenzene	ug/kg	<2.7	9.1	01/13/20 14:24	
Methyl-tert-butyl ether	ug/kg	<6.0	19.8	01/13/20 14:24	
Naphthalene	ug/kg	<46.8	156	01/13/20 14:24	
Toluene	ug/kg	<12.2	40.6	01/13/20 14:24	
Xylene (Total)	ug/kg	<11.6	38.6	01/13/20 14:24	
1,2-Dichloroethane-d4 (S)	%	103	75-125	01/13/20 14:24	
4-Bromofluorobenzene (S)	%	100	75-125	01/13/20 14:24	
Toluene-d8 (S)	%	101	75-125	01/13/20 14:24	

LABORATORY CONTROL SAMPLE: 3516237

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	652	65	63-126	
1,3,5-Trimethylbenzene	ug/kg	1000	652	65	64-125	
Benzene	ug/kg	1000	609	61	59-125	
Ethylbenzene	ug/kg	1000	670	67	62-125	
Methyl-tert-butyl ether	ug/kg	1000	651	65	58-125	
Naphthalene	ug/kg	1000	588	59	57-125	
Toluene	ug/kg	1000	629	63	59-125	
Xylene (Total)	ug/kg	3000	1950	65	65-125	
1,2-Dichloroethane-d4 (S)	%			98	75-125	
4-Bromofluorobenzene (S)	%			101	75-125	
Toluene-d8 (S)	%			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3516238 3516239

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10504908001 Result	Spike Conc.	Spike Conc.	Conc.								
1,2,4-Trimethylbenzene	ug/kg	ND	1080	1080	1080	969	996	90	92	53-150	3	30	
1,3,5-Trimethylbenzene	ug/kg	ND	1080	1080	1080	960	985	89	91	60-150	3	30	
Benzene	ug/kg	ND	1080	1080	1080	839	811	78	75	46-150	3	30	
Ethylbenzene	ug/kg	ND	1080	1080	1080	950	952	88	88	59-150	0	30	
Methyl-tert-butyl ether	ug/kg	ND	1080	1080	1080	937	921	87	85	50-150	2	30	
Naphthalene	ug/kg	ND	1080	1080	1080	982	1030	91	96	50-150	5	30	
Toluene	ug/kg	ND	1080	1080	1080	858	865	80	80	55-150	1	30	

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3516238 3516239												
Parameter	Units	10504908001		MS	MSD	MS		MSD		% Rec Limits	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec	% Rec				
Xylene (Total)	ug/kg	ND	3230	3240	2810	2840	87	88	60-150	1	30	
1,2-Dichloroethane-d4 (S)	%						100	98	75-125			
4-Bromofluorobenzene (S)	%						99	100	75-125			
Toluene-d8 (S)	%						100	100	75-125			

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

QC Batch: 654110 Analysis Method: EPA 8260B
 QC Batch Method: EPA 5035/5030B Analysis Description: 8260B MSV UST
 Associated Lab Samples: 10504984004, 10504984005, 10504984006, 10504984007, 10504984008, 10504984009, 10504984010, 10504984011, 10504984012, 10504984013, 10504984014, 10504984015, 10504984016

METHOD BLANK: 3516647 Matrix: Solid
 Associated Lab Samples: 10504984004, 10504984005, 10504984006, 10504984007, 10504984008, 10504984009, 10504984010, 10504984011, 10504984012, 10504984013, 10504984014, 10504984015, 10504984016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<10.0	33.3	01/14/20 00:29	
1,3,5-Trimethylbenzene	ug/kg	<8.0	26.5	01/14/20 00:29	
Benzene	ug/kg	<2.8	9.4	01/14/20 00:29	
Ethylbenzene	ug/kg	<2.7	9.1	01/14/20 00:29	
Methyl-tert-butyl ether	ug/kg	<6.0	19.8	01/14/20 00:29	
Naphthalene	ug/kg	<46.8	156	01/14/20 00:29	
Toluene	ug/kg	<12.2	40.6	01/14/20 00:29	
Xylene (Total)	ug/kg	<11.6	38.6	01/14/20 00:29	
1,2-Dichloroethane-d4 (S)	%	101	75-125	01/14/20 00:29	
4-Bromofluorobenzene (S)	%	100	75-125	01/14/20 00:29	
Toluene-d8 (S)	%	101	75-125	01/14/20 00:29	

LABORATORY CONTROL SAMPLE: 3516648

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	891	89	63-126	
1,3,5-Trimethylbenzene	ug/kg	1000	885	89	64-125	
Benzene	ug/kg	1000	752	75	59-125	
Ethylbenzene	ug/kg	1000	879	88	62-125	
Methyl-tert-butyl ether	ug/kg	1000	864	86	58-125	
Naphthalene	ug/kg	1000	915	92	57-125	
Toluene	ug/kg	1000	794	79	59-125	
Xylene (Total)	ug/kg	3000	2590	86	65-125	
1,2-Dichloroethane-d4 (S)	%			99	75-125	
4-Bromofluorobenzene (S)	%			97	75-125	
Toluene-d8 (S)	%			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3516649 3516650

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10505053007 Result	Spike Conc.	Spike Conc.	MS Result								
1,2,4-Trimethylbenzene	ug/kg	ND	1310	1320	1830	1440	140	110	53-150	24	30		
1,3,5-Trimethylbenzene	ug/kg	ND	1310	1320	1790	1430	137	108	60-150	23	30		
Benzene	ug/kg	ND	1310	1320	1440	1090	110	82	46-150	28	30		
Ethylbenzene	ug/kg	ND	1310	1320	1720	1320	132	100	59-150	27	30		
Methyl-tert-butyl ether	ug/kg	ND	1310	1320	1640	1290	125	98	50-150	24	30		
Naphthalene	ug/kg	ND	1310	1320	2010	1600	154	121	50-150	23	30	M1	

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3516649		3516650		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10505053007 Result	MS Spike Conc.	MSD Spike Conc.									
Toluene	ug/kg	ND	1310	1320	1500	1150	115	87	55-150	26	30		
Xylene (Total)	ug/kg	ND	3910	3950	5080	3900	130	99	60-150	26	30		
1,2-Dichloroethane-d4 (S)	%						99	97	75-125				
4-Bromofluorobenzene (S)	%						99	100	75-125				
Toluene-d8 (S)	%						100	101	75-125				

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II
Pace Project No.: 10504984

QC Batch: 654411 Analysis Method: EPA 8260B
QC Batch Method: EPA 5035/5030B Analysis Description: 8260B MSV UST
Associated Lab Samples: 10504984017, 10504984018, 10504984019, 10504984020

METHOD BLANK: 3518038 Matrix: Solid
Associated Lab Samples: 10504984017, 10504984018, 10504984019, 10504984020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<10.0	33.3	01/15/20 02:01	
1,3,5-Trimethylbenzene	ug/kg	<8.0	26.5	01/15/20 02:01	
Benzene	ug/kg	<2.8	9.4	01/15/20 02:01	
Ethylbenzene	ug/kg	<2.7	9.1	01/15/20 02:01	
Methyl-tert-butyl ether	ug/kg	<6.0	19.8	01/15/20 02:01	
Naphthalene	ug/kg	<46.8	156	01/15/20 02:01	
Toluene	ug/kg	<12.2	40.6	01/15/20 02:01	
Xylene (Total)	ug/kg	<11.6	38.6	01/15/20 02:01	
1,2-Dichloroethane-d4 (S)	%	98	75-125	01/15/20 02:01	
4-Bromofluorobenzene (S)	%	99	75-125	01/15/20 02:01	
Toluene-d8 (S)	%	100	75-125	01/15/20 02:01	

LABORATORY CONTROL SAMPLE: 3518039

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	203	167	82	63-126	
1,3,5-Trimethylbenzene	ug/kg	203	164	80	64-125	
Benzene	ug/kg	203	161	79	59-125	
Ethylbenzene	ug/kg	203	167	82	62-125	
Methyl-tert-butyl ether	ug/kg	203	155	76	58-125	
Naphthalene	ug/kg	203	165	81	57-125	
Toluene	ug/kg	203	160	79	59-125	
Xylene (Total)	ug/kg	610	493	81	65-125	
1,2-Dichloroethane-d4 (S)	%			99	75-125	
4-Bromofluorobenzene (S)	%			100	75-125	
Toluene-d8 (S)	%			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3518040 3518041

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10504962001 Result	Spike Conc.	Spike Conc.	Conc.								
1,2,4-Trimethylbenzene	ug/kg	16000	1160	1150	17200	20700	102	410	53-150	18	30	E,M1	
1,3,5-Trimethylbenzene	ug/kg	4640	1160	1150	6380	7830	149	278	60-150	20	30	M1	
Benzene	ug/kg	ND	1160	1150	1190	1280	102	112	46-150	7	30		
Ethylbenzene	ug/kg	8320	1160	1150	10100	12500	158	365	59-150	21	30	M1	
Methyl-tert-butyl ether	ug/kg	ND	1160	1150	1140	1230	98	107	50-150	8	30		
Naphthalene	ug/kg	3970	1160	1150	5940	7330	170	293	50-150	21	30	M1	
Toluene	ug/kg	287	1160	1150	1480	1730	103	126	55-150	16	30		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Parameter	Units	3518040		3518041		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10504962001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Xylene (Total)	ug/kg	31100	3480	3430	36700	44600	162	395	60-150	19	30	ES,MS	
1,2-Dichloroethane-d4 (S)	%						100	104	75-125				
4-Bromofluorobenzene (S)	%						99	100	75-125				
Toluene-d8 (S)	%						100	100	75-125				

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

QC Batch: 654717 Analysis Method: EPA 8260B
 QC Batch Method: EPA 5035/5030B Analysis Description: 8260B MSV UST
 Associated Lab Samples: 10504984021, 10504984022, 10504984023, 10504984024, 10504984025, 10504984026, 10504984027, 10504984028, 10504984029, 10504984030, 10504984031, 10504984032, 10504984033, 10504984034, 10504984035, 10504984036, 10504984037, 10504984038

METHOD BLANK: 3519456 Matrix: Solid
 Associated Lab Samples: 10504984021, 10504984022, 10504984023, 10504984024, 10504984025, 10504984026, 10504984027, 10504984028, 10504984029, 10504984030, 10504984031, 10504984032, 10504984033, 10504984034, 10504984035, 10504984036, 10504984037, 10504984038

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<10.0	33.3	01/16/20 01:31	
1,3,5-Trimethylbenzene	ug/kg	<8.0	26.5	01/18/20 01:45	
Benzene	ug/kg	<2.8	9.4	01/18/20 01:45	
Ethylbenzene	ug/kg	<2.7	9.1	01/18/20 01:45	
Methyl-tert-butyl ether	ug/kg	<6.0	19.8	01/18/20 01:45	
Naphthalene	ug/kg	<46.8	156	01/18/20 01:45	
Toluene	ug/kg	<12.2	40.6	01/18/20 01:45	
Xylene (Total)	ug/kg	<11.6	38.6	01/18/20 01:45	
1,2-Dichloroethane-d4 (S)	%	100	75-125	01/18/20 01:45	
4-Bromofluorobenzene (S)	%	97	75-125	01/18/20 01:45	
Toluene-d8 (S)	%	101	75-125	01/18/20 01:45	

LABORATORY CONTROL SAMPLE: 3519457

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	868	87	63-126	
1,3,5-Trimethylbenzene	ug/kg	1000	894	89	64-125	
Benzene	ug/kg	1000	587	59	59-125	
Ethylbenzene	ug/kg	1000	754	75	62-125	
Methyl-tert-butyl ether	ug/kg	1000	696	70	58-125	
Naphthalene	ug/kg	1000	939	94	57-125	
Toluene	ug/kg	1000	628	63	59-125	
Xylene (Total)	ug/kg	3000	2330	78	65-125	
1,2-Dichloroethane-d4 (S)	%			97	75-125	
4-Bromofluorobenzene (S)	%			101	75-125	
Toluene-d8 (S)	%			99	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3519458 3519459

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10504984021 Result	Spike Conc.	Spike Conc.	Conc.								
1,2,4-Trimethylbenzene	ug/kg	<13.0	1270	1270	1530	1430	120	112	53-150	7	30		
1,3,5-Trimethylbenzene	ug/kg	<10.4	1270	1270	1220	1240	96	97	60-150	2	30		
Benzene	ug/kg	<3.7	1270	1270	1100	1120	86	88	46-150	2	30		
Ethylbenzene	ug/kg	<3.5	1270	1270	1160	1170	91	92	59-150	2	30		

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Parameter	Units	3519458		3519459		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		10504984021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Methyl-tert-butyl ether	ug/kg	<7.7	1270	1270	1000	969	79	76	50-150	4	30	
Naphthalene	ug/kg	<60.9	1270	1270	1040	1060	82	83	50-150	2	30	
Toluene	ug/kg	<15.9	1270	1270	1090	1090	85	86	55-150	0	30	
Xylene (Total)	ug/kg	<15.1	3820	3820	3620	3650	95	96	60-150	1	30	
1,2-Dichloroethane-d4 (S)	%						98	98	75-125			
4-Bromofluorobenzene (S)	%						100	98	75-125			
Toluene-d8 (S)	%						99	99	75-125			

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

QC Batch: 654058 Analysis Method: WI MOD DRO
 QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
 Associated Lab Samples: 10504984001, 10504984002, 10504984003, 10504984004, 10504984005, 10504984006, 10504984007,
 10504984008, 10504984009, 10504984010, 10504984011, 10504984012, 10504984013, 10504984014,
 10504984015, 10504984016, 10504984017, 10504984018, 10504984019, 10504984021

METHOD BLANK: 3515985 Matrix: Solid
 Associated Lab Samples: 10504984001, 10504984002, 10504984003, 10504984004, 10504984005, 10504984006, 10504984007,
 10504984008, 10504984009, 10504984010, 10504984011, 10504984012, 10504984013, 10504984014,
 10504984015, 10504984016, 10504984017, 10504984018, 10504984019, 10504984021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
WDRO C10-C28	mg/kg	<3.9	12.9	01/12/20 15:58	
n-Triacontane (S)	%	106	50-150	01/12/20 15:58	

LABORATORY CONTROL SAMPLE & LCSD: 3515986 3515987

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/kg	80	69.0	86.3	86	108	70-120	22	20	R1
n-Triacontane (S)	%				93	113	50-150			

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

QC Batch: 654060 Analysis Method: WI MOD DRO
 QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
 Associated Lab Samples: 10504984022, 10504984023, 10504984024, 10504984025, 10504984026, 10504984027, 10504984028,
 10504984029, 10504984030, 10504984031, 10504984032, 10504984033, 10504984034, 10504984035,
 10504984036, 10504984037

METHOD BLANK: 3515988 Matrix: Solid
 Associated Lab Samples: 10504984022, 10504984023, 10504984024, 10504984025, 10504984026, 10504984027, 10504984028,
 10504984029, 10504984030, 10504984031, 10504984032, 10504984033, 10504984034, 10504984035,
 10504984036, 10504984037

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
WDRO C10-C28	mg/kg	<3.9	12.9	01/12/20 12:49	
n-Triacontane (S)	%	85	50-150	01/12/20 12:49	

LABORATORY CONTROL SAMPLE & LCSD: 3515989 3515990

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/kg	80	67.0	62.9	84	79	70-120	6	20	
n-Triacontane (S)	%				89	83	50-150			

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QUALIFIERS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

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.

LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

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.

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

MS Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.

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.

R1 RPD value was outside control limits.

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

T6 High boiling point hydrocarbons are present in the sample.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 49161477.00 Nemadji PH II
Pace Project No.: 10504984

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10504984001	SB-14_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984002	SB-15_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984003	SB-13_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984004	SB-12_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984005	SB-8_2-4	WI MOD DRO	654058	WI MOD DRO	654166
10504984006	SB-8_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984007	SB-11_2-4	WI MOD DRO	654058	WI MOD DRO	654166
10504984008	SB-11_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984009	SB-10_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984010	SB-10_5-6	WI MOD DRO	654058	WI MOD DRO	654166
10504984011	SB-10_1-2	WI MOD DRO	654058	WI MOD DRO	654166
10504984012	SB-9_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984013	SB-7_2-4	WI MOD DRO	654058	WI MOD DRO	654166
10504984014	SB-7_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984015	SB-16_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984016	SB-6_1.5-2	WI MOD DRO	654058	WI MOD DRO	654166
10504984017	SB-6_5-6	WI MOD DRO	654058	WI MOD DRO	654166
10504984018	SB-21_2-4	WI MOD DRO	654058	WI MOD DRO	654166
10504984019	SB-21_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984021	SB-22_2-4	WI MOD DRO	654058	WI MOD DRO	654166
10504984022	SB-22_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984023	SB-23_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984024	SB-29_2-4	WI MOD DRO	654060	WI MOD DRO	654165
10504984025	SB-29_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984026	SB-27_2-4	WI MOD DRO	654060	WI MOD DRO	654165
10504984027	SB-27_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984028	SB-28_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984029	SB-24_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984030	SB-25_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984031	SB-26_2-4	WI MOD DRO	654060	WI MOD DRO	654165
10504984032	SB-26_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984033	SB-19_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984034	SB-18_2-4	WI MOD DRO	654060	WI MOD DRO	654165
10504984035	SB-18_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984036	SB-17_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984037	SB-20_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984001	SB-14_6-8	ASTM D2974	654419		
10504984002	SB-15_6-8	ASTM D2974	654419		
10504984003	SB-13_6-8	ASTM D2974	654419		
10504984004	SB-12_6-8	ASTM D2974	654419		
10504984005	SB-8_2-4	ASTM D2974	654419		
10504984006	SB-8_6-8	ASTM D2974	654419		
10504984007	SB-11_2-4	ASTM D2974	654419		
10504984008	SB-11_6-8	ASTM D2974	654419		
10504984009	SB-10_6-8	ASTM D2974	654419		
10504984010	SB-10_5-6	ASTM D2974	654419		
10504984011	SB-10_1-2	ASTM D2974	654419		
10504984012	SB-9_6-8	ASTM D2974	654419		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 49161477.00 Nemadji PH II
Pace Project No.: 10504984

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10504984013	SB-7_2-4	ASTM D2974	654419		
10504984014	SB-7_6-8	ASTM D2974	654419		
10504984015	SB-16_6-8	ASTM D2974	654419		
10504984016	SB-6_1.5-2	ASTM D2974	654420		
10504984017	SB-6_5-6	ASTM D2974	654420		
10504984018	SB-21_2-4	ASTM D2974	654420		
10504984019	SB-21_6-8	ASTM D2974	654420		
10504984021	SB-22_2-4	ASTM D2974	654420		
10504984022	SB-22_6-8	ASTM D2974	654420		
10504984023	SB-23_6-8	ASTM D2974	654420		
10504984024	SB-29_2-4	ASTM D2974	654420		
10504984025	SB-29_6-8	ASTM D2974	654420		
10504984026	SB-27_2-4	ASTM D2974	654420		
10504984027	SB-27_6-8	ASTM D2974	654420		
10504984028	SB-28_6-8	ASTM D2974	654420		
10504984029	SB-24_6-8	ASTM D2974	654420		
10504984030	SB-25_6-8	ASTM D2974	654420		
10504984031	SB-26_2-4	ASTM D2974	654420		
10504984032	SB-26_6-8	ASTM D2974	654420		
10504984033	SB-19_6-8	ASTM D2974	654420		
10504984034	SB-18_2-4	ASTM D2974	654420		
10504984035	SB-18_6-8	ASTM D2974	654420		
10504984036	SB-17_6-8	ASTM D2974	654665		
10504984037	SB-20_6-8	ASTM D2974	654665		
10504984001	SB-14_6-8	EPA 5035/5030B	654083	EPA 8260B	654097
10504984002	SB-15_6-8	EPA 5035/5030B	654083	EPA 8260B	654097
10504984003	SB-13_6-8	EPA 5035/5030B	654083	EPA 8260B	654097
10504984004	SB-12_6-8	EPA 5035/5030B	654110	EPA 8260B	654264
10504984005	SB-8_2-4	EPA 5035/5030B	654110	EPA 8260B	654264
10504984006	SB-8_6-8	EPA 5035/5030B	654110	EPA 8260B	654264
10504984007	SB-11_2-4	EPA 5035/5030B	654110	EPA 8260B	654264
10504984008	SB-11_6-8	EPA 5035/5030B	654110	EPA 8260B	654264
10504984009	SB-10_6-8	EPA 5035/5030B	654110	EPA 8260B	654264
10504984010	SB-10_5-6	EPA 5035/5030B	654110	EPA 8260B	654264
10504984011	SB-10_1-2	EPA 5035/5030B	654110	EPA 8260B	654264
10504984012	SB-9_6-8	EPA 5035/5030B	654110	EPA 8260B	654264
10504984013	SB-7_2-4	EPA 5035/5030B	654110	EPA 8260B	654264
10504984014	SB-7_6-8	EPA 5035/5030B	654110	EPA 8260B	654264
10504984015	SB-16_6-8	EPA 5035/5030B	654110	EPA 8260B	654264
10504984016	SB-6_1.5-2	EPA 5035/5030B	654110	EPA 8260B	654264
10504984017	SB-6_5-6	EPA 5035/5030B	654411	EPA 8260B	654476
10504984018	SB-21_2-4	EPA 5035/5030B	654411	EPA 8260B	654476
10504984019	SB-21_6-8	EPA 5035/5030B	654411	EPA 8260B	654476
10504984020	Field Blank	EPA 5035/5030B	654411	EPA 8260B	654476
10504984021	SB-22_2-4	EPA 5035/5030B	654717	EPA 8260B	654743
10504984022	SB-22_6-8	EPA 5035/5030B	654717	EPA 8260B	654743

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10504984023	SB-23_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984024	SB-29_2-4	EPA 5035/5030B	654717	EPA 8260B	654743
10504984025	SB-29_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984026	SB-27_2-4	EPA 5035/5030B	654717	EPA 8260B	654743
10504984027	SB-27_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984028	SB-28_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984029	SB-24_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984030	SB-25_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984031	SB-26_2-4	EPA 5035/5030B	654717	EPA 8260B	654743
10504984032	SB-26_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984033	SB-19_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984034	SB-18_2-4	EPA 5035/5030B	654717	EPA 8260B	654743
10504984035	SB-18_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984036	SB-17_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984037	SB-20_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984038	Trip Blank	EPA 5035/5030B	654717	EPA 8260B	654743

REPORT OF LABORATORY ANALYSIS

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Barr Engineering Co. Chain of Custody

Ann Arbor
 Duluth
 Hibbing
 Minneapolis
 Bismarck
 Grand Rapids
 Jefferson City
 Salt Lake City

Sample Origination State:
 KS MO UT
 MI ND WI
 MN SD Other: _____

Analysis Requested	
Water	Soil
	Pvoc + Naphthalene
	DRO
	% Solids

COC Number: **56983**

COC 1 of 4

Matrix Code:	Preservative Code:
GW = Groundwater	A = None
SW = Surface Water	B = HCl
WW = Waste Water	C = HNO ₃
DW = Drinking Water	D = H ₂ SO ₄
S = Soil/Solid	E = NaOH
SD = Sediment	F = MeOH
O = Other	G = NaHSO ₄
	H = Na ₂ S ₂ O ₃
	I = Ascorbic Acid
	J = NH ₄ Cl
	K = Zn Acetate
	O = Other

REPORT TO
 Company: Barr Engineering
 Address: 325 S Lake Ave Duluth MN
 Name: Lynette Carney
 email: LCarney@barr.com
 Copy to: datamgt@barr.com

INVOICE TO
 Company: same
 Address: _____
 Name: _____
 email: _____
 P.O. _____

WO#: 10504984



Project Name: Nemadji PH II

Barr Project No: 49161477.00

Location	Sample Depth			Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix Code	Perform MS/	Total Number	F	A	A	N	N	N	Field Filtered Y/N	Preservative Code
	Start	Stop	Unit (m./ft. or in.)													
1. SB-14	6	8	ft	01/06/2020	1050	S	N	5								601
2. SB-15	6	8			1110											002
3. SB-13	6	8			1140											003
4. SB-12	6	8			1210											004
5. SB-8	2	4			1220											005
6. SB-8	6	8			1240											005
7. SB-11	2	4			1305											007
8. SB-11	6	8			1310											008
9. SB-10	6	8			1320											009
10. SB-10	5	6			1340											010

BARR USE ONLY
 Sampled by: CSS3 / MAB
 Barr Proj. Manager: LMC
 Barr DQ Manager: SET
 Lab Name: Pace
 Lab Location: Minneapolis

Relinquished by: Christina Scott On Ice? N Date 1/8/20 Time 15:00
 Relinquished by: _____ On Ice? Y N Date _____ Time _____
 Samples Shipped VIA: Courier Federal Express Sampler
 Other: _____ Air Bill Number: _____

Received by: John Pace Date 1/8/2020 Time 15:00
 Received by: John Pace Date 1/10/20 Time 8:56
 Requested Due Date:
 Standard Turn Around Time
 Rush _____ (mm/dd/yyyy)

Lab WO: _____ Temperature on Receipt (°C): _____ Custody Seal Intact? Y N None

HRIGSTDFORMS\Chain of Custody Form 2015 RIG Rev. 01/02/18

Barr Engineering Co. Chain of Custody

Sample Origination State:

- Ann Arbor Duluth Hibbing Minneapolis Bismarck Grand Rapids Jefferson City Salt Lake City

- KS MO UT MI ND WI MN SD Other: _____

REPORT TO	INVOICE TO
Company: <u>Barr Engineering</u>	Company: <u>same</u>
Address: <u>325 S Lake Ave Duluth, MN</u>	Address: <u>↓</u>
Name: <u>Lynette Carney</u>	Name: <u>↓</u>
email: <u>LCarney@barr.com</u>	email: <u>↓</u>
Copy to: <u>datamgt@barr.com</u>	P.O. <u>↓</u>
Project Name: <u>Nemadji Substation PH II</u>	Barr Project No: <u>49161477.00</u>

Location	Sample Depth			Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix Code	Perform MS/MSD Y/N	Total Number of Containers	Analysis Requested			
	Start	Stop	Unit (m./ft. or in.)						Water	Soil		
1. SB-10	1	2	ft	01/06/2020	1345	S	N	5				
2. SB-9	6	8			1400							
3. SB-7	2	4			1430							
4. SB-7	6	8			1440							
5. SB-16	6	8			1455							
6. SB-6	1.5	2			1510							
7. SB-6	5	6			1515							
8. SB-21	2	4			1540							
9. SB-21	6	8			1550							
10. Field Blank				01/06/2020	1520							

COC Number: **56980**
 COC 2 of 4

Matrix Code: PVOC + Naphthalene
 Preservative Code: 011

Legend:
 GW = Groundwater A = None
 SW = Surface Water B = HCl
 WW = Waste Water C = HNO₃
 DW = Drinking Water D = H₂SO₄
 S = Soil/Solid E = NaOH
 SD = Sediment F = MeOH
 O = Other G = NaHSO₄
 H = Na₂S₂O₃
 I = Ascorbic Acid
 J = NH₄Cl
 K = Zn Acetate
 O = Other

BARR USE ONLY		Relinquished by:	On Ice?	Date	Time	Received by:	Date	Time
Sampled by: <u>CSS3 / MAB</u>	Relinquished by: <u>Christina J. Scholt</u>	<input checked="" type="radio"/> N	<u>1/8/2020</u>	<u>1500</u>	<u>PA</u>	<u>1/8/2020</u>	<u>15:00</u>	
Barr Proj. Manager: <u>LMC</u>	Relinquished by:	<input type="radio"/> Y			<u>PA</u>	<u>1/10/20</u>	<u>8:50</u>	
Barr DQ Manager: <u>JET</u>	Samples Shipped VIA: <input type="checkbox"/> Courier <input type="checkbox"/> Federal Express <input checked="" type="checkbox"/> Sampler	Air Bill Number:		Requested Due Date: <input checked="" type="checkbox"/> Standard Turn Around Time <input type="checkbox"/> Rush (mm/dd/yyyy)				
Lab Name: <u>Pace</u>	Lab WO: _____	Temperature on Receipt (°C): <u>1</u>		Custody Seal Intact? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> None				

Barr Engineering Co. Chain of Custody

Sample Origination State:

- Ann Arbor Duluth Hibbing Minneapolis
 Bismarck Grand Rapids Jefferson City Salt Lake City

- KS MO UT
 MI ND WI
 MN SD Other: _____

REPORT TO	INVOICE TO
Company: <u>Barr Engineering</u>	Company: <u>same</u>
Address: <u>325 S Lake Ave Duluth, MN</u>	Address: <u>↓</u>
Name: <u>Lynette Carney</u>	Name: <u>↓</u>
email: <u>LCarney@barr.com</u>	email: <u>↓</u>
Copy to: <u>datamgt@barr.com</u>	PO: <u>↓</u>
Project Name: <u>Nemadji Substation PH II</u>	Barr Project No: <u>49161477.00</u>

Location	Sample Depth			Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix Code
	Start	Stop	Unit (m./ft. or in.)			
1. SB-22	2	4	ft	01/07/2020	0915	S
2. SB-22	6	8			0925	
3. SB-23	6	8			0950	
4. SB-29	2	4			1020	
5. SB-29	6	8			1025	
6. SB-27	2	4			1040	
7. SB-27	6	8			1045	
8. SB-28	6	8			1100	
9. SB-24	6	8			1120	
10. SB-25	6	8			1145	

Perform MS/MSD Y / N	Analysis Requested	
	Water	Soil
Total Number Of Containers		

COC Number: **56975**

COC 3 of 4

Matrix Code: PVOC + Naphthalene
 SW = Surface Water A = None
 WW = Waste Water B = HCl
 DW = Drinking Water C = HNO₃
 S = Soil/Solid D = H₂SO₄
 SD = Sediment E = NaOH
 O = Other F = MeOH
 G = NaHSO₄
 H = Na₂S₂O₃
 I = Ascorbic Acid
 J = NH₄Cl
 K = Zn Acetate
 O = Other

Preservative Code: FAA

Field Filtered Y/N: N N N

BARR USE ONLY		Relinquished by: <u>Christin J. Scholt</u>	On Ice? <input checked="" type="checkbox"/> N	Date: <u>1/8/2020</u>	Time: <u>1:50</u>	Received by: <u>AR Pace</u>	Date: <u>1/8/2020</u>	Time: <u>15:00</u>
Sampled by: <u>CJS3</u>	Barr Proj. Manager: <u>LMC</u>	Relinquished by:	On Ice? <input type="checkbox"/> Y	Date:	Time:	Received by: <u>DOO Pace</u>	Date: <u>1/10/20</u>	Time: <u>8:50</u>
Barr DQ Manager: <u>JET</u>	Lab Name: <u>Pace</u>	Samples Shipped VIA: <input type="checkbox"/> Courier <input type="checkbox"/> Federal Express <input checked="" type="checkbox"/> Sampler	Air Bill Number:		Requested Due Date: <input checked="" type="checkbox"/> Standard Turn Around Time			
Lab Location: <u>Minneapolis</u>	Lab WO:	Temperature on Receipt (°C):	Custody Seal Intact? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> None		<input type="checkbox"/> Rush (mm/dd/yyyy)			

05c, 2.6c, 4.4c, 32c T = 0.9, 2.0, 2.1, 0.5

1/16/20
 17
 021
 022
 023
 024
 025
 026
 027
 028
 029
 030
 HRRGSTDFORMS(Chain of Custody Form 2015 - RLG Rev. 01/02/18)

Barr Engineering Co. Chain of Custody

Sample Origination State:

- Ann Arbor Duluth Hibbing Minneapolis
 Bismarck Grand Rapids Jefferson City Salt Lake City

- KS MO UT
 MI ND WI
 MN SD Other: _____

COC Number: **56982**

COC 4 of 4

REPORT TO	INVOICE TO
Company: <u>Barr Engineering</u>	Company: <u>Same</u>
Address: <u>325 S Lake Ave Duluth MN</u>	Address: <u>↓</u>
Name: <u>Lynette Carney</u>	Name: <u>↓</u>
email: <u>LCarney@barr.com</u>	email: <u>↓</u>
Copy to: <u>datamgt@barr.com</u>	P.O. <u>↓</u>
Project Name: <u>Namadjji Substation PH II</u>	Barr Project No: <u>49161477.00</u>

- | | |
|---------------------|---|
| Matrix Code: | Preservative Code: |
| GW = Groundwater | A = None |
| SW = Surface Water | B = HCl |
| WW = Waste Water | C = HNO ₃ |
| DW = Drinking Water | D = H ₂ SO ₄ |
| S = Soil/Solid | E = NaOH |
| SD = Sediment | F = MeOH |
| O = Other | G = NaHSO ₄ |
| | H = Na ₂ S ₂ O ₃ |
| | I = Ascorbic Acid |
| | J = NH ₄ Cl |
| | K = Zn Acetate |
| | O = Other |


Location	Sample Depth			Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix Code	Perform MS/MSD	Total Number Of Containers	Y / N	Water	Soil	PVOC + Naphthalene	DRO	% Solids
	Start	Stop	Unit (m./ft. or in.)											
1. SB-26	2	4	ft	01/07/2020	1235	S	N	S						
2. SB-26	6	8			1245									
3. SB-19	6	8			1310									
4. SB-18	2	4			1330									
5. SB-18	6	8			1340									
6. SB-17	6	8			1405									
7. SB-20	6	8			1420									
8. Trip Blank				01/07/2020										
9.														
10.														

Preservative Code
 Field Filtered Y/N
 PVOC + Naphthalene by method EPA 8260B 031
 DRO by method WI MOD DRO 801SD (C10-C28) 032
033
034
035
036
037
038

BARR USE ONLY		Relinquished by: <u>Christian J. Selut</u>	On Ice? <input checked="" type="checkbox"/> N	Date <u>1/8/2020</u>	Time <u>1500</u>	Received by: <u>[Signature]</u>	Date <u>1/8/2020</u>	Time <u>15:00</u>
Sampled by: <u>CSS3</u>	Barr Proj. Manager: <u>LMC</u>	Relinquished by:	On Ice? <input type="checkbox"/> Y	Date	Time	Received by: <u>[Signature]</u>	Date <u>1/10/20</u>	Time <u>8:50</u>
Barr DQ Manager: <u>JET</u>	Lab Name: <u>Pace</u>	Samples Shipped VIA: <input type="checkbox"/> Courier <input type="checkbox"/> Federal Express <input checked="" type="checkbox"/> Sampler	Air Bill Number:		Requested Due Date:			
Lab Location: <u>Minneapolis</u>	Lab WO:	Temperature on Receipt (°C):	Custody Seal Intact? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> None		<input checked="" type="checkbox"/> Standard Turn Around Time <input type="checkbox"/> Rush (mm/dd/yyyy)			

Distribution - White-Original: Accompanies Shipment to Laboratory; Yellow Copy: Include in Field Documents; Pink Copy: Send to Data Management Administrators.

0.5°C, 26°C, 4.4°C, 3.2°C

	Document Name: Sample Condition Upon Receipt Form	Document Revised: 14Nov2019 Page 1 of 1
	Document No.: F-MN-L-213-rev.30	Pace Analytical Services - Minneapolis

Sample Condition Upon Receipt Client Name: Barr Engineering Project #: **WO#: 10504984**

Courier: Fed Ex UPS USPS Client
 Pace Speedee Commercial See Exceptions

Tracking Number: 6279 8897 9362/9340/9351/9330

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) Type of Ice: Wet Blue None Dry Melted
 T4(0254) T5(0489)

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C	Cooler Temp Read w/temp blank: <u>0.7, 1.8, 1.9, 0.3</u> °C	Average Corrected Temp (no temp blank only): <input type="checkbox"/> See Exceptions
Correction Factor: <u>+0.2</u>	Cooler Temp Corrected w/temp blank: <u>0.9, 2.0, 2.1, 0.5</u> °C	<input type="checkbox"/> 1 Container

USDA Regulated Soil: (N/A, water sample/Other: _____) Date/Initials of Person Examining Contents: 1/10/20 JS

Did samples originate in a quarantine zone within the United States: AL, AR, 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 (F-MN-Q-338) and include with SCUR/COC paperwork.

	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.
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 Chrome <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 Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 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 on Container Below: See Exception <input type="checkbox"/>
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"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> Zinc Acetate
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , <2pH, NaOH >9 Sulfide, NaOH >12 Cyanide) <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Positive for Res. <input type="checkbox"/> Yes See Exception <input type="checkbox"/> Chlorine? <input type="checkbox"/> No pH Paper Lot# _____
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Res. Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Extra labels present on soil VOA or WIDRO containers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. See Exception <input type="checkbox"/>
Headspace in VOA Vials (greater than 6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Trip Blank Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14. Pace Trip Blank Lot # (if purchased): <u>102819-3</u>
Trip Blank Custody Seals Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

CLIENT NOTIFICATION/RESOLUTION Field Data Required? Yes No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Amanda J. Albrecht Date: 1/10/20

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: JS

Date : 12-JAN-2020 16:47

Client ID: SB-14_6-8

Sample Info: 10504984001

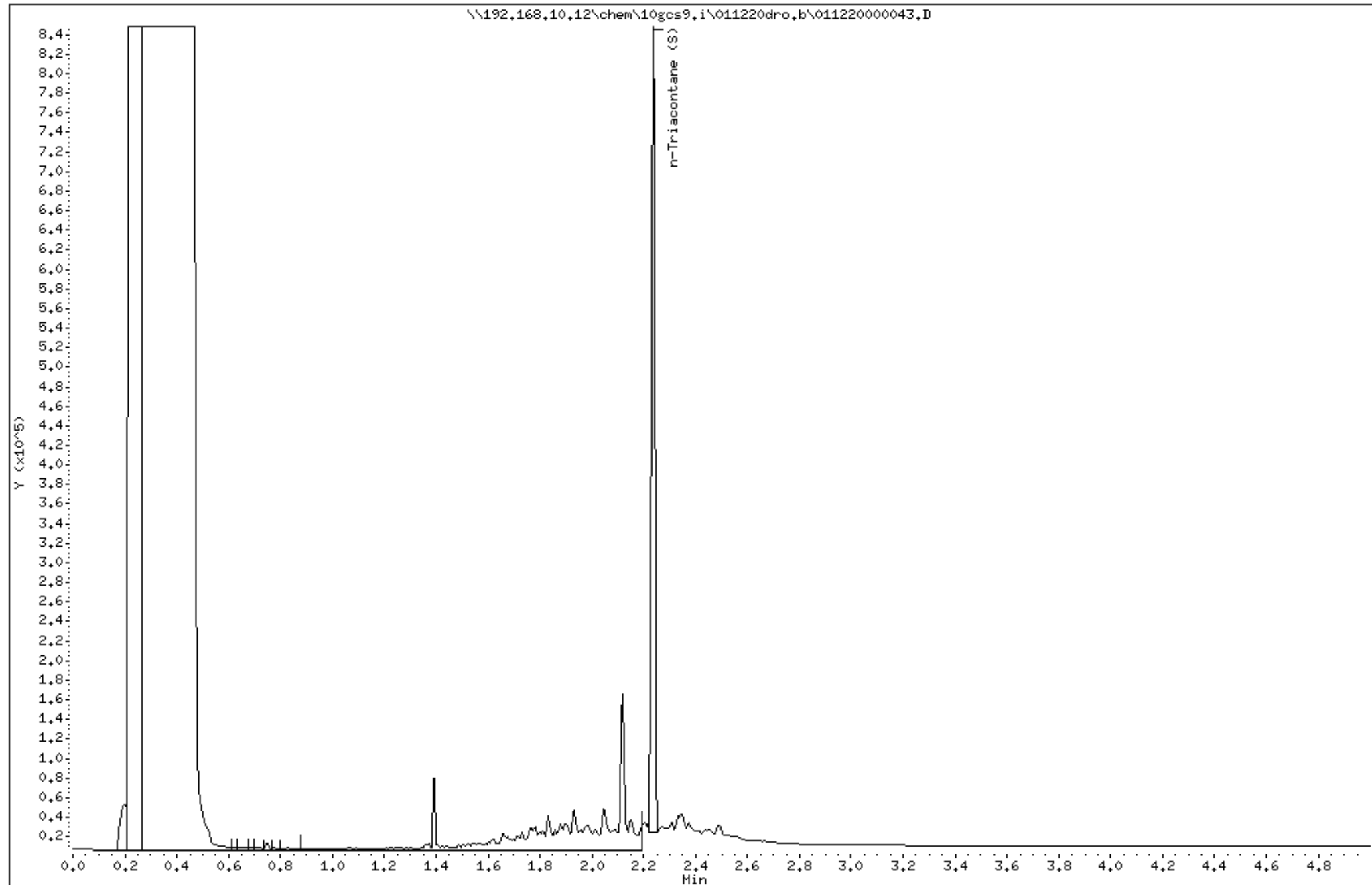
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 16:54

Client ID: SB-15_6-8

Sample Info: 10504984002

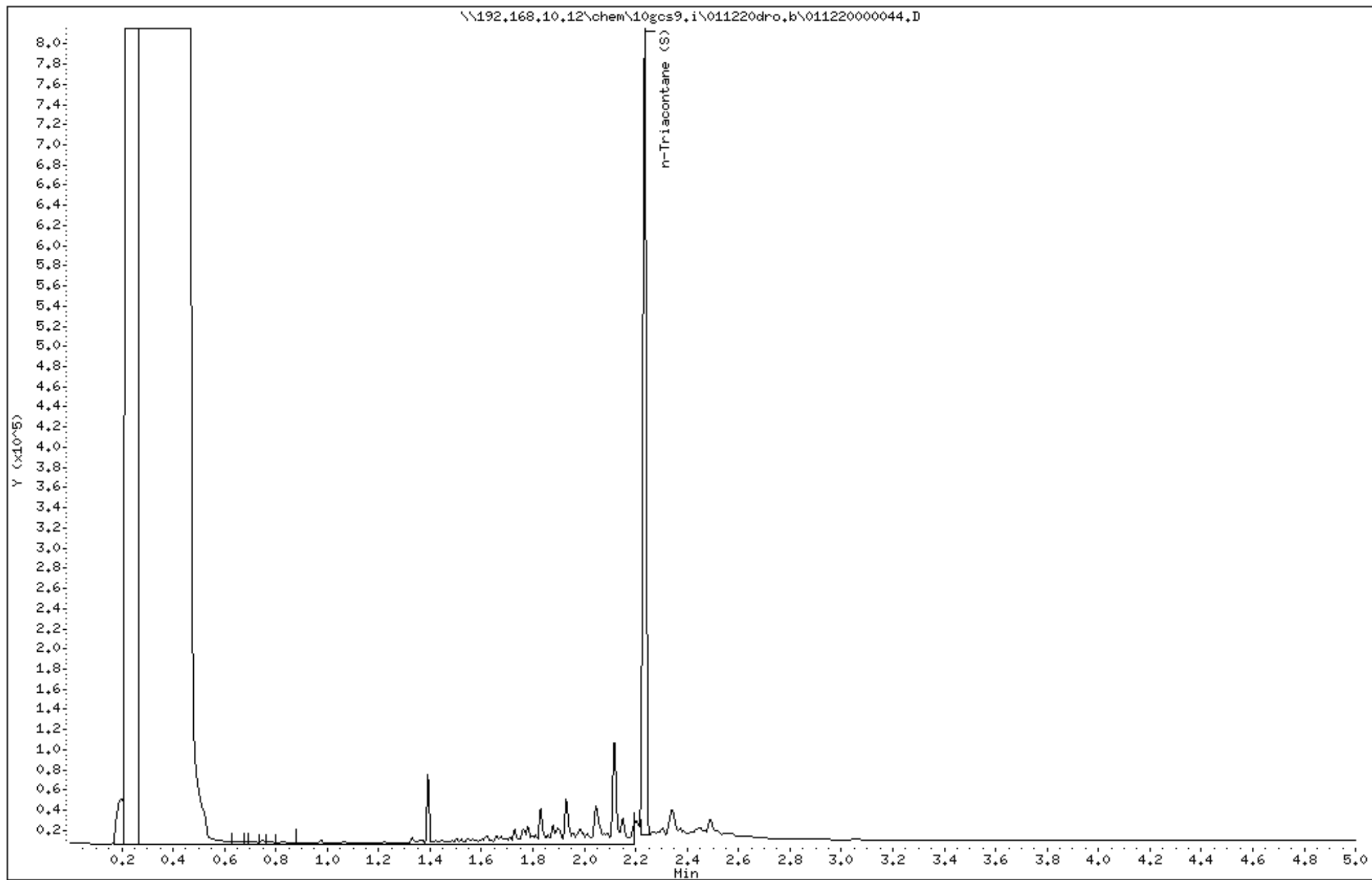
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 17:01

Client ID: SB-13_6-8

Sample Info: 10504984003

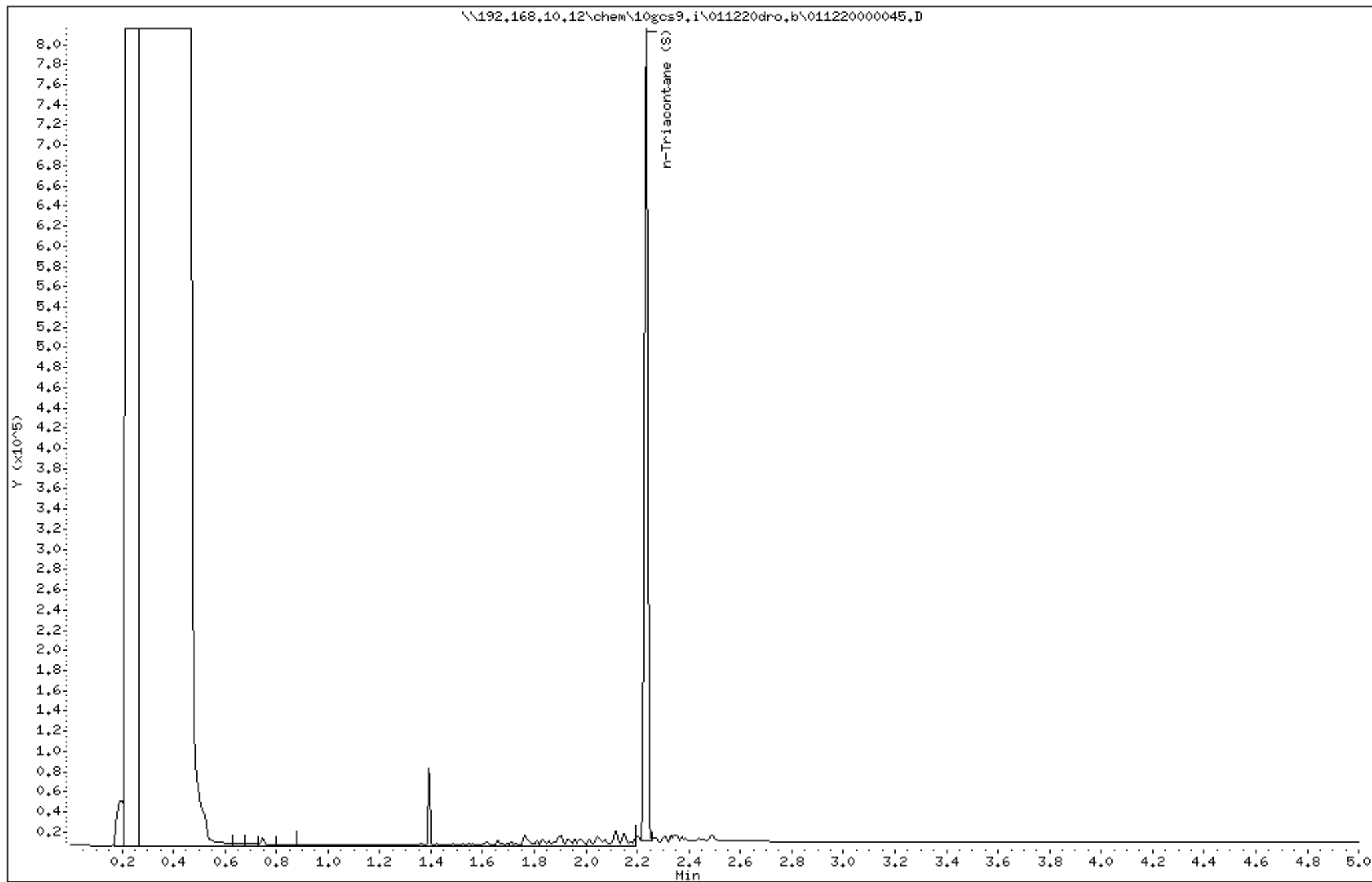
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 17:08

Client ID: SB-12_6-8

Sample Info: 10504984004

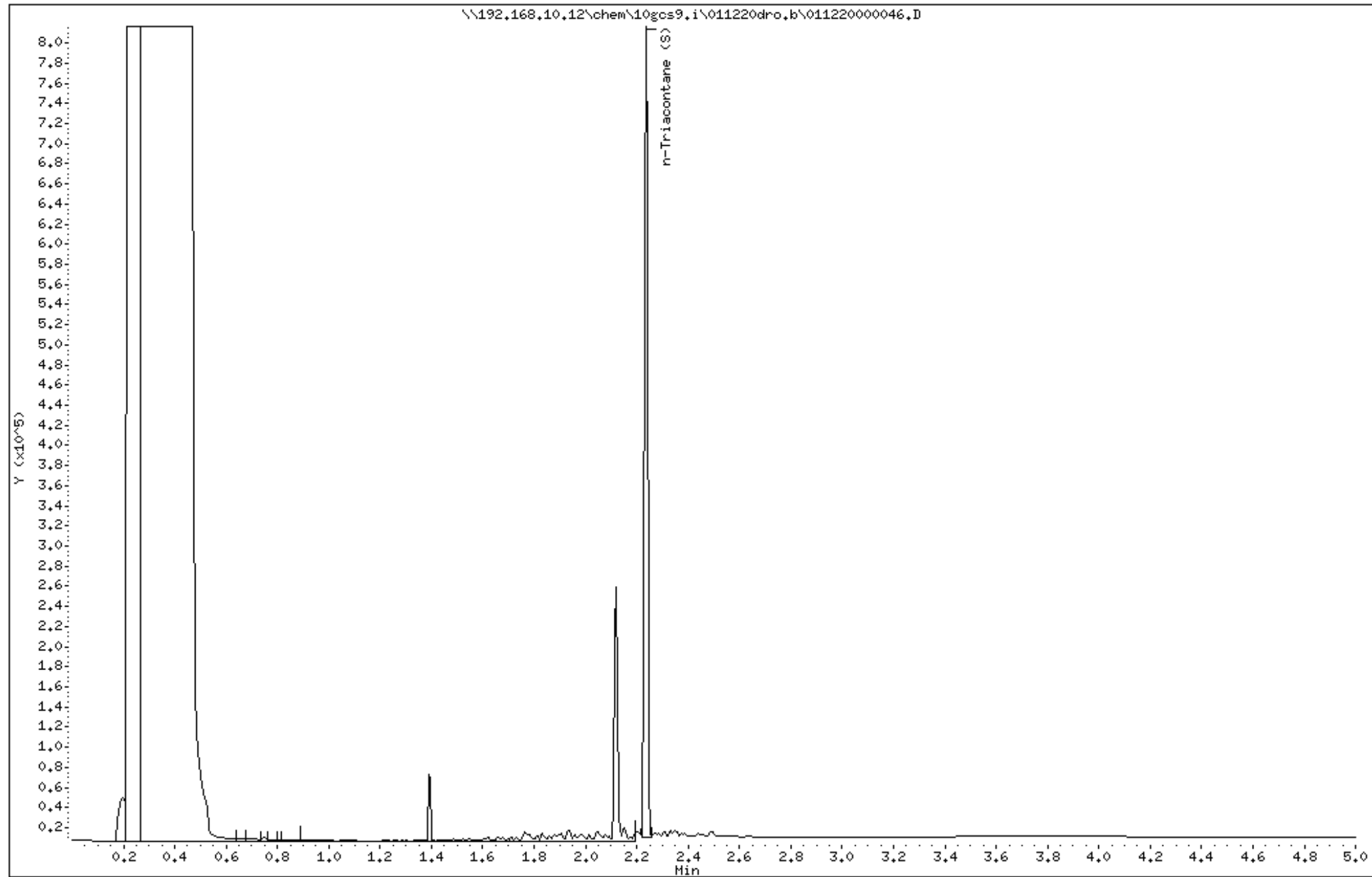
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 16:33

Client ID: SB-8_2-4

Sample Info: 10504984005

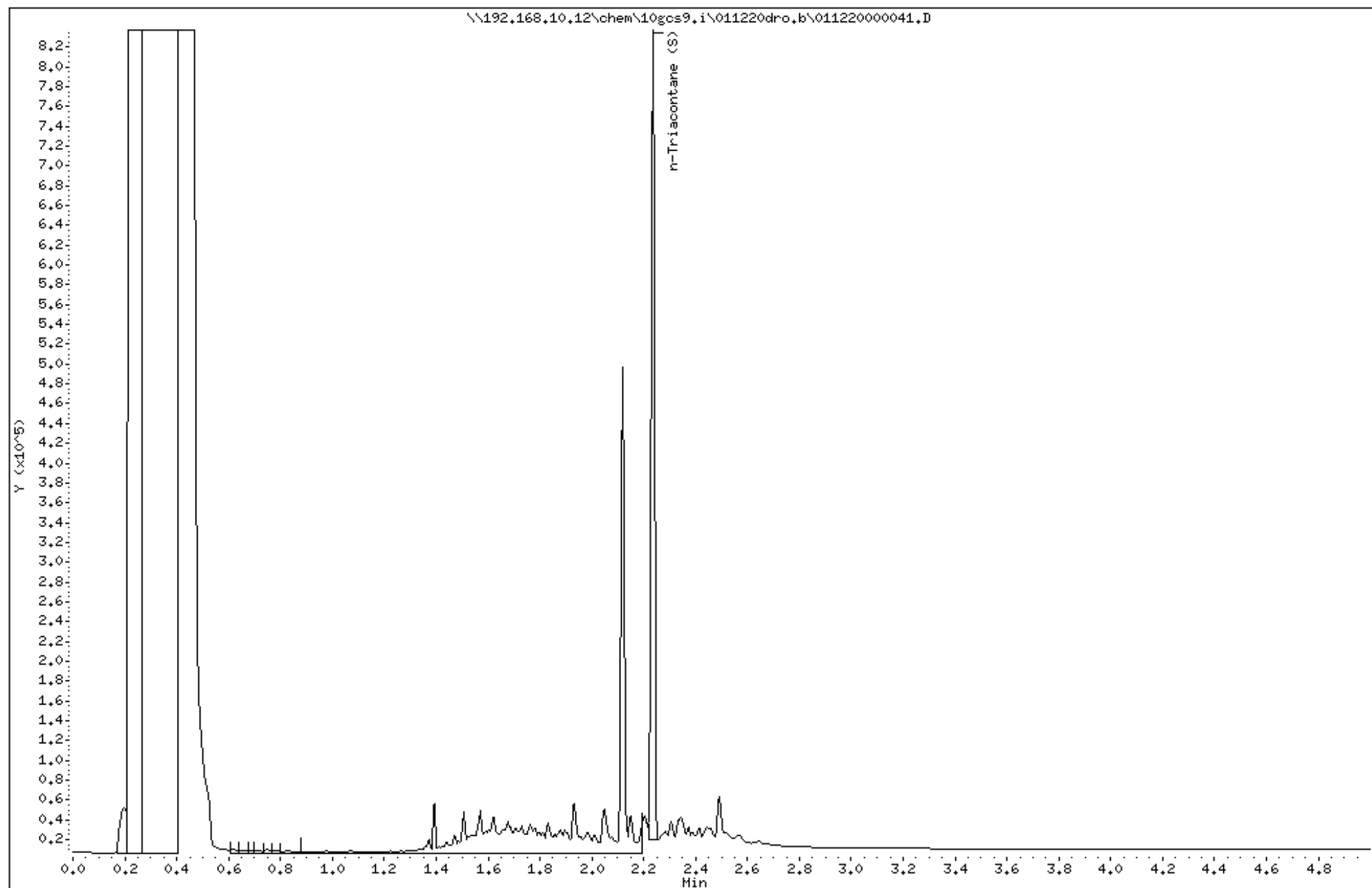
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 17:15

Client ID: SB-8_6-8

Sample Info: 10504984006

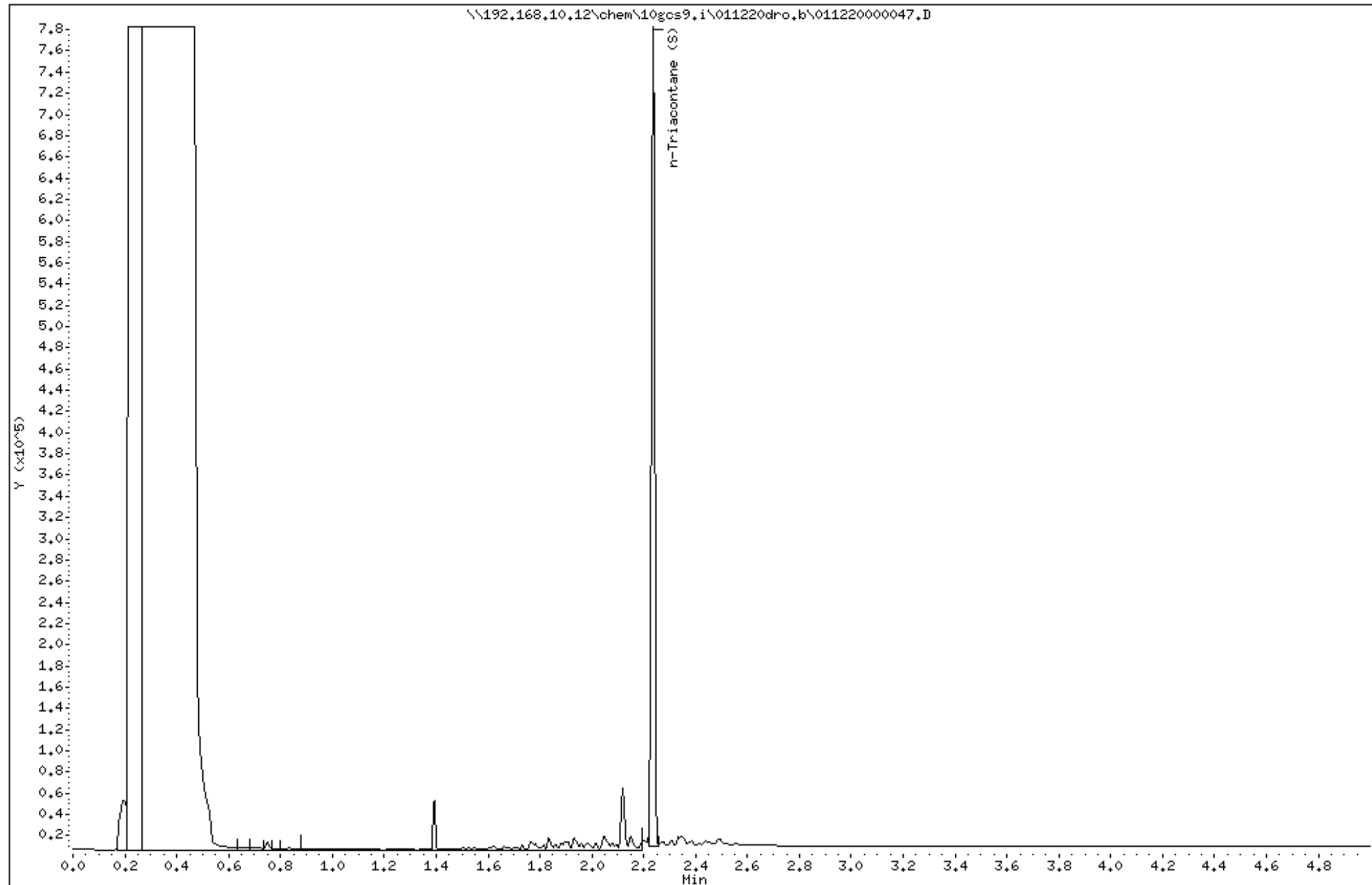
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9.i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 16:40

Client ID: SB-11_2-4

Sample Info: 10504984007

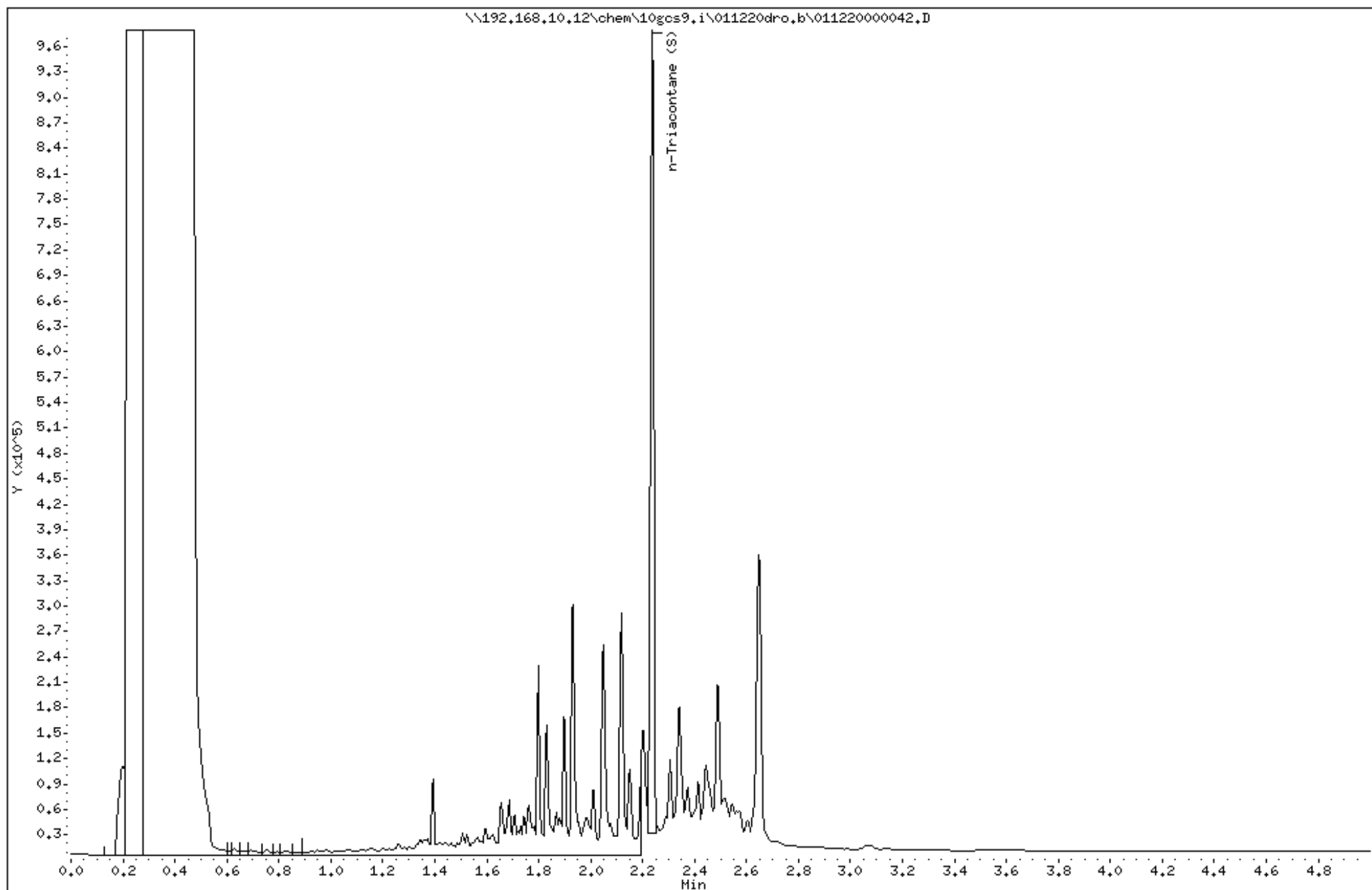
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9.i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 17:22

Client ID: SB-11_6-8

Sample Info: 10504984008

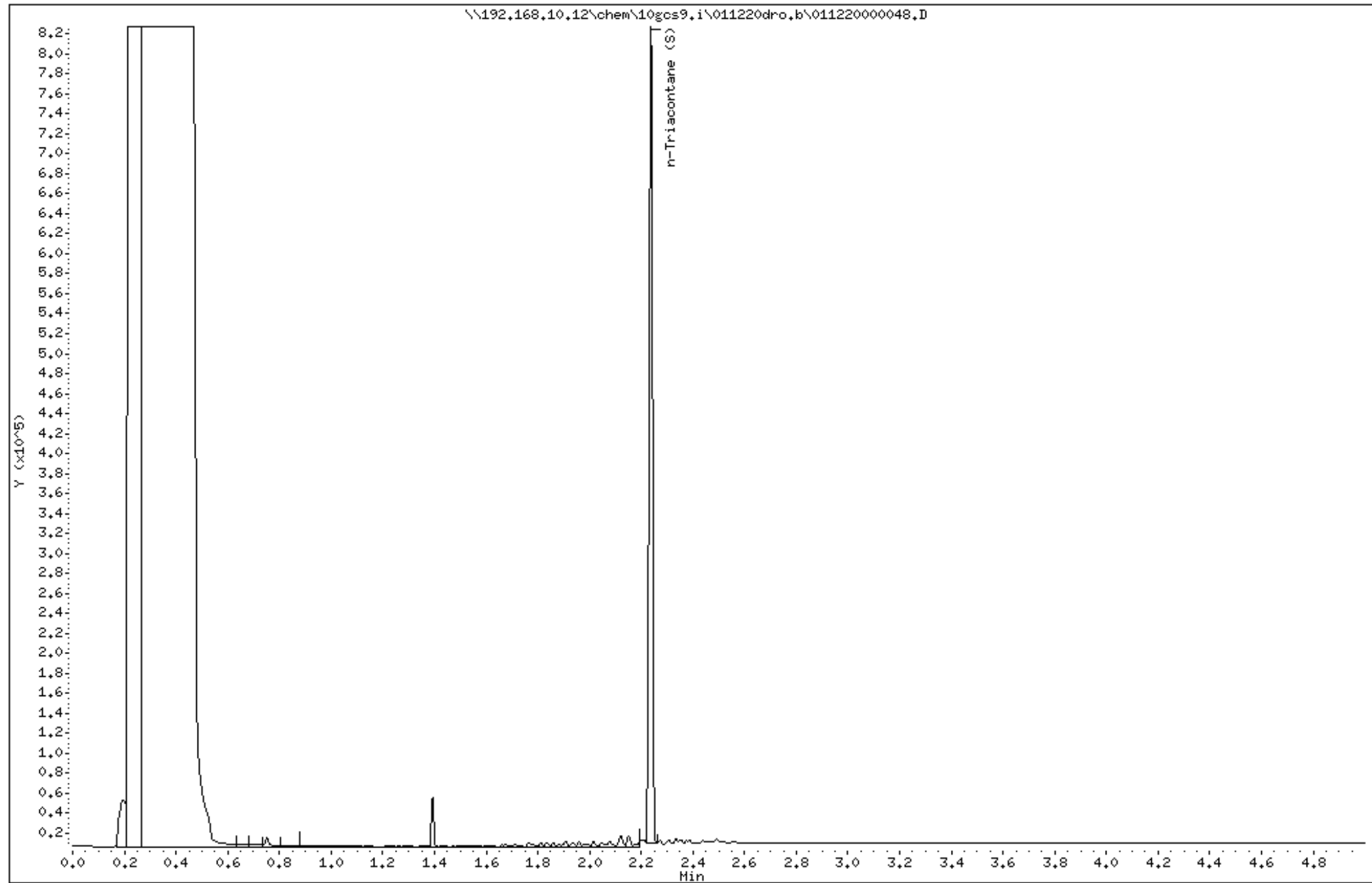
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 17:29

Client ID: SB-10_6-8

Sample Info: 10504984009

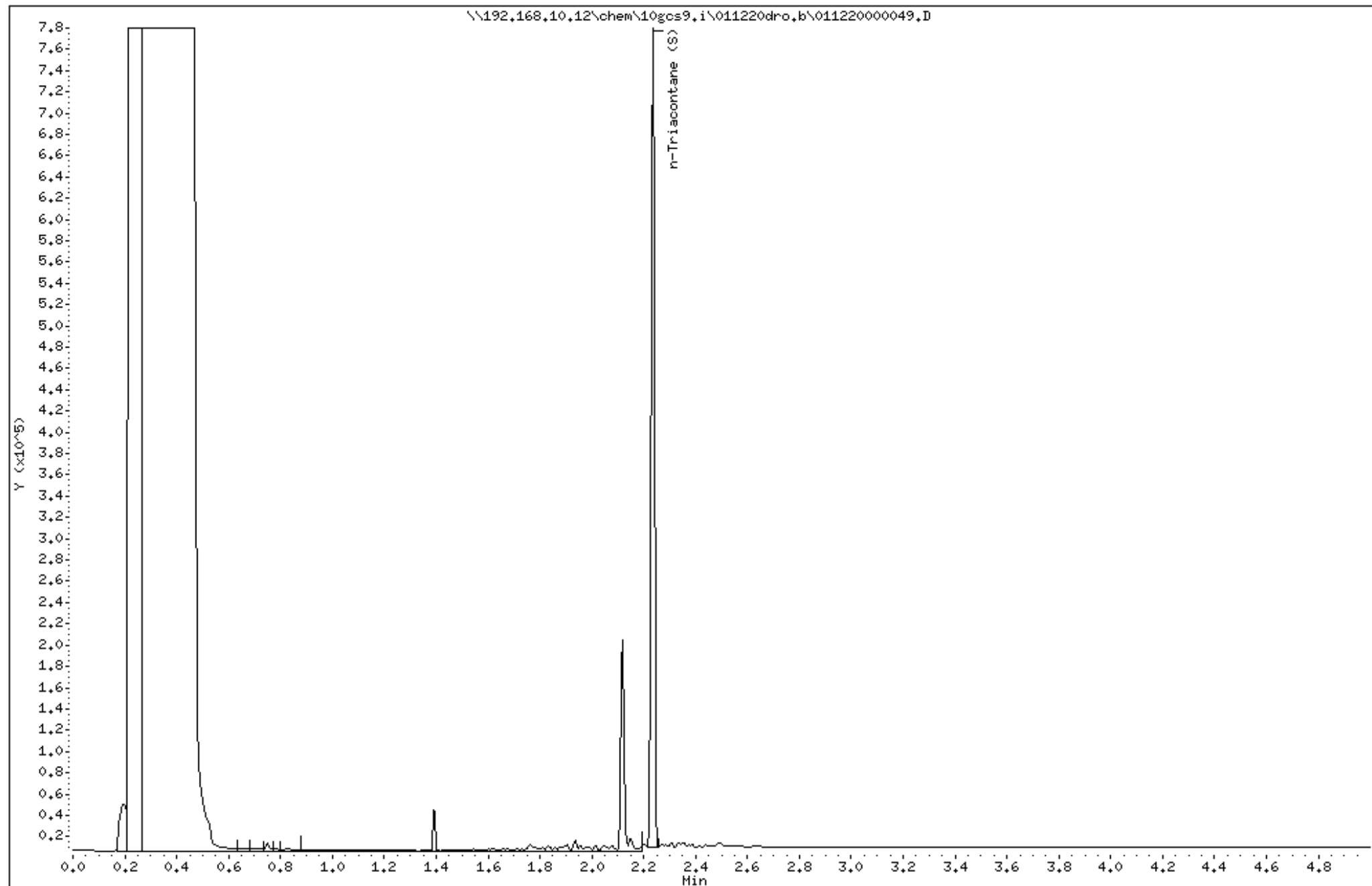
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9.i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 17:36

Client ID: SB-10_5-6

Sample Info: 10504984010

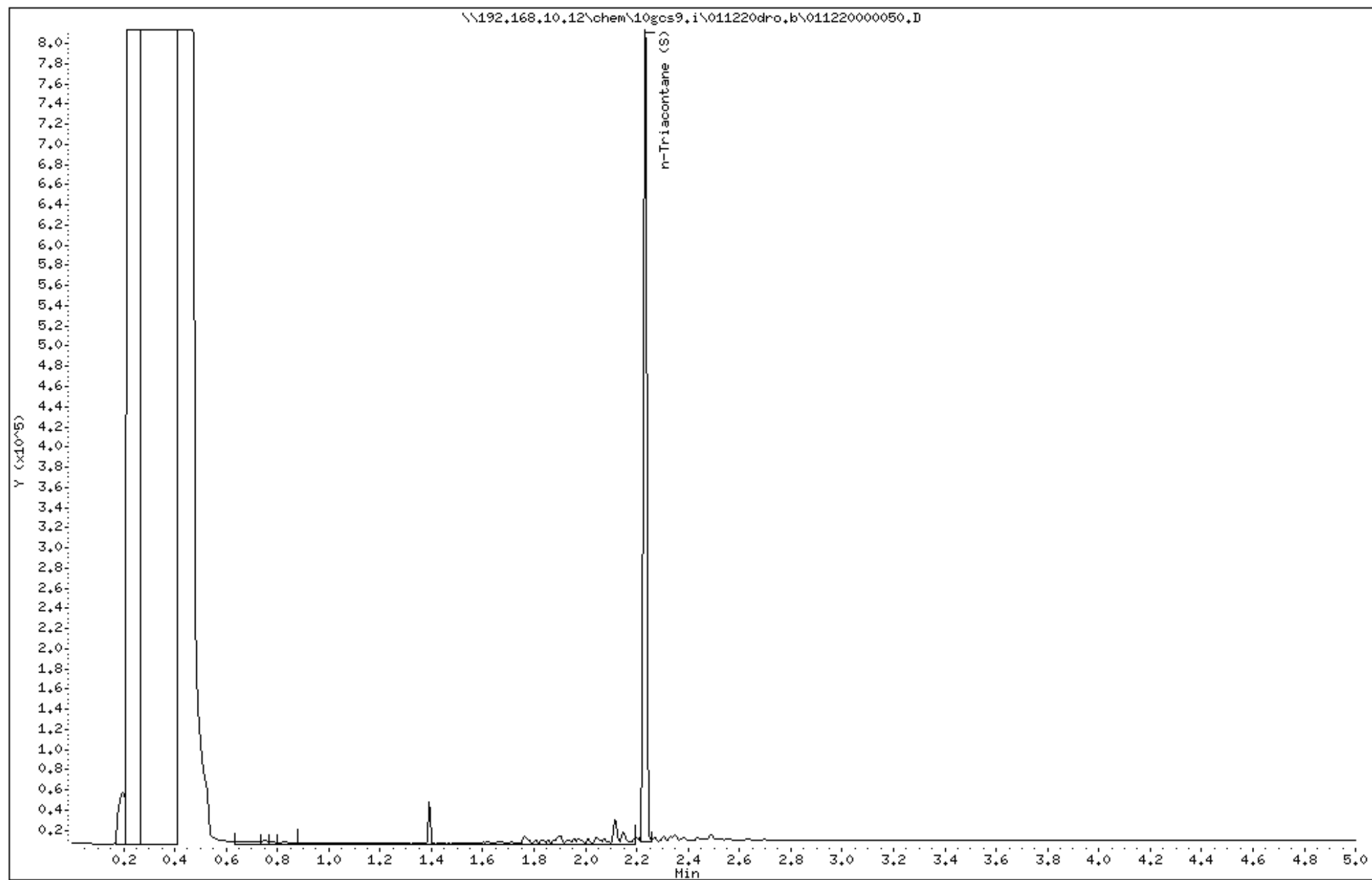
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 16:12

Client ID: SB-10_1-2

Sample Info: 10504984011X10

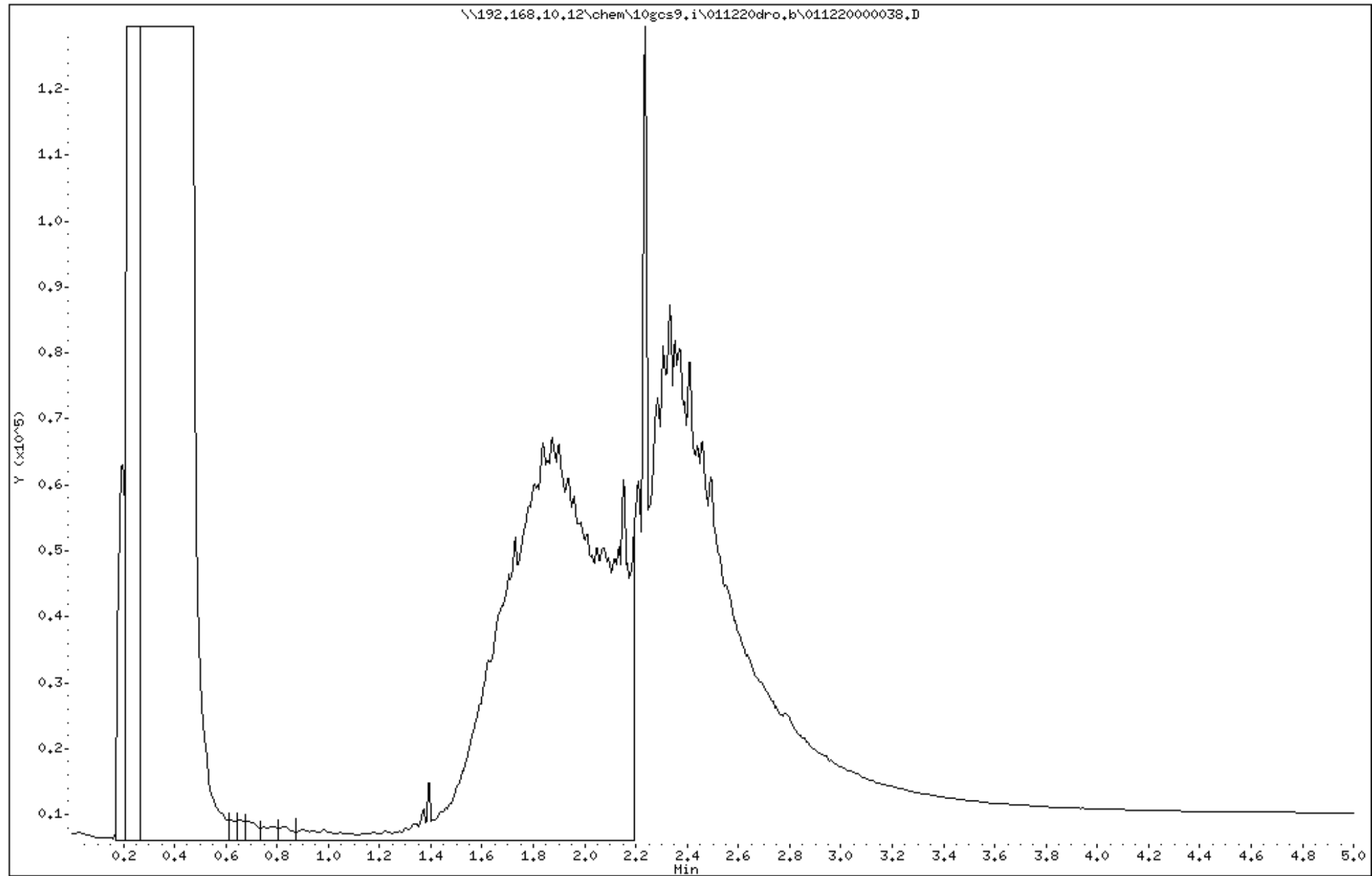
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 17:43

Client ID: SB-9_6-8

Sample Info: 10504984012

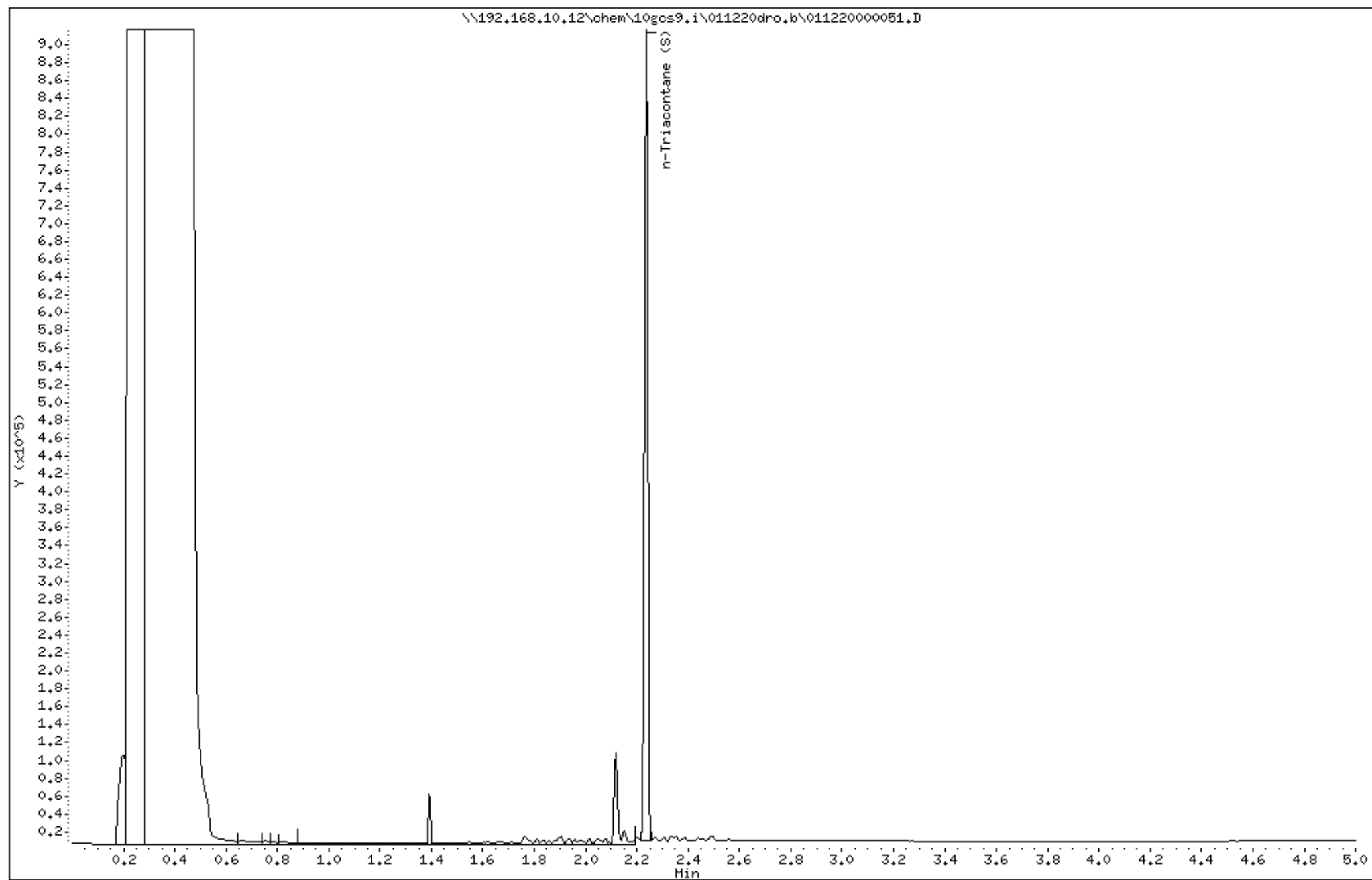
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 17:50

Client ID: SB-7_2-4

Sample Info: 10504984013

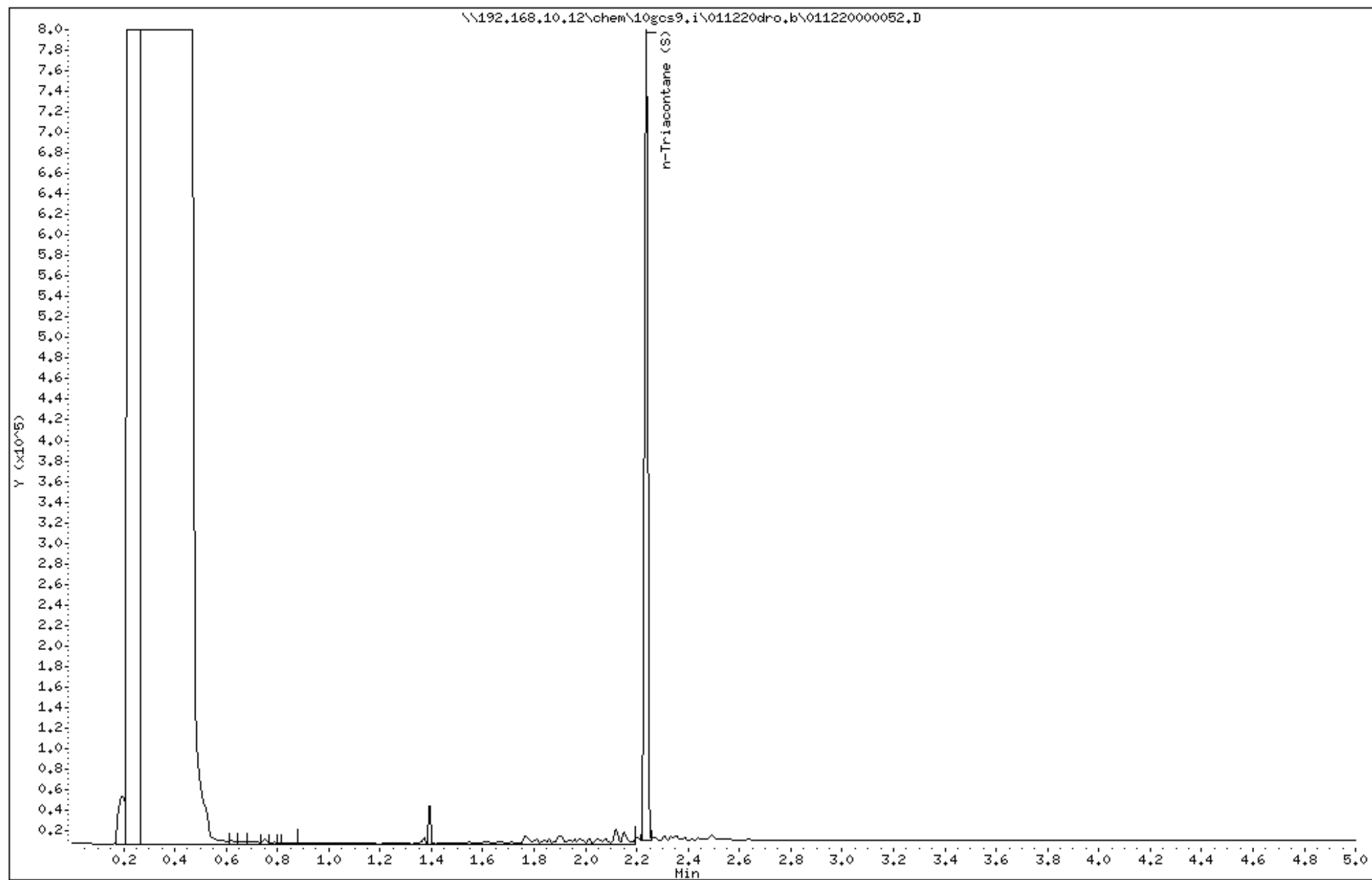
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 17:57

Client ID: SB-7_6-8

Sample Info: 10504984014

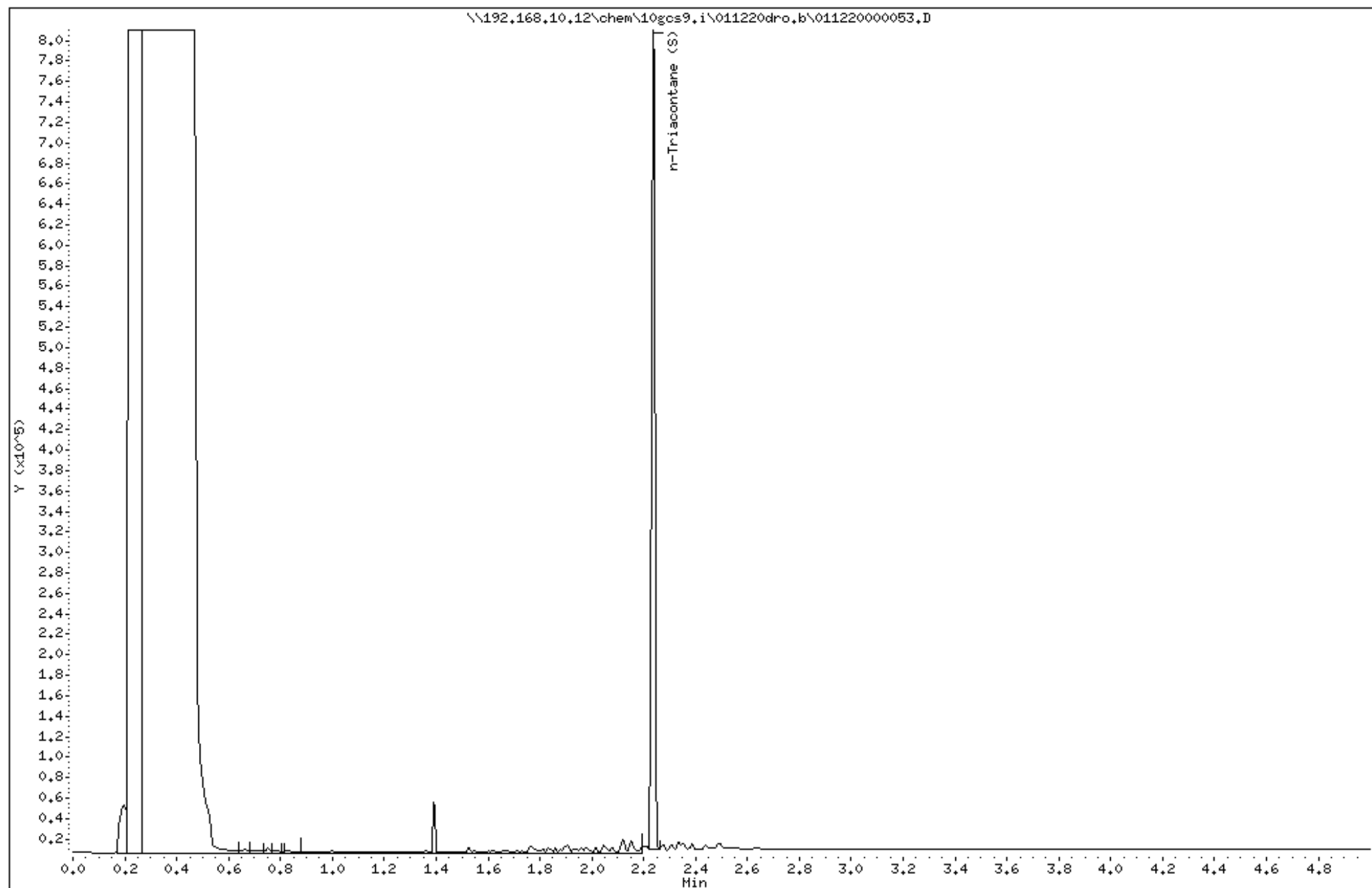
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9.i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 16:26

Client ID: SB-16_6-8

Sample Info: 10504984015

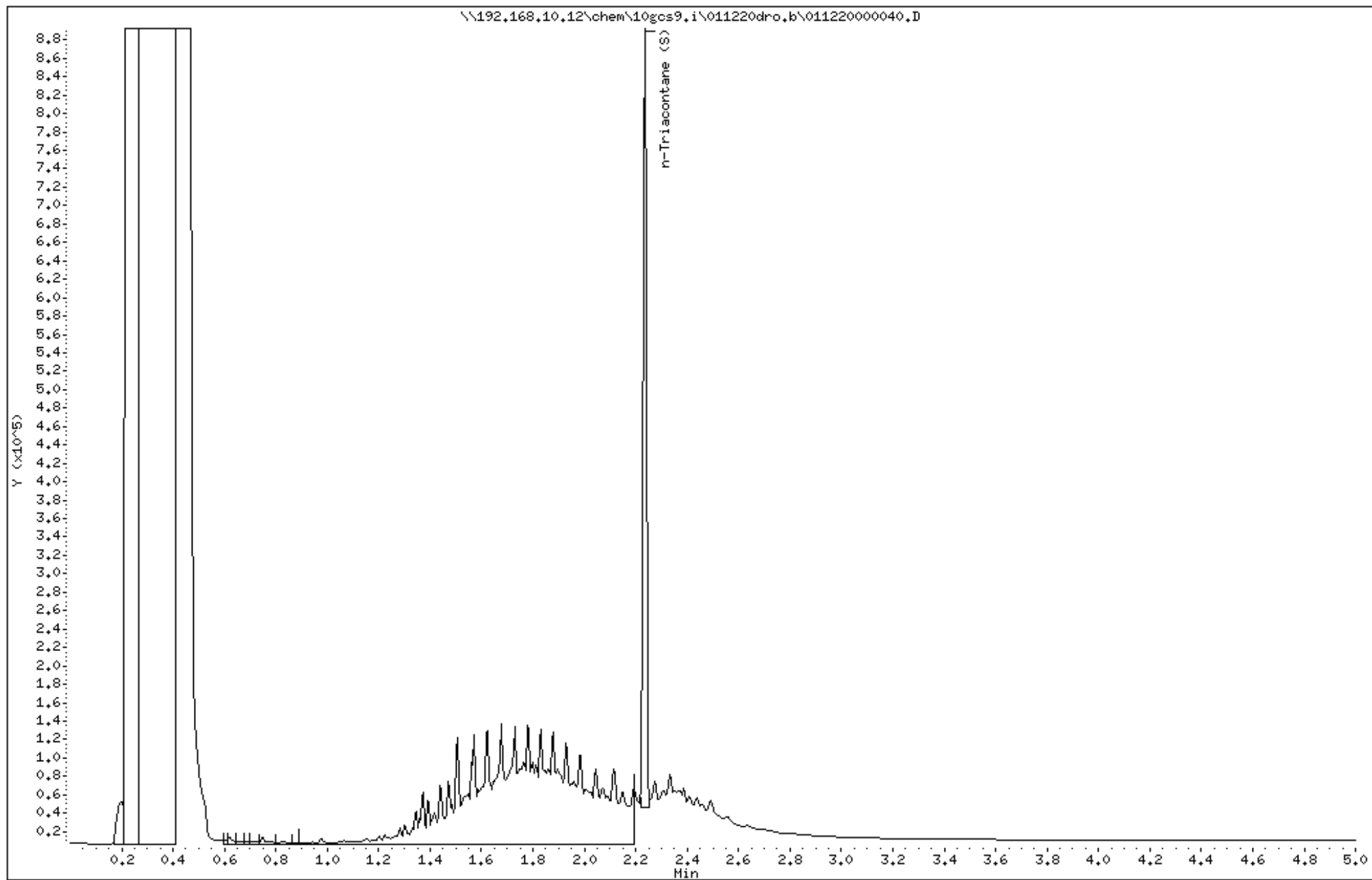
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 16:19

Client ID: SB-6_1,5-2

Sample Info: 10504984016

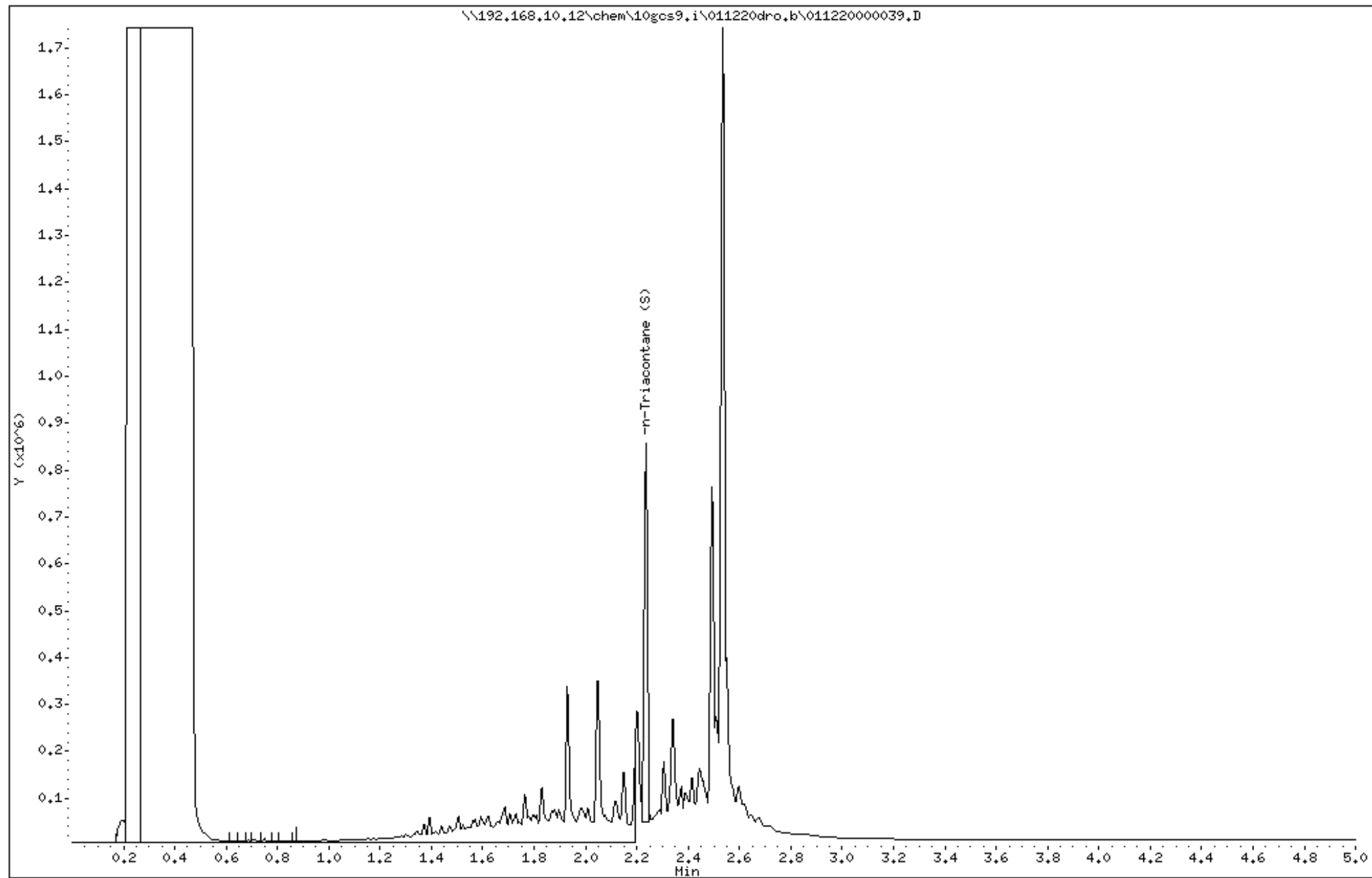
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 18:19

Client ID: SB-6_5-6

Sample Info: 10504984017

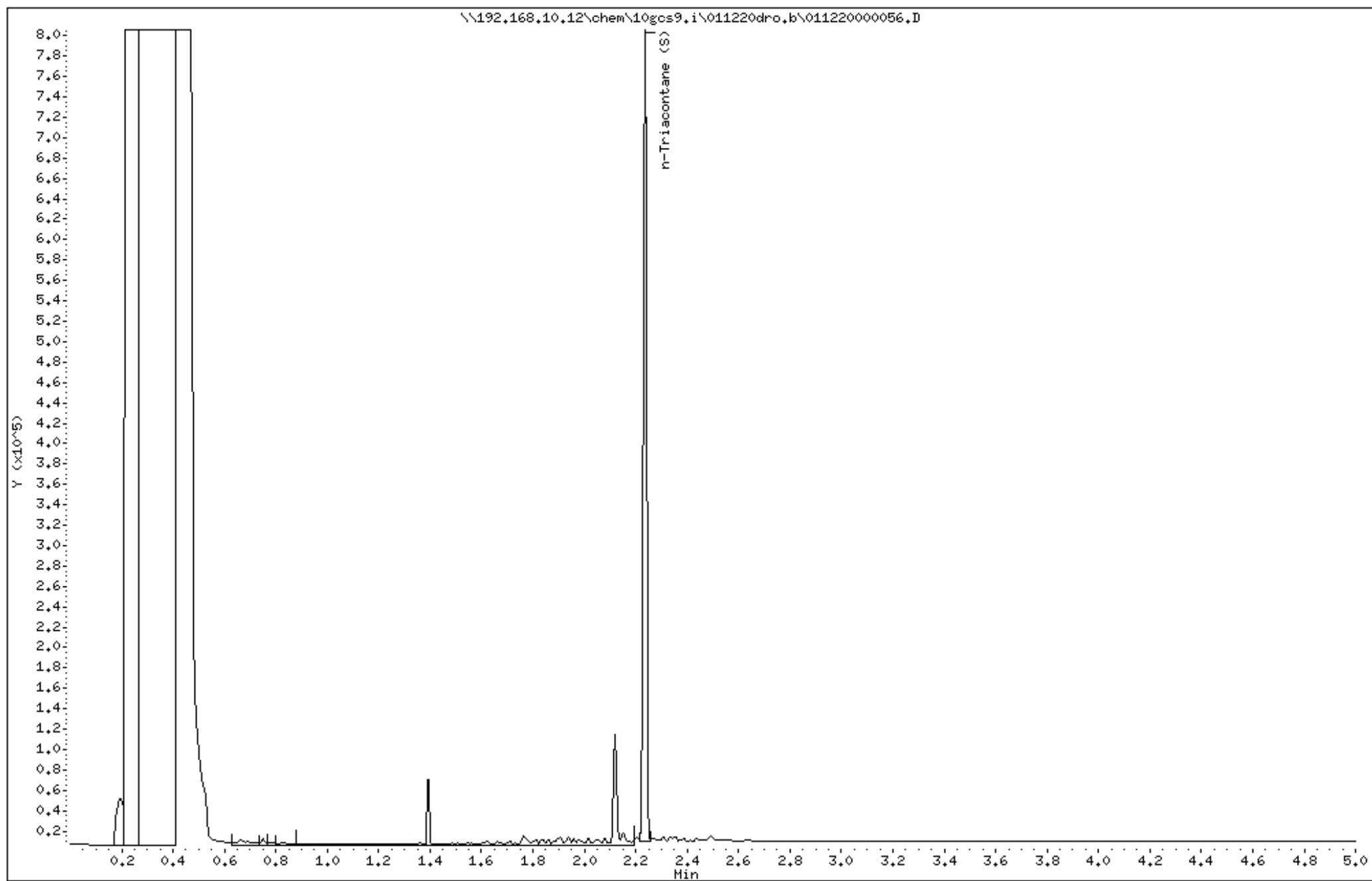
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9.i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 18:05

Client ID: SB-21_2-4

Sample Info: 10504984018

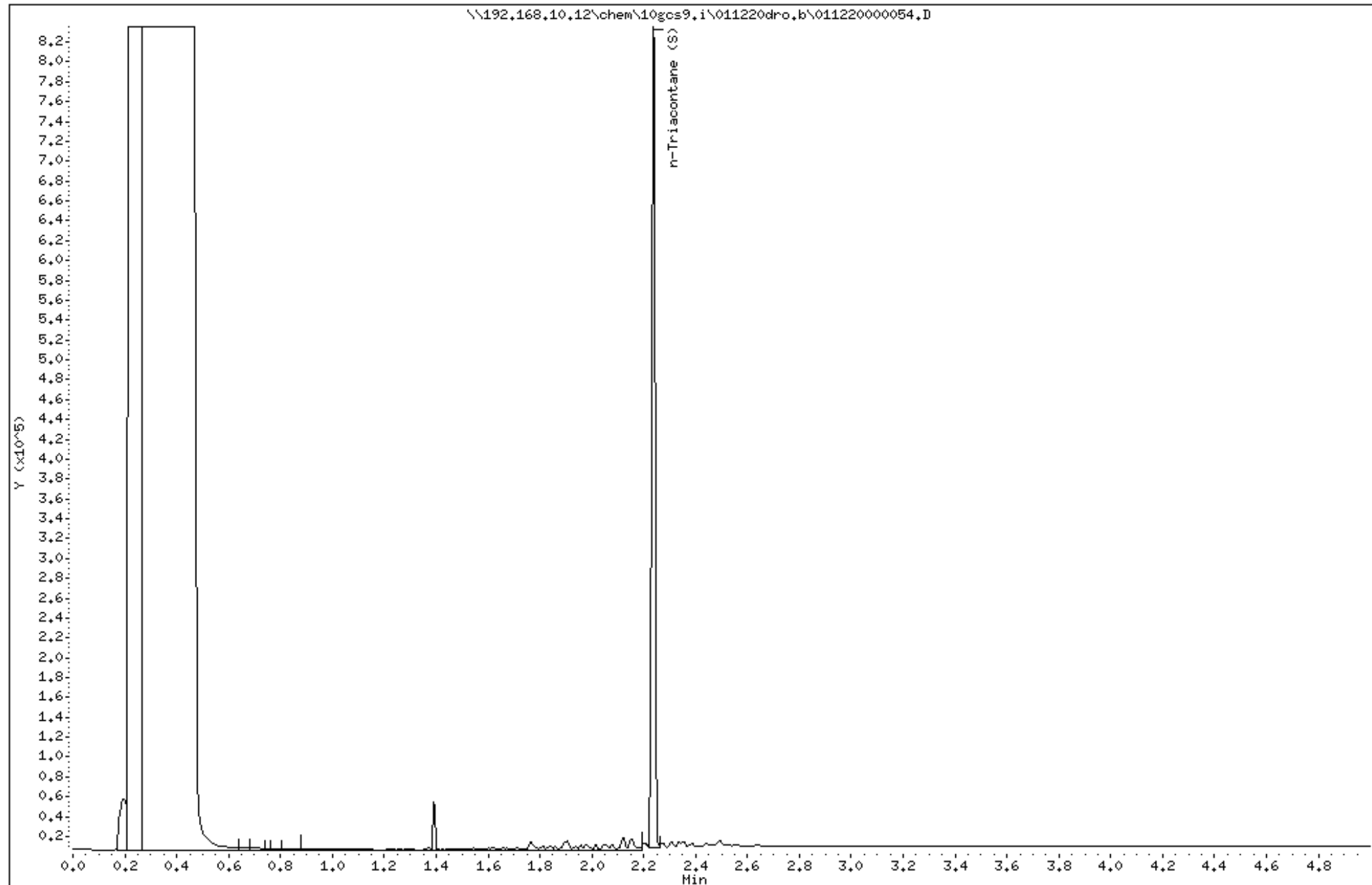
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 18:12

Client ID: SB-21_6-8

Sample Info: 10504984019

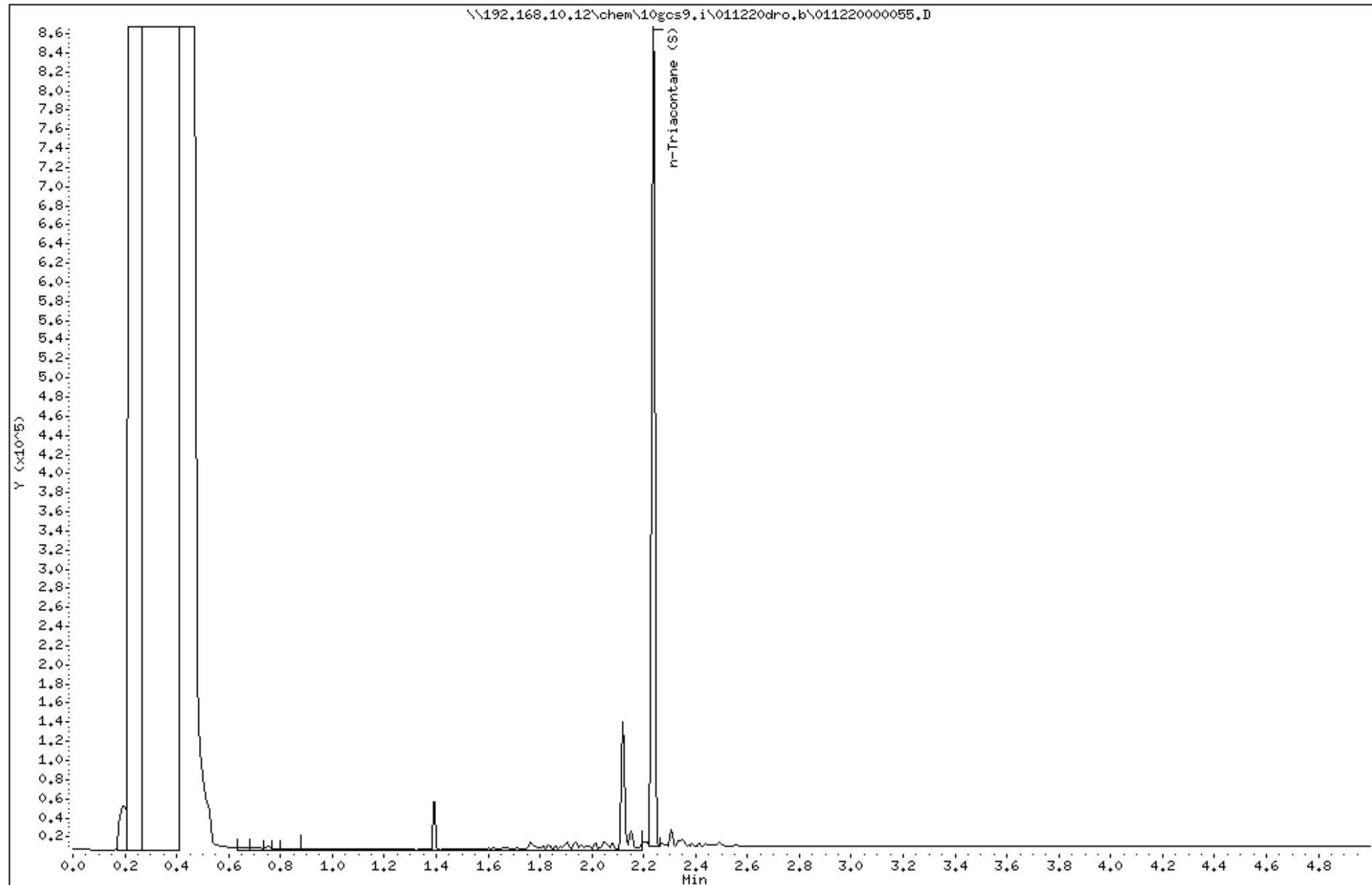
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 18:26

Client ID: SB-22_2-4

Sample Info: 10504984021

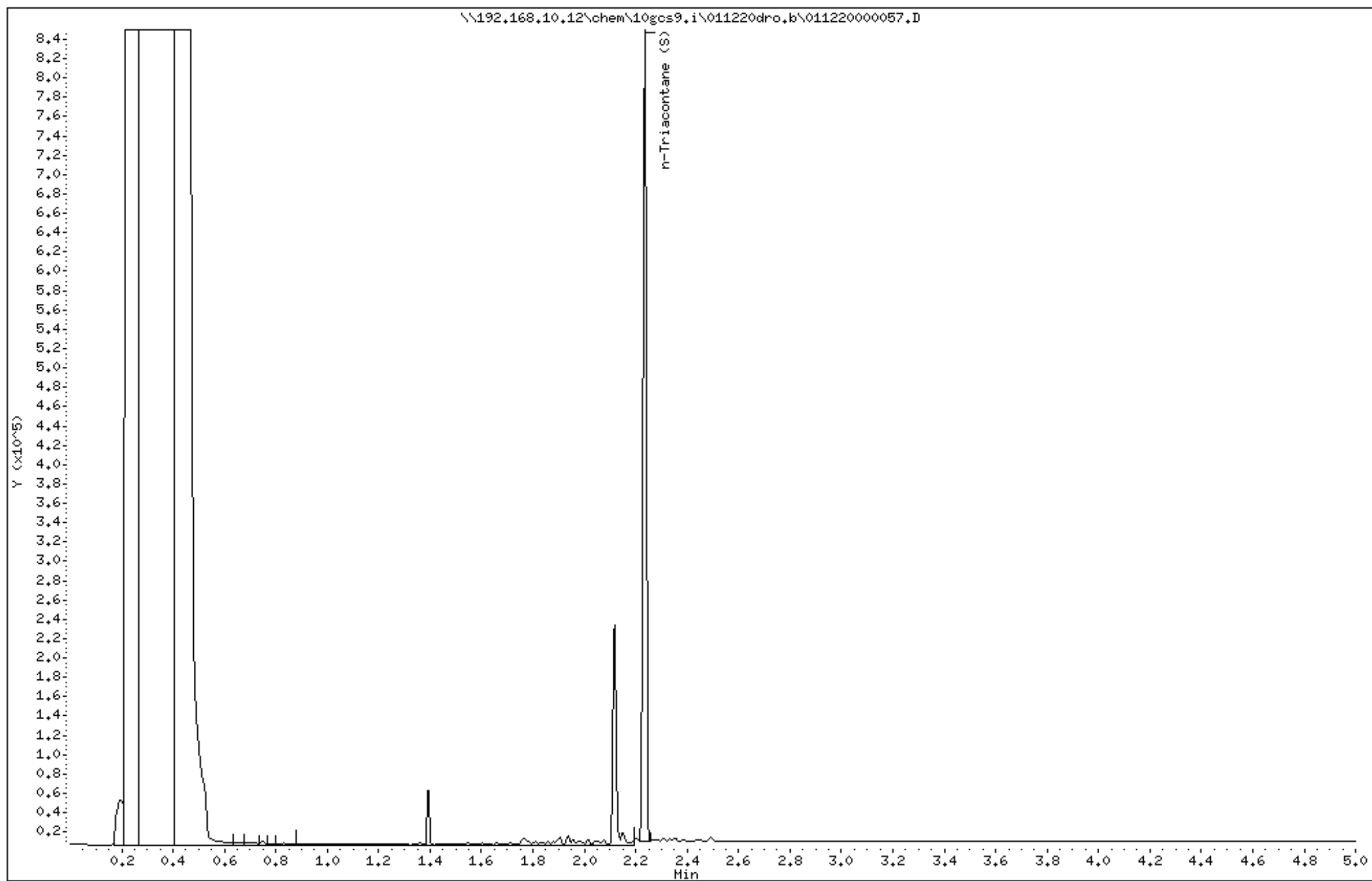
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 13:53

Client ID: SB-22_6-8

Sample Info: 10504984022

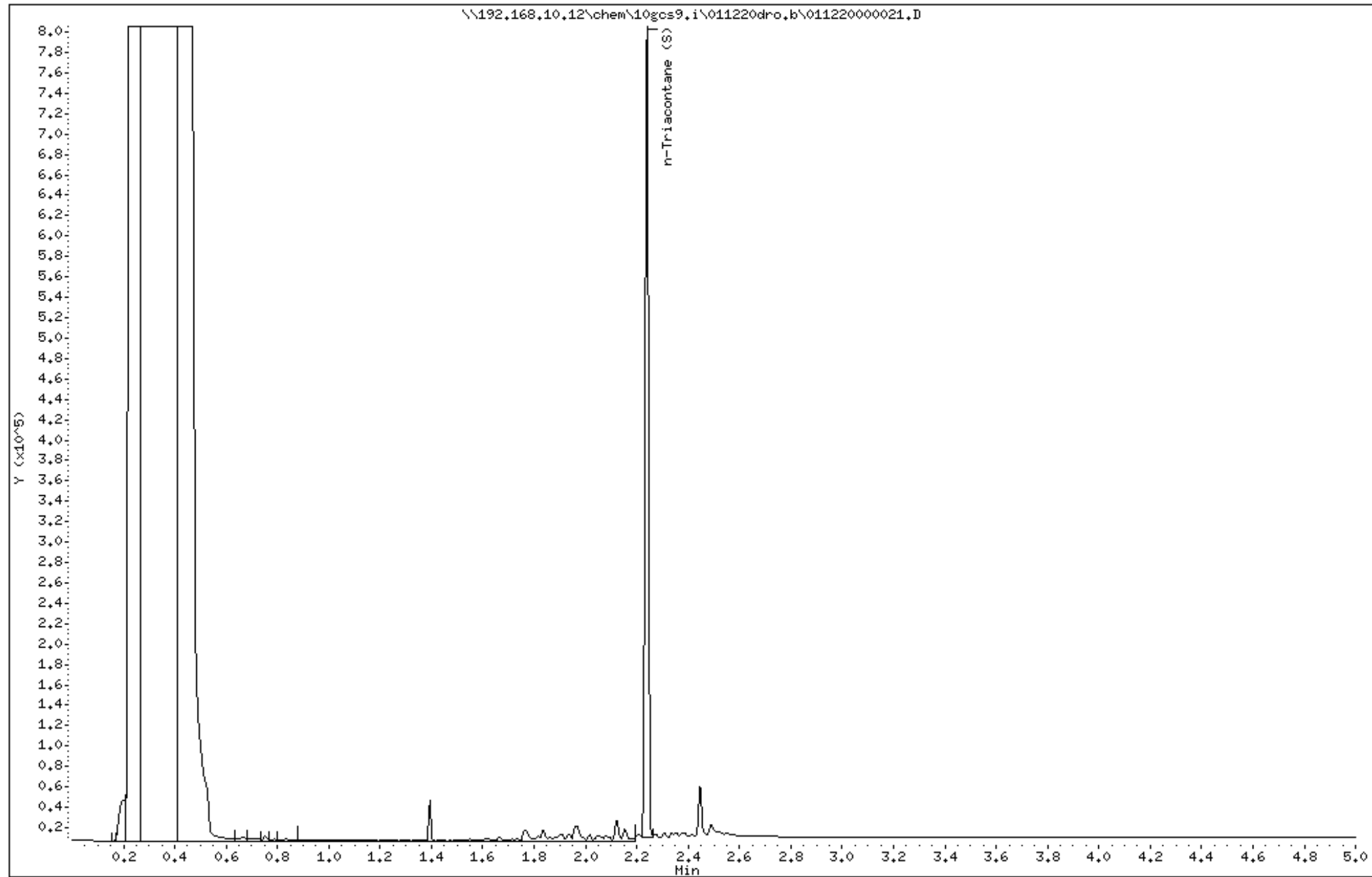
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9.i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 13:39

Client ID: SB-23_6-8

Sample Info: 10504984023

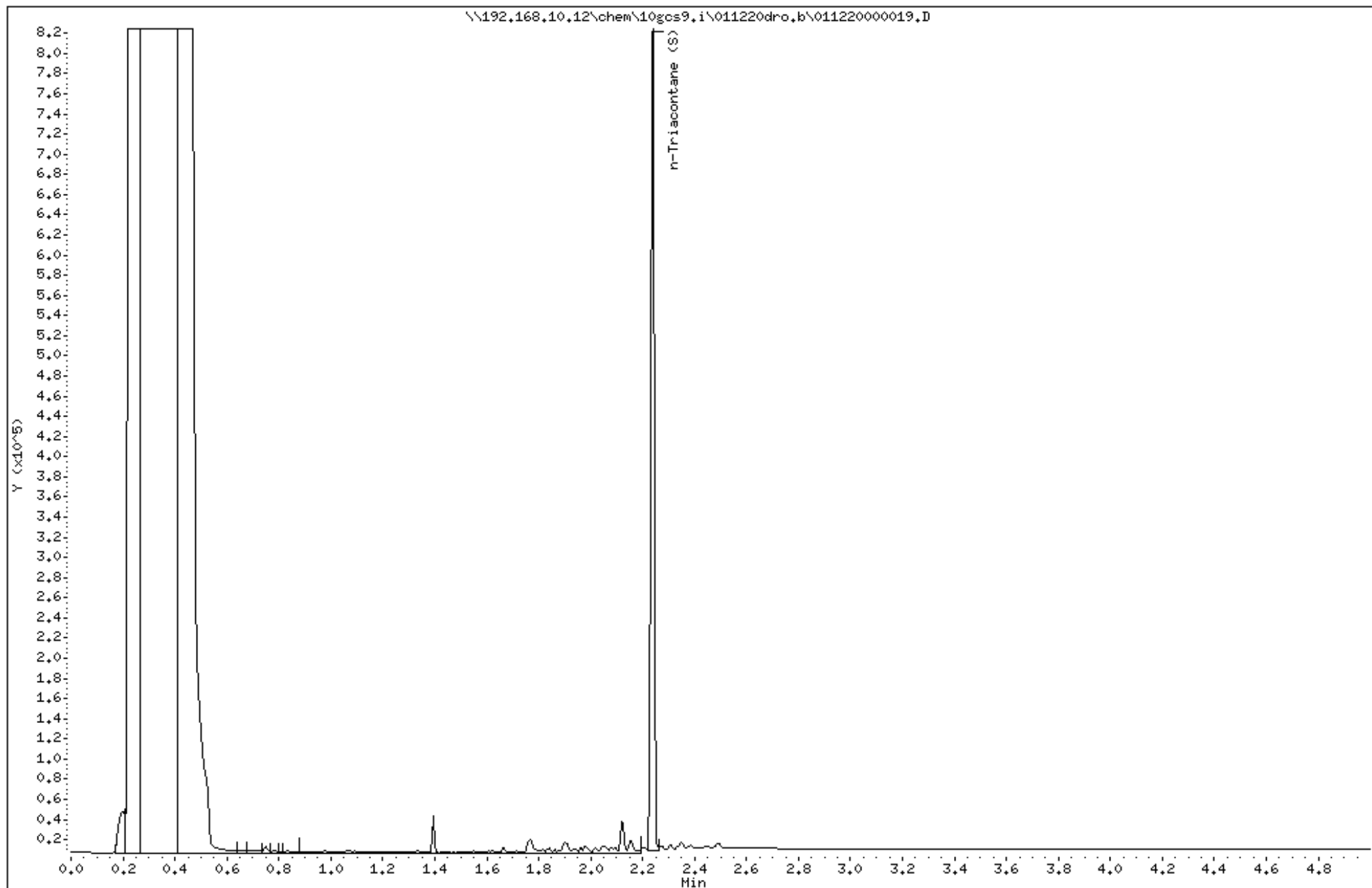
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 13:46

Client ID: SB-29_2-4

Sample Info: 10504984024

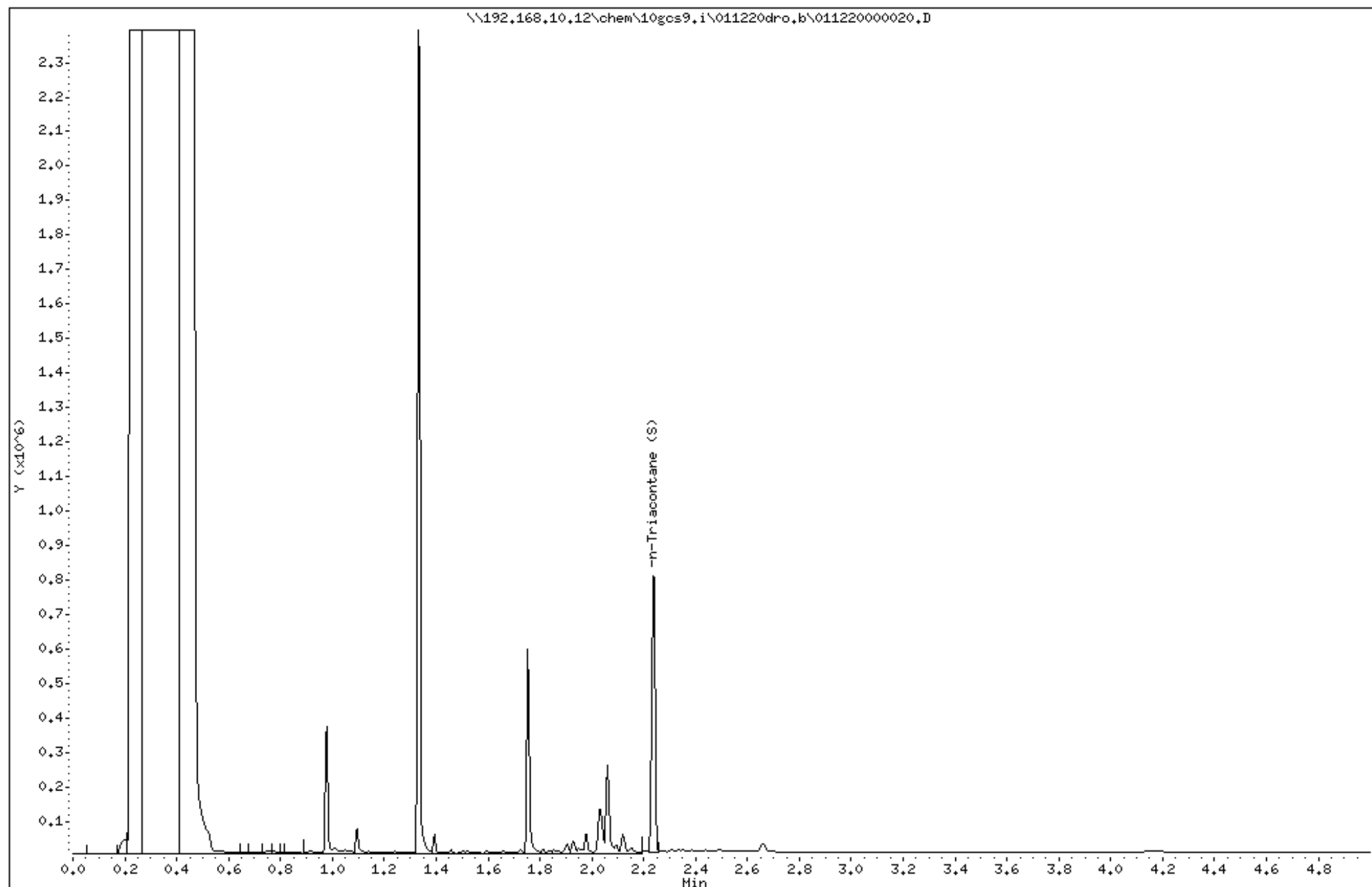
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 14:00

Client ID: SB-29_6-8

Sample Info: 10504984025

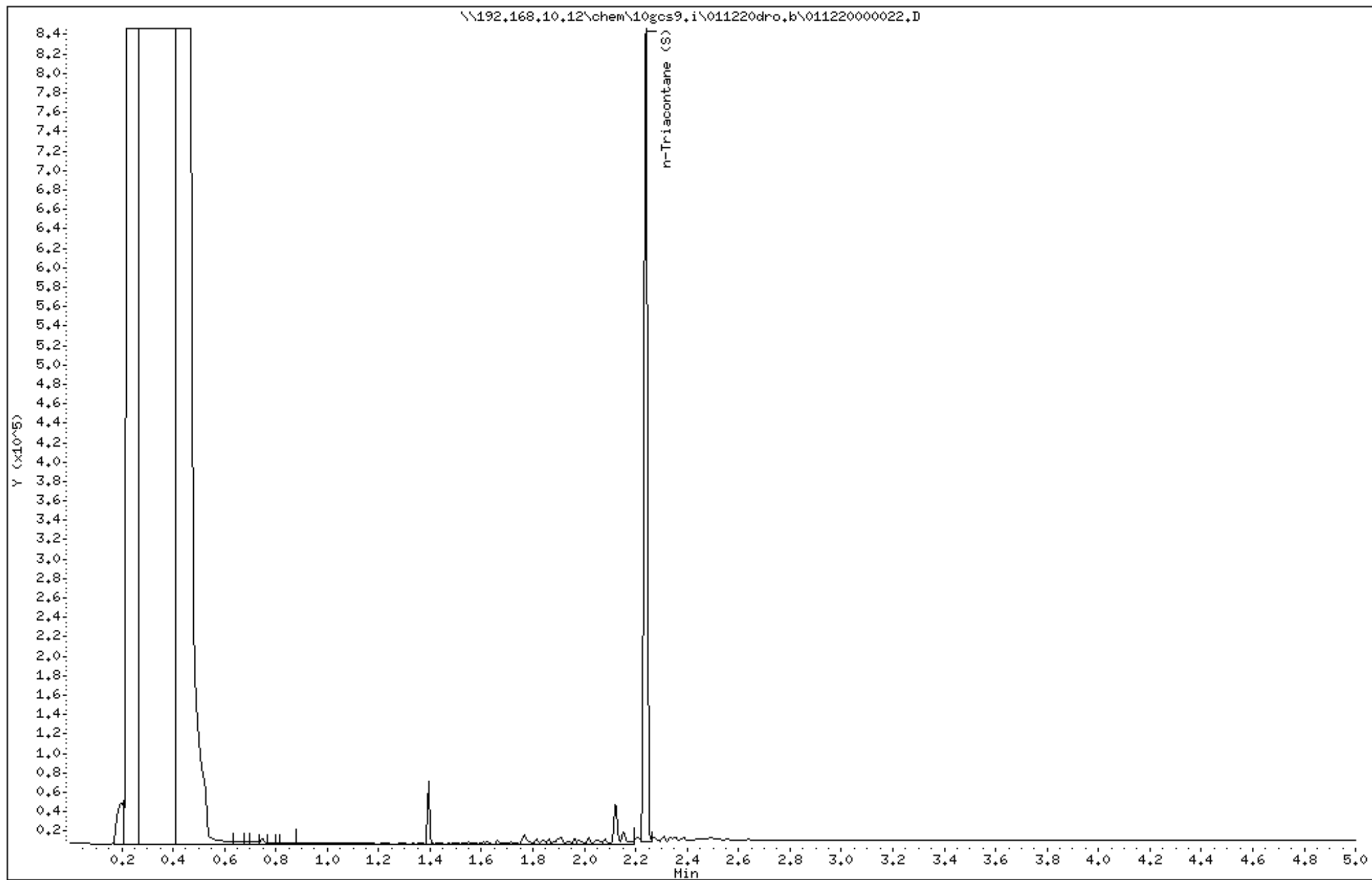
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 14:07

Client ID: SB-27_2-4

Sample Info: 10504984026

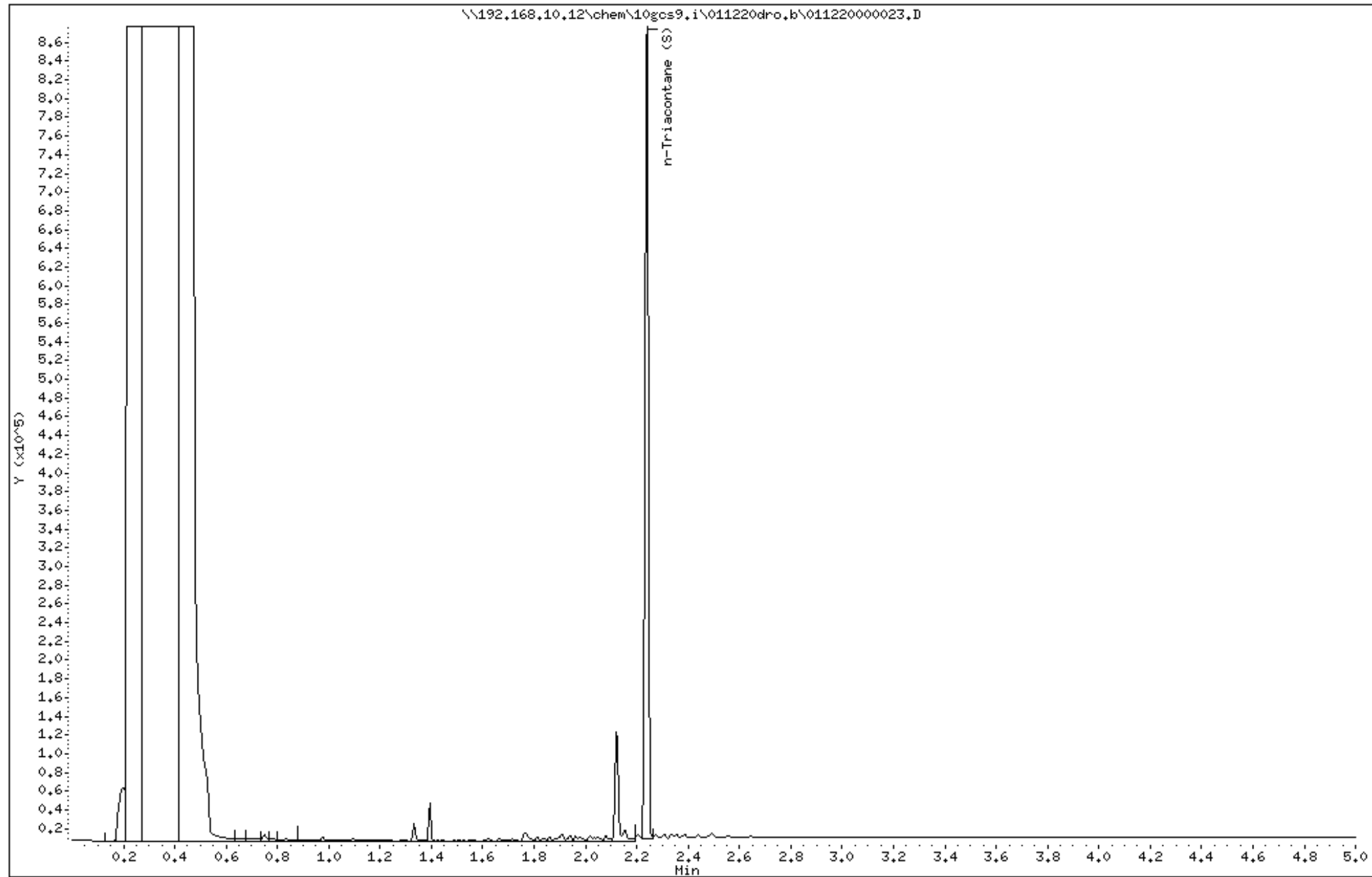
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 14:14

Client ID: SB-27_6-8

Sample Info: 10504984027

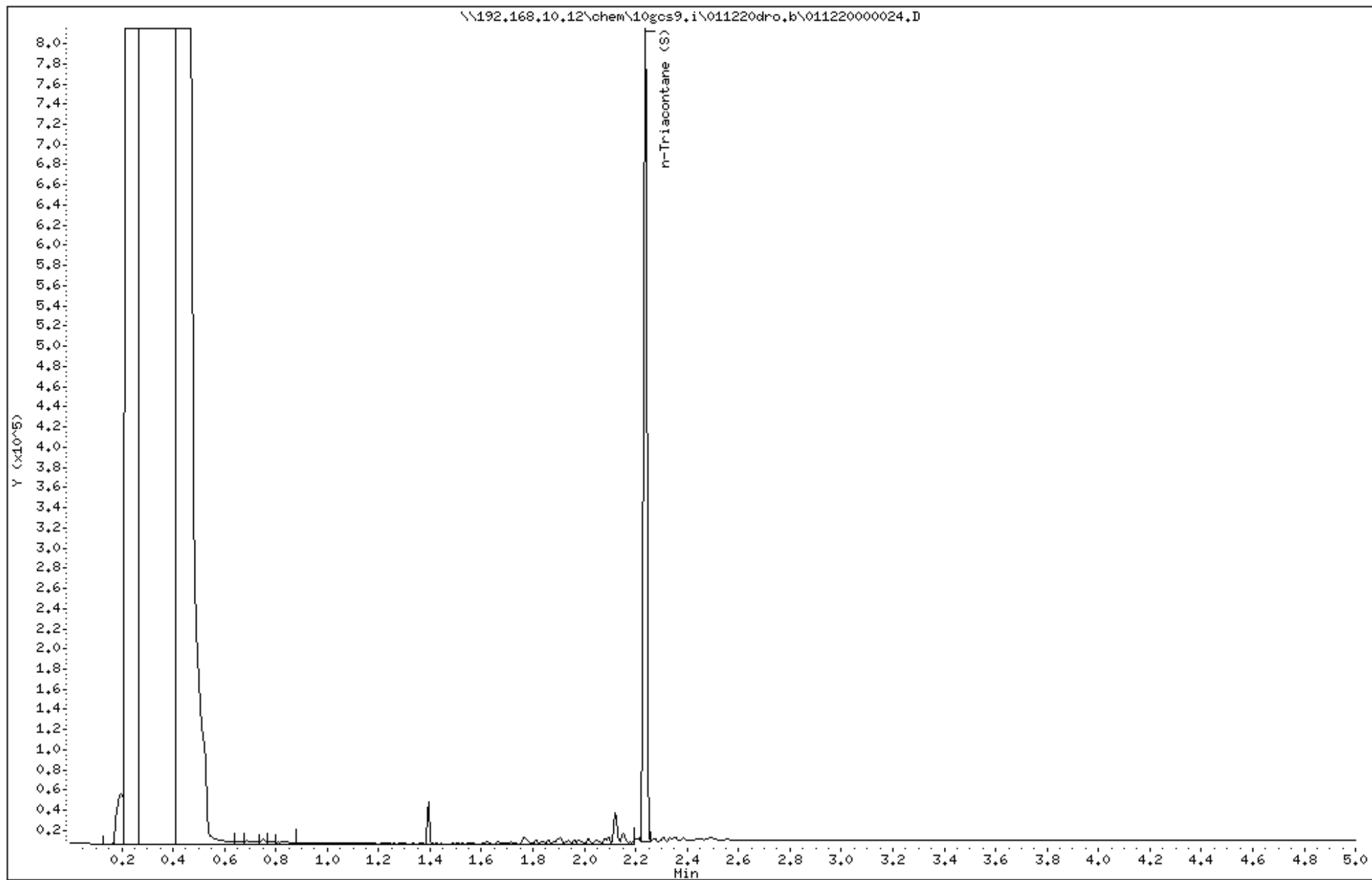
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 14:21

Client ID: SB-28_6-8

Sample Info: 10504984028

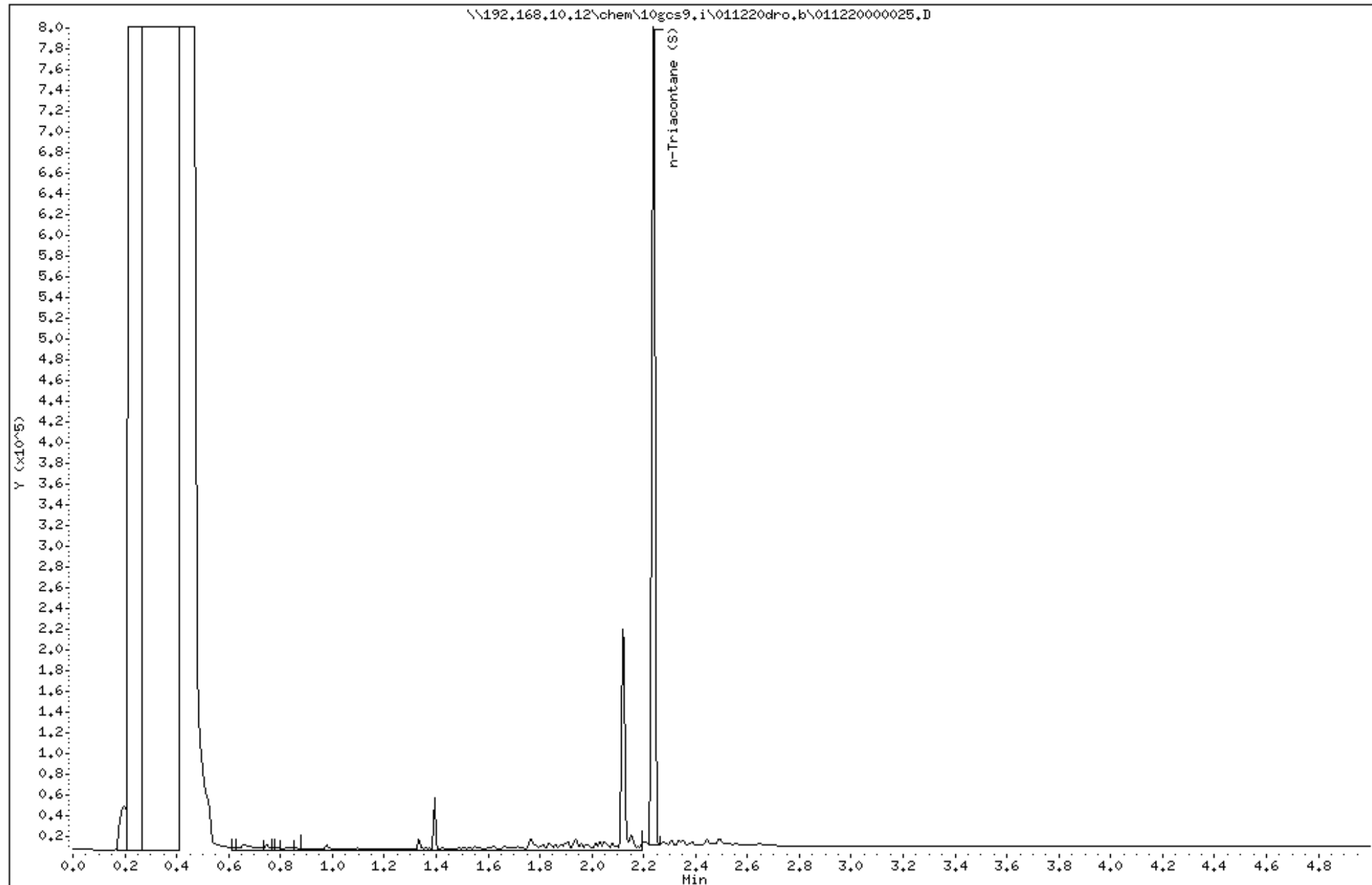
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 13:10

Client ID: SB-24_6-8

Sample Info: 10504984029

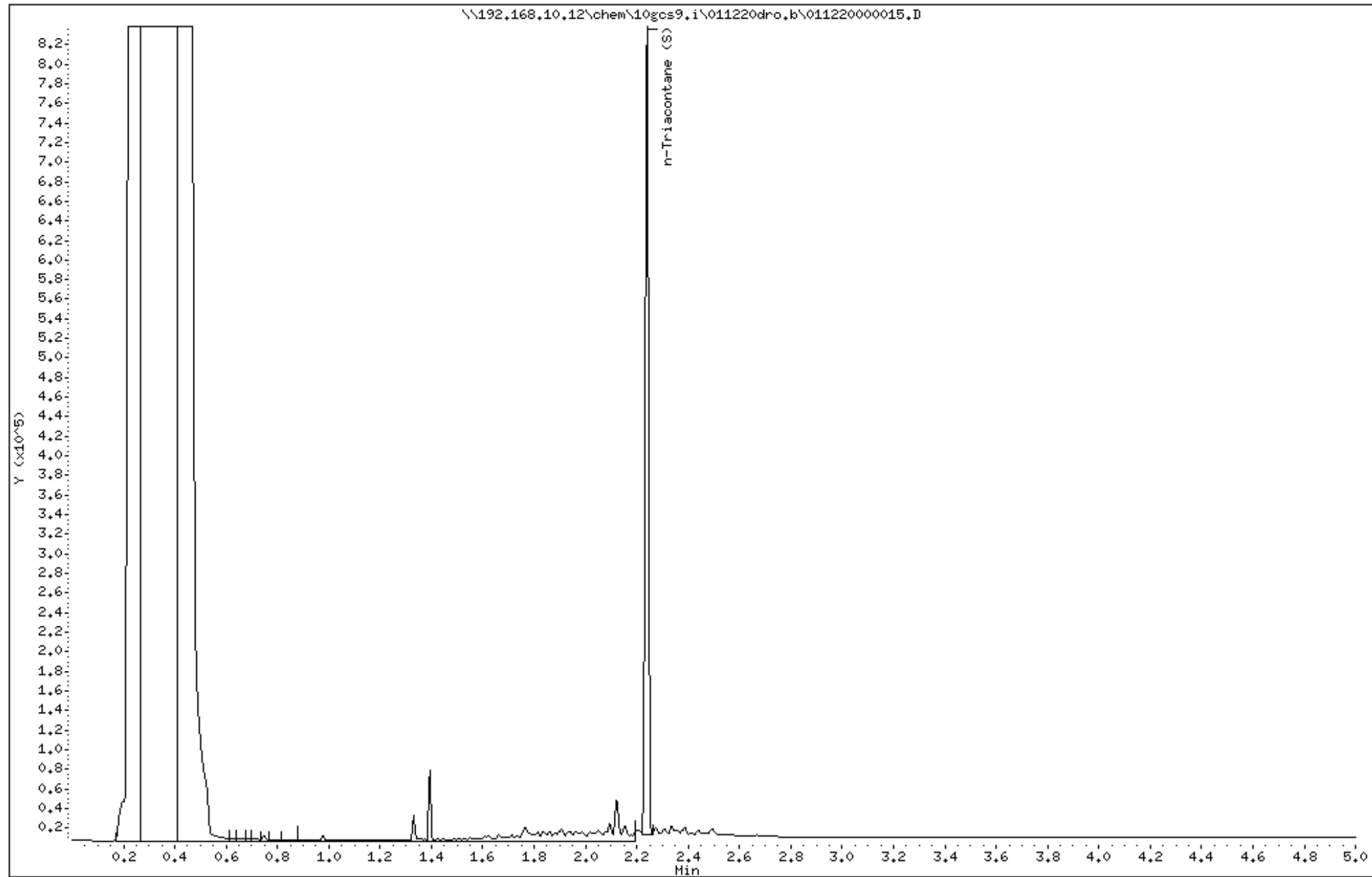
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 13:32

Client ID: SB-25_6-8

Sample Info: 10504984030

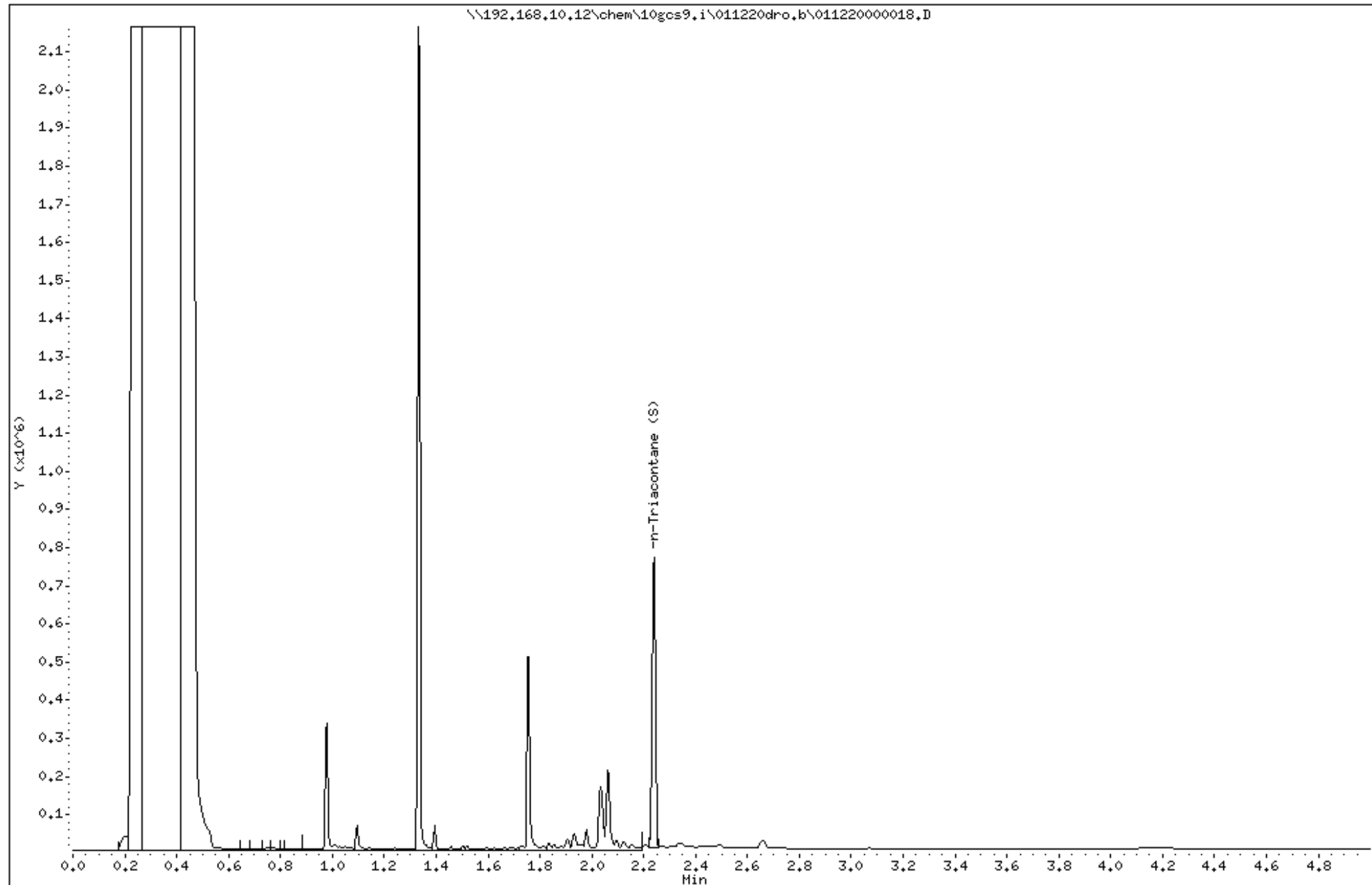
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 14:28

Client ID: SB-26_2-4

Sample Info: 10504984031

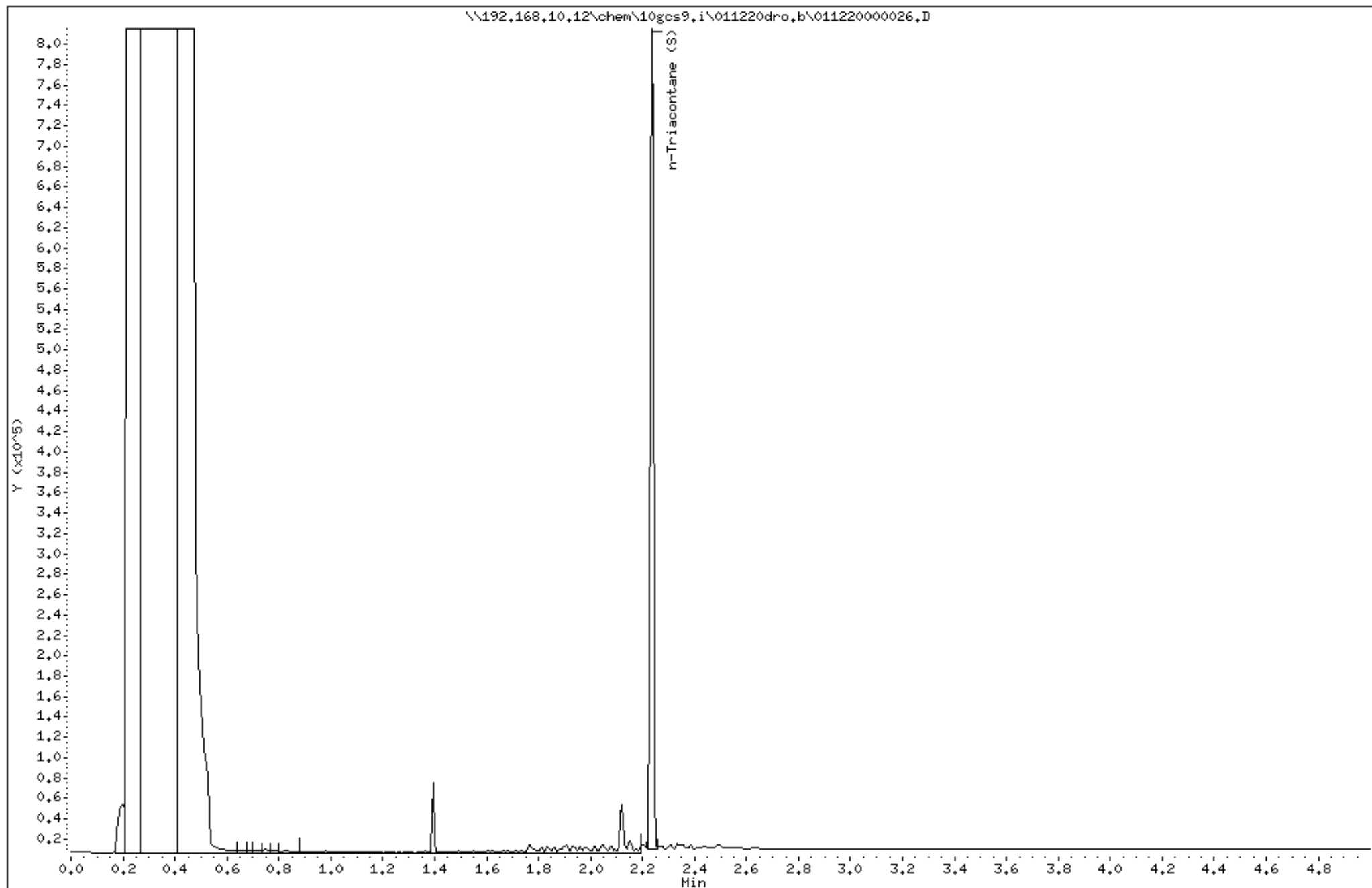
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 14:35

Client ID: SB-26_6-8

Sample Info: 10504984032

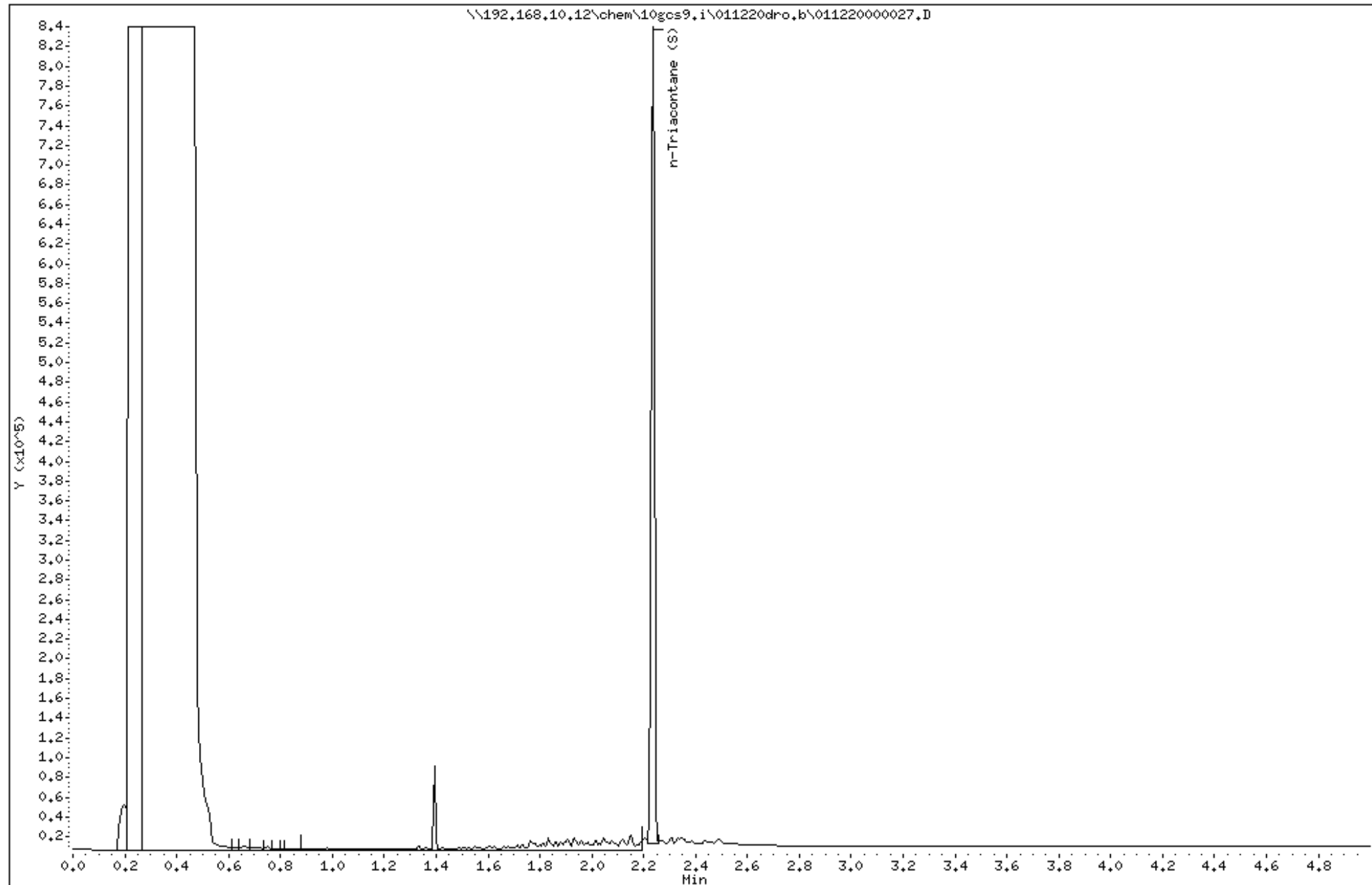
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 14:56

Client ID: SB-19_6-8

Sample Info: 10504984033

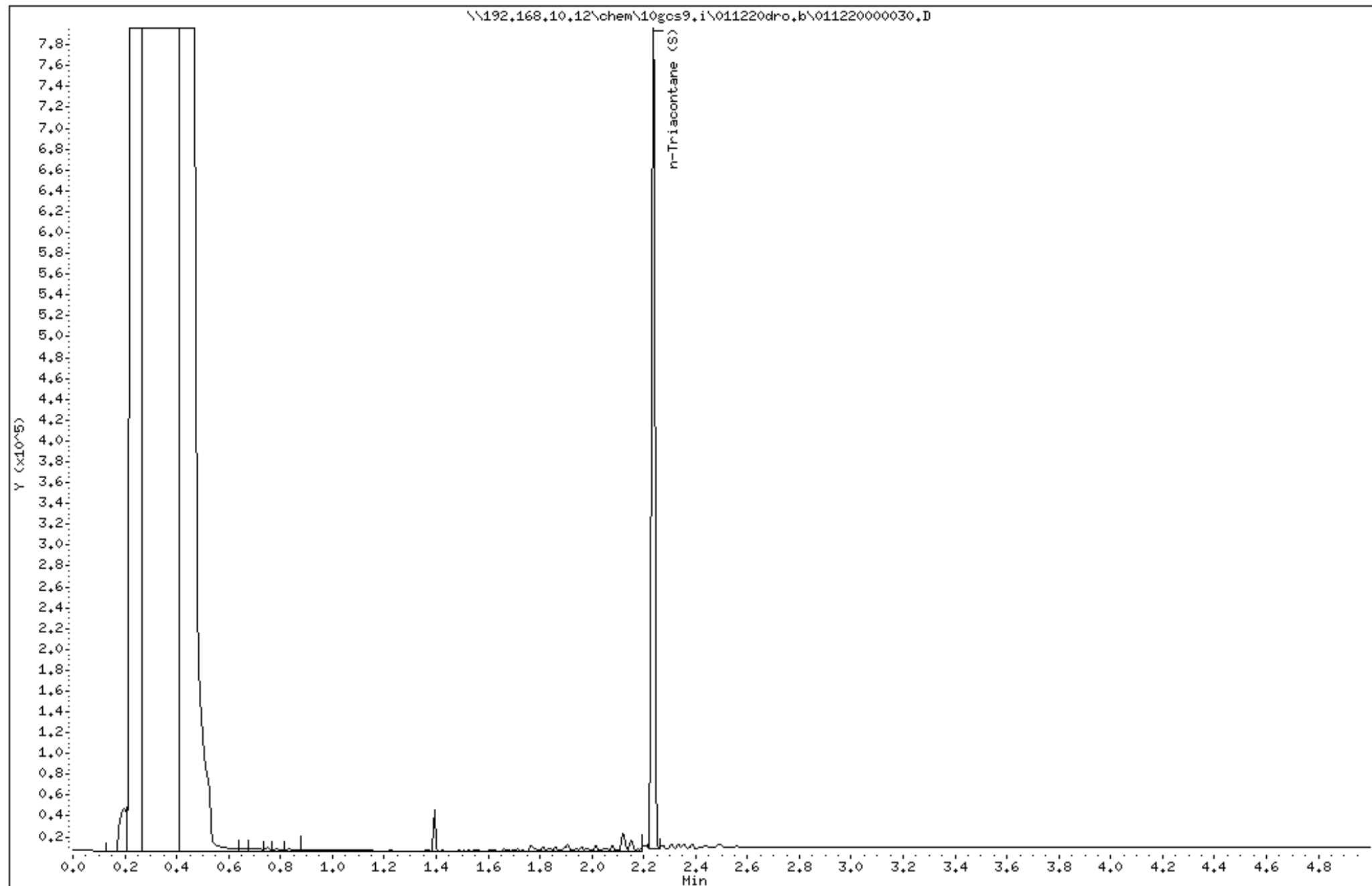
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 15:03

Client ID: SB-18_2-4

Sample Info: 10504984034

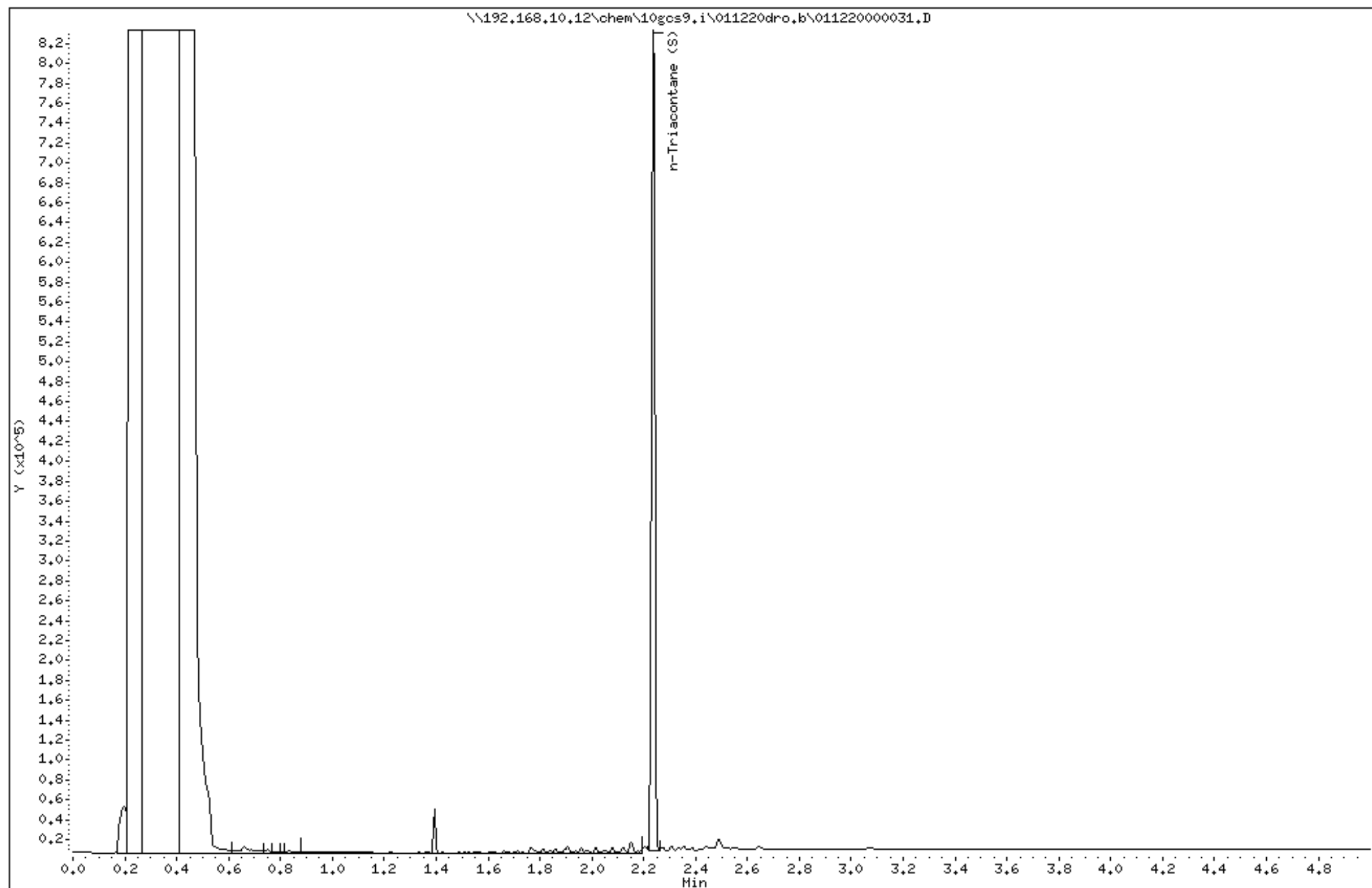
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 15:10

Client ID: SB-18_6-8

Sample Info: 10504984035

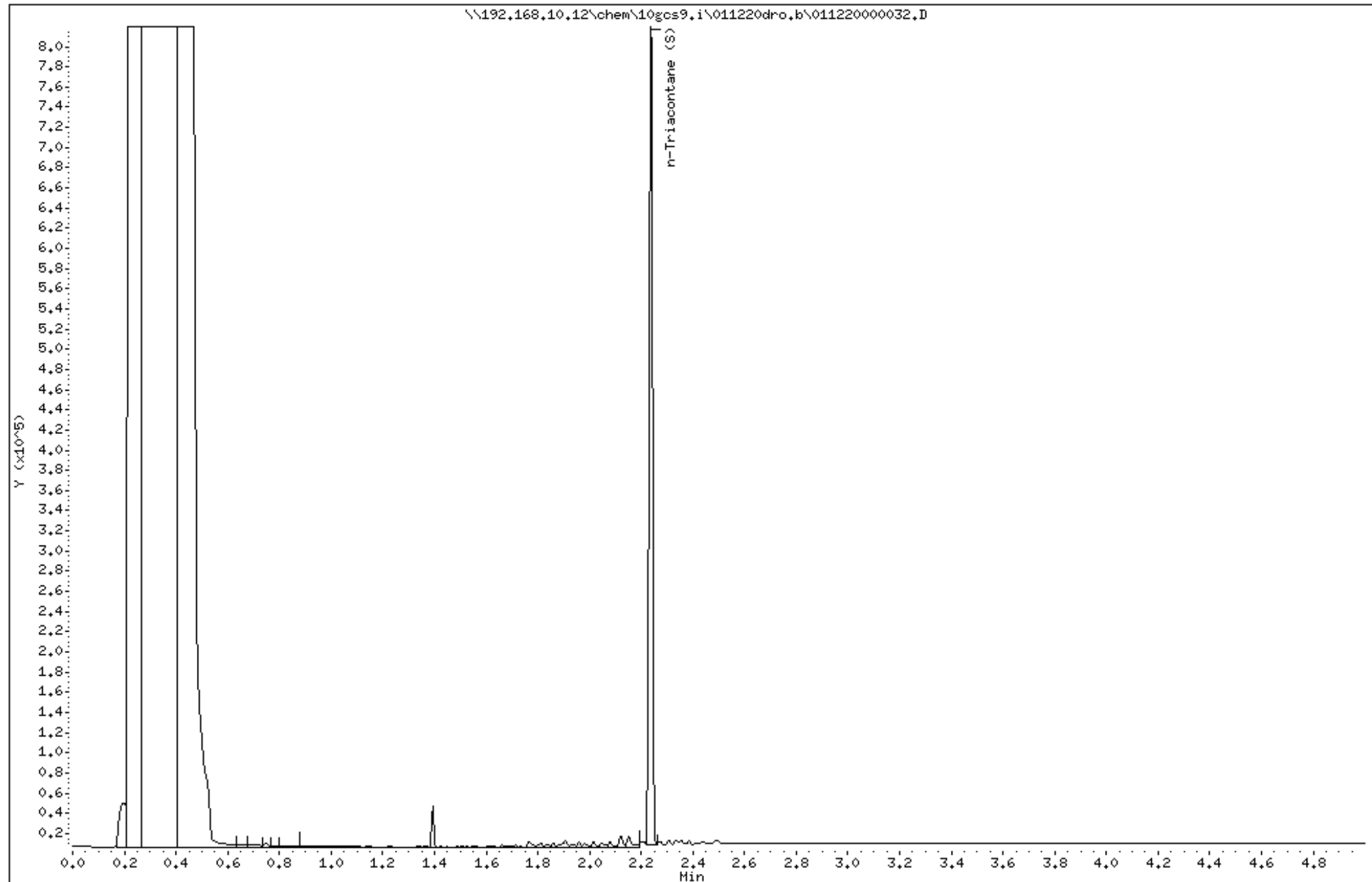
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 15:17

Client ID: SB-17_6-8

Sample Info: 10504984036

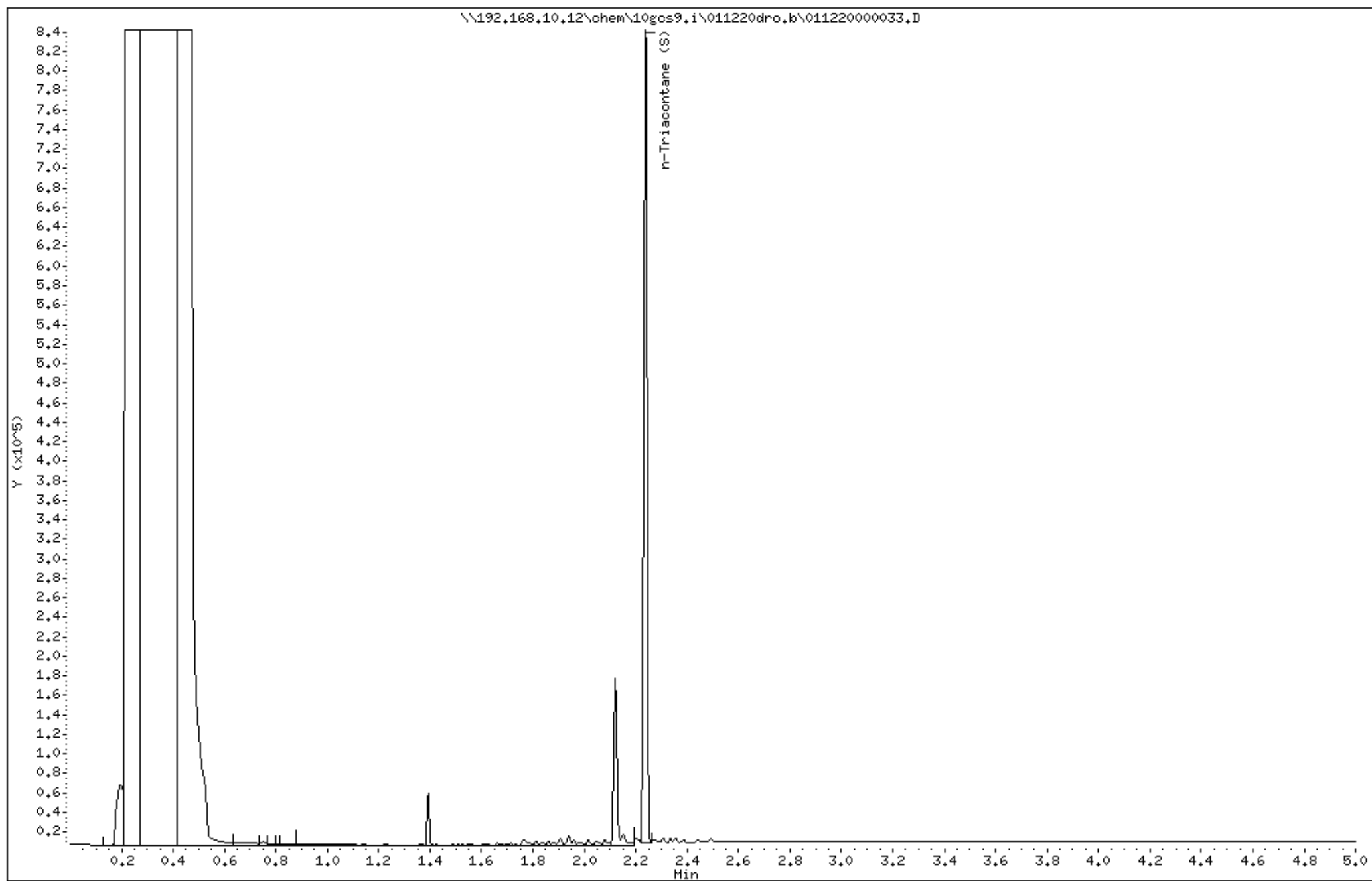
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 14:42

Client ID: SB-20_6-8

Sample Info: 10504984037

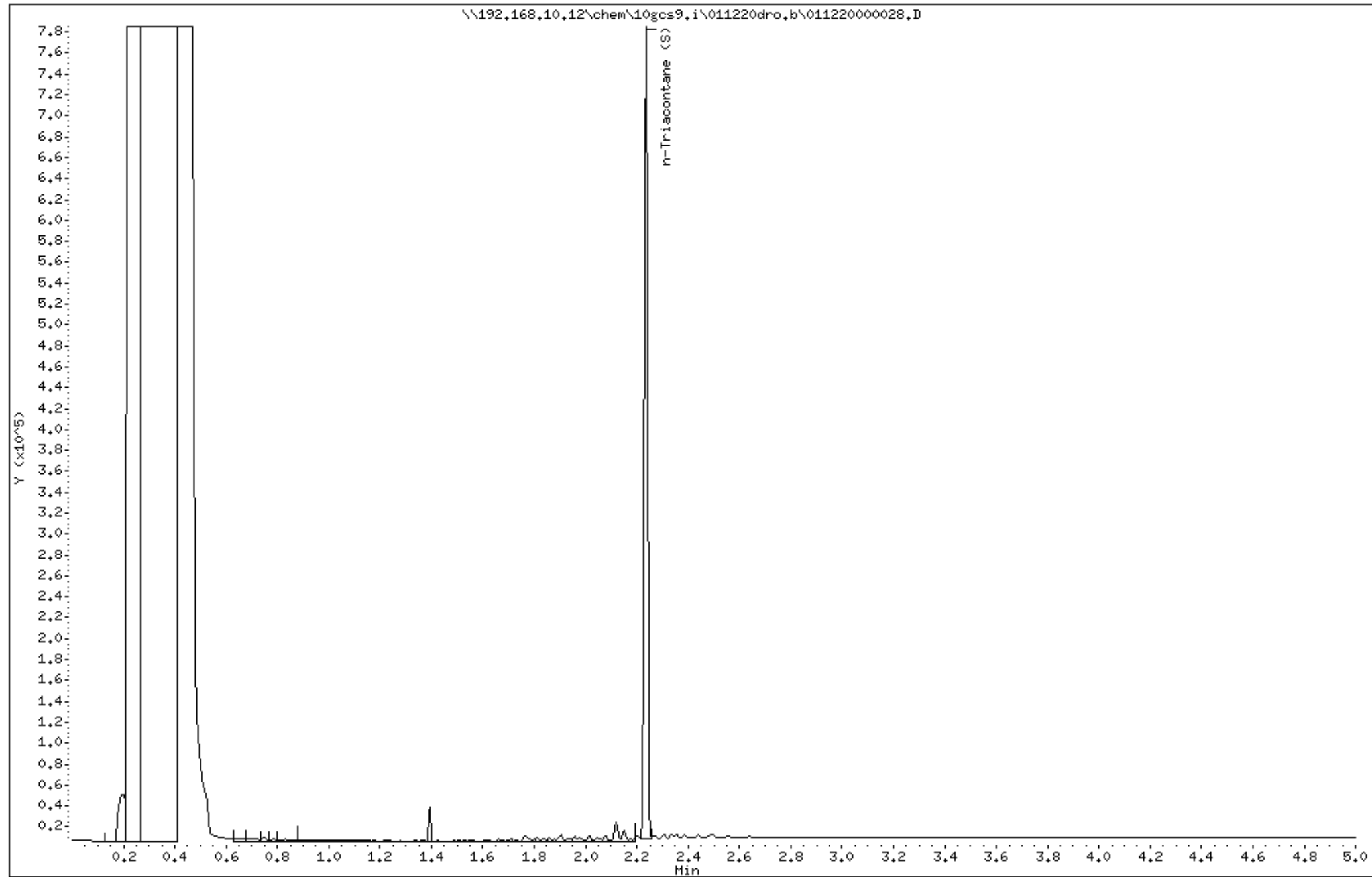
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JWH

Column diameter: 0.32



C.2 – Investigation Waste Disposal Documentation

P.O. Number	Customer Code	SKB Representative Kyle Backstrom	CL
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I. Generator Information

Generator Name: Superior Water Light and Power		Generator EPA ID Number: WIR 000 150 185	SIC Code
Generator Location: Nemadji Substation, Hill Avenue and Stinson Avenue Superior WI, 54880	County: Douglas	Generator Contact: Greg Prom or Zach Golkowski	
Generator Mailing Address (if different): SWLP 2915 Hill Avenue Superior, WI 54880		Phone: 218-355-3191	Fax:
Bill To Name & Address: SWLP 2915 Hill Avenue Superior, WI 54880		Billing Contact: Accounts Payable	
Invoice Contact: Zach Golkowski		Billing Email Address: accountspayable@allete.com	

II. Waste Generation Information

Waste Name: Oil Impacted Soil/Debris	Estimated rate of waste generation: 1,000	<input checked="" type="checkbox"/> one time
Generator Facility Operations and/or Site History: Buried debris mixed with bituminous.		<input type="checkbox"/> Lbs. <input checked="" type="checkbox"/> tons <input type="checkbox"/> cy <input type="checkbox"/> drums
Describe the generating process or source of contaminated soil/debris and/or waste: Historic dumping of oily tarry bituminous.		

III. Waste Composition and Constituents (list all known)

	Actual Range	
	%	ppm
Oil Contaimainted Soil/Debris (e.g. class 5, grave, sand clay, topsoil, crushed rock, metal debris)	100	<50 (PCB)

IV. Waste Properties

Physical state: <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Sludge <input type="checkbox"/> Gas	Free Liquids: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Content _____ %	pH Range: <input type="checkbox"/> <2 <input type="checkbox"/> 2-4 <input checked="" type="checkbox"/> 5-8 <input type="checkbox"/> 8-12.4 <input type="checkbox"/> >12.5	Flash point: <input type="checkbox"/> ≤ 140°F <input type="checkbox"/> > 140°F to < 200°F <input checked="" type="checkbox"/> > 200°F	Color: Brown	Odor (describe): Slight petroleum
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V. Waste Classification

Waste stream properties (answer ALL questions)	Does this waste contain absorbents? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Does this waste stream contain any D, F, K, U or P listed as hazardous waste, either in pure form, as a mixture, or treatment residue? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this waste lethal (by Minn. Rules 7045.0131 Subp. 6)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Does this waste stream contain PCB material <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, concentration: _____ppm	Is this waste recyclable? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Does this waste stream contain fuming acids? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this waste explosive? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Does this waste contain asbestos? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this waste infectious? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Does this waste contain oxidizers? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this waste putrescible waste? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Does this waste contain radioactive material? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this waste demolition debris? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Is this waste sewer sludge? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Please attach any available information or analytical test results that have previously been performed on this waste that substantiates these determinations. Include MSDS's and any information from other agencies (i.e., MPCA, USEPA)

VI. Shipping Information

Proper DOT Shipping Name (per CFR 172.101) where applicable			
Reportable Quantity	DOT Hazard Class	UN/NA Number	Packing Group
Method of packaging: <input type="checkbox"/> drums (size _____) <input checked="" type="checkbox"/> Bulk Solids <input type="checkbox"/> boxes (size _____)		Method of shipment <input checked="" type="checkbox"/> Roll-off <input type="checkbox"/> End dump <input type="checkbox"/> Rail <input type="checkbox"/> Other (Specify) _____	

VII. Certification of Non Hazardous Waste & Approval Conditions

I hereby certify and warrant, on behalf of the generator and myself that, to the best of my knowledge and belief, the information contained herein is accurate, and true and that the waste is nonhazardous as defined in Title 42, Unites States Code Section 6903, Minnesota Statute Section 116.06, Subdivision 13, and/or any rules adopted by the Minnesota Pollution Control Agency under Minnesota Statute Section 116.07.

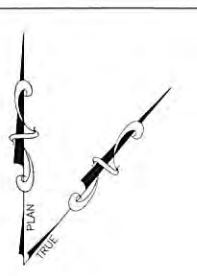
I understand that any approval is no longer valid if there are any changes in the process generating the waste or there have been changes in the composition of the waste. Therefore, if the composition of the waste stream changes or potentially changes, I or someone representing the generator, will immediately notify SKB Environmental. I, on behalf of the generator, hereby agree to fully indemnify SKB Environmental for any damages and/or costs incurred as a result of this certification being inaccurate or untrue.

Signature

Greg Prom
Printed Name

Env. Complinace Spec
Title

11/18/2019
Date



CONTROL POINT TABLE				
CONTROL POINT	POINT DESCRIPTION	SURFACE ELEVATION	SURVEY CONTROL	
			NORTHING	EASTING
100	SET SPIKE	N/A	561878.274	1448992.415
101	SET SPIKE	N/A	561701.521	1448775.383

REFERENCE DRAWINGS	
TITLE	DRAWING NO. SERIES
STORMWATER DRAINAGE PLAN	ME-35635-02 SH.3
SITE SURFACING PLAN	ME-35635-02 SH.4
CONSTRUCTION DETAILS	ME-35635-02 SH.6
EROSION CONTROL AND REMOVALS PLAN	ME-35635-03 SH.1

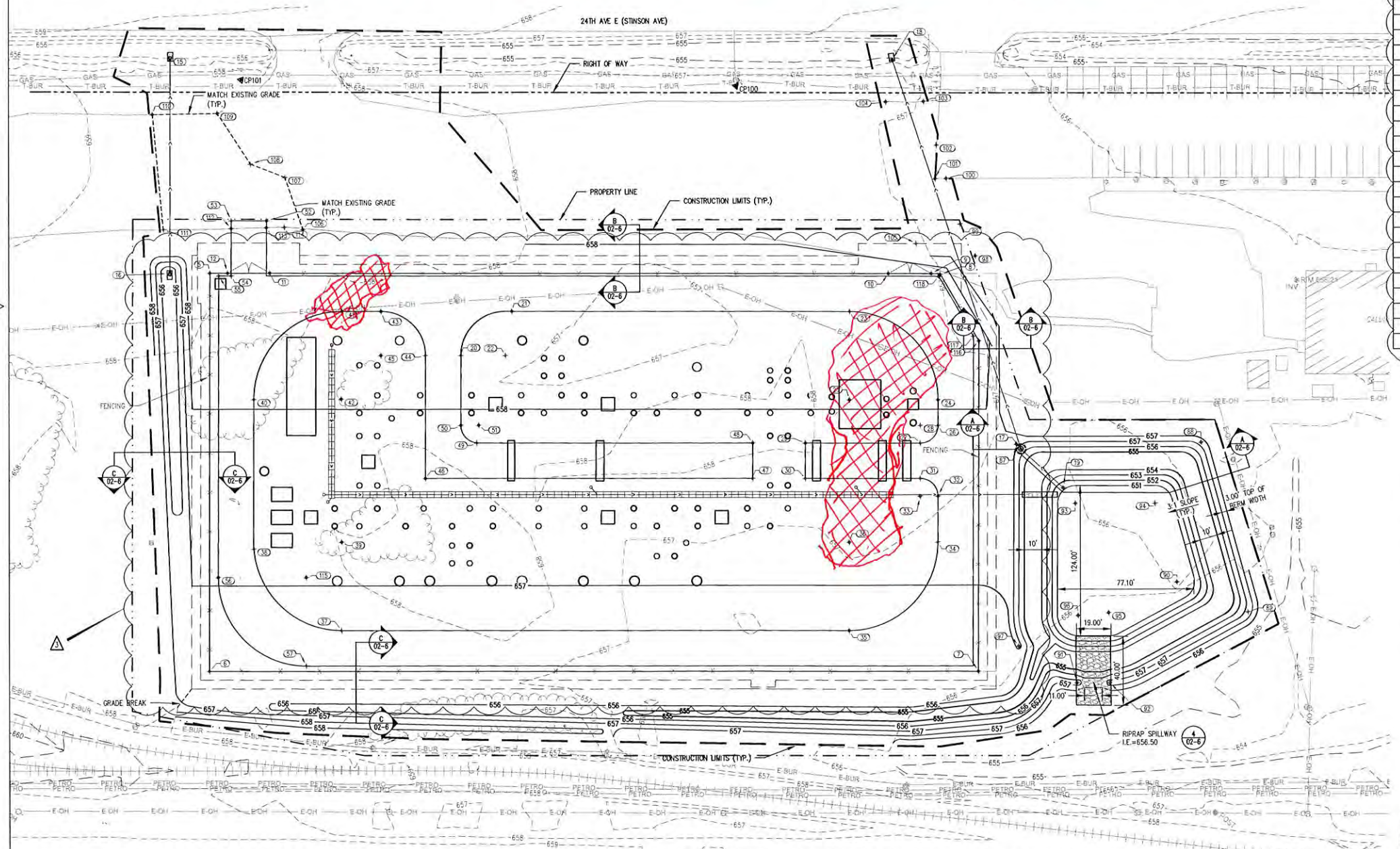
ESTIMATED QUANTITIES		
DESCRIPTION	UNIT	EST. QUANTITY
CLEARING AND GRUBBING (LIGHT)	ACRES	3.8
CUT TO SALVAGE (CV)	C.Y.	2,400
NON-STRUCTURAL FILL SALVAGE (CV)	C.Y.	160
4" TOPSOIL SALVAGE (CV)	C.Y.	500
STRUCTURAL FILL IMPORTED (CV)	C.Y.	2,750
AGGREGATE BASE IMPORTED (CV)	C.Y.	4,500
SPOIL DISPOSAL (CV)	C.Y.	1,700
CRUSHED ROCK SURFACING	TONS	1,815
MIN DOT TYPE 5 GEOTEXTILE FABRIC	S.Y.	4,400
SUBSTATION FENCE	L.F.	1,330

NOTE: ALL VOLUMES ARE IN-PLACE VOLUMES (CV). CONTRACTOR SHALL ADJUST AS NEEDED FOR LOOSE VOLUMES.

CONSTRUCTION POINT TABLE (SEE NOTE 6)				
POINT #	NORTHING	EASTING	ELEV.	DESC.
5	561606.49	1448831.98	658.77	FENCE COR
6	561433.66	1448976.03	656.50	FENCE COR
7	561712.55	1449305.96	656.50	FENCE COR
8	561870.59	1449149.69	658.77	FENCE COR
9	561867.69	1449145.40	658.77	GATE
10	561852.33	1449126.96	658.77	GATE
11	561628.27	1448858.09	658.77	GATE
12	561612.90	1448839.65	658.77	GATE
15	561685.26	1448736.94	655.25	PAPR-1
16	561592.00	1448814.79	655.75	PAPR-2
17	561824.00	1449248.28	656.25	CB-1
18	561946.49	1449051.03	654.00	PAPR-3
19	561822.68	1449280.83	654.00	12" CPP
20	561661.70	1448970.82	658.30	DRIVE 1
21	561699.23	1448976.81	658.50	DRIVE 2
22	561677.70	1448990.03	658.30	RAD 1
23	561821.75	1449123.82	658.50	DRIVE 3
24	561815.36	1449194.24	658.10	DRIVE 4
25	561783.34	1449155.83	658.10	RAD 2
26	561804.22	1449203.52	657.90	DRIVE 5
27	561790.13	1449202.24	657.80	DRIVE 6
28	561797.82	1449195.84	657.90	RAD 3
29	561748.52	1449152.31	657.80	DRIVE 7
30	561733.15	1449165.12	657.60	DRIVE 8
31	561774.77	1449215.05	657.60	DRIVE 9
32	561773.49	1449229.13	657.50	DRIVE 10
33	561767.09	1449221.45	657.50	RAD 4
34	561753.52	1449245.78	657.25	DRIVE 11
35	561683.10	1449239.38	656.75	DRIVE 12
36	561721.51	1449207.37	657.25	RAD 5
37	561499.35	1449018.92	656.75	DRIVE 13
38	561502.77	1448951.17	657.25	DRIVE 14
39	561537.71	1448986.90	657.25	RAD 6
40	561567.58	1448996.95	658.05	DRIVE 15
41	561638.00	1448903.35	658.50	DRIVE 16
42	561599.63	1448934.93	658.05	RAD 7
43	561652.09	1448920.25	658.50	DRIVE 17
44	561648.89	1448955.46	658.30	DRIVE 18
45	561632.88	1448936.26	658.30	RAD 8
46	561595.50	1448999.96	657.60	DRIVE 19
47	561713.95	1449142.07	657.60	DRIVE 20
48	561729.31	1449129.27	657.80	DRIVE 21
49	561629.43	1449009.34	657.80	DRIVE 22
50	561631.35	1448996.11	657.90	DRIVE 23

51	561637.75	1449003.80	657.90	RAD 9
52	561649.70	1448837.58	658.39	DRIVE 24
53	561636.90	1448822.21	658.42	DRIVE 25
54	561613.03	1448842.15	658.75	DRIVE 26
55	561608.55	1448836.77	658.75	DRIVE 27
56	561477.58	1448945.94	657.05	DRIVE 28
57	561471.18	1449016.36	656.53	DRIVE 29
87	561824.46	1449244.48	657.50	top berm
88	561892.39	1449324.20	657.50	top berm
89	561835.91	1449406.25	657.50	top berm
90	561823.00	1449364.39	651.00	RAD 15
91	561743.11	1449357.56	657.50	top berm
92	561754.99	1449371.70	657.50	top berm
93	561820.29	1449291.72	651.00	rad 11
94	561849.24	1449326.32	651.00	rad 12
95	561784.97	1449345.91	651.00	rad 13
96	561772.72	1449333.66	651.00	rad 14
97	561737.69	1449318.78	657.50	top berm
98	561891.28	1449158.12	656.75	GRV RESTORE
99	561899.65	1449139.85	656.82	GRV RESTORE
100	561914.47	1449117.37	656.75	GRV RESTORE
101	561910.21	1449112.66	656.78	GRV RESTORE
102	561925.32	1449100.94	656.62	grv restore
103	561939.70	1449079.53	656.87	GRV RESTORE
104	561925.95	1449063.48	657.08	GRV RESTORE
105	561875.28	1449127.95	657.18	GRV RESTORE
106	561659.23	1448856.71	658.40	GRV RESTORE
107	561675.31	1448829.94	658.46	GRV RESTORE
108	561668.49	1448809.96	658.46	GRV RESTORE
109	561678.47	1448777.17	658.44	GRV RESTORE
110	561654.54	1448749.49	658.69	GRV RESTORE
111	561608.61	1448796.05	658.58	GRV RESTORE
112	561633.56	1448825.00	658.42	GRV RESTORE
113	561646.71	1448840.08	658.37	GRV RESTORE
114	561653.43	1448847.79	658.35	GRV RESTORE
115	561509.54	1448984.34	657.05	RAD 16
116	561855.71	1449190.55	658.40	FENCE COR
117	561855.83	1449186.54	658.45	DRIVE 30
118	561869.38	1449149.72	658.72	DRIVE 31

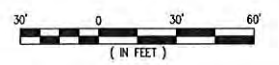
CONTAMINATED MATERIALS FOUND AND REMOVED L. DIXON 11/15/2019



SHEET LEGEND

- - - 656 - - - EXISTING 1' CONTOUR
- - - 655 - - - EXISTING 5' CONTOUR
- - - 656 - - - PROPOSED 1' CONTOUR (SEE NOTE 6)
- - - 655 - - - PROPOSED 5' CONTOUR (SEE NOTE 6)
- - - - - PROPOSED STORM PIPE
- (TP) - - - CONSTRUCTION POINT
- --- CONSTRUCTION LIMITS
- - - - - PROPERTY LINE
- △ CPXXX CONTROL POINT

- SHEET NOTES**
- ANY EXCESS OR UNACCEPTABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF IN AN ENVIRONMENTALLY ACCEPTABLE MANNER, AS APPROVED BY MINNESOTA POWER (MP) ON-SITE REPRESENTATIVE.
 - IMMEDIATELY NOTIFY MP AND/OR THEIR FIELD REPRESENTATIVE IF CONTAMINATED SOILS ARE ENCOUNTERED.
 - LIMITS OF CRUSHED ROCK SURFACING TO BE 17 FT MIN. FROM FENCE LINE AT DOUBLE FENCE GATES AND 9 FT MIN. AT MAN GATES.
 - COORDINATES SHOWN HEREON ARE BASED ON WISCONSIN STATE PLANE NORTH ZONE (NAD83), VERTICAL DATUM NAVD 83 (GEOID 03).
 - EXISTING UNDERGROUND UTILITY LOCATIONS IDENTIFIED ON THIS DRAWING ARE APPROXIMATE AND MAY NOT BE COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
 - ELEVATIONS AND CONTOURS ARE TO FINISHED GRADE. FINISHED GRADE IN ROCK-SURFACED AREAS IS DEFINED AS TOP OF AGGREGATE BASE PRIOR TO INSTALLING CRUSHED ROCK SURFACING.



RE-ISSUED FOR CONSTRUCTION
11/5/19



DIGGERS HOTLINE
"Call 3 Work Days Before You Dig!"
TOLL FREE 1-800-242-8511
MILW. AREA (414) 259-1181
TDD 1-800-542-2289

NO.	DATE	REVISION DESCRIPTION	BY	APPROVED	NO.	DATE	REVISION DESCRIPTION	BY	APPROVED
0	02-02-18	ISSUED FOR CONSTRUCTION	DP	DGS	3	11-5-19	RE-ISSUED FOR CONSTRUCTION	DRP	DGS
1	03-01-18	ADDENDUM 1	DP	DGS					
2	05-10-18	PROPERTY LINE AND POND MODIFICATIONS	DP	DGS					



NEMADJI 115/14 KV SUBSTATION
SITE DEVELOPMENT
SITE GRADING PLAN

SHEET	2	REV	3
ME-35635-02			

SCALE	1" = 30'-0"	DATE	05-10-18
SCALE	1" = 30'-0"	DATE	05-10-18
SCALE	1" = 30'-0"	DATE	05-10-18

November 15, 2019

Zach Golkowski
MN Power
30 W. Superior St.
Duluth, MN 55802

RE: Project: Nemadji Substation Soil Sampli
Pace Project No.: 10498837

Dear Zach Golkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on November 08, 2019. 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,



Ryan Thibault
ryan.thibault@pacelabs.com
(612)607-1700
Project Manager

Enclosures

cc: Ross Dudzik, Minnesota Power
Drew Janke, Minnesota Power



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

Pace Analytical Services Minneapolis

A2LA Certification #: 2926.01
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
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
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 #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Massachusetts DWP Certification #: via MN 027-053-137
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certification #: via MN 027-053-137
Minnesota Petrofund Certification #: 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 #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
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

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SAMPLE SUMMARY

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10498837001	Nemadji Sub	Solid	11/08/19 02:07	11/08/19 14:00

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SAMPLE ANALYTE COUNT

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10498837001	Nemadji Sub	EPA 8082A	JVM	12	PASI-M
		WI MOD DRO	EC2	2	PASI-M
		EPA 6010D	BD1	7	PASI-M
		EPA 7470A	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D	STB	18	PASI-M
		EPA 8260B	AEZ	14	PASI-M

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Nemadji Substation Soil Sampli
Pace Project No.: 10498837

Sample: **Nemadji Sub** Lab ID: **10498837001** Collected: 11/08/19 02:07 Received: 11/08/19 14:00 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB								
Analytical Method: EPA 8082A Preparation Method: EPA 3550								
PCB-1016 (Aroclor 1016)	ND	ug/kg	46.8	1	11/11/19 17:17	11/14/19 20:23	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/kg	46.8	1	11/11/19 17:17	11/14/19 20:23	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/kg	46.8	1	11/11/19 17:17	11/14/19 20:23	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/kg	46.8	1	11/11/19 17:17	11/14/19 20:23	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/kg	46.8	1	11/11/19 17:17	11/14/19 20:23	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/kg	46.8	1	11/11/19 17:17	11/14/19 20:23	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/kg	46.8	1	11/11/19 17:17	11/14/19 20:23	11096-82-5	
PCB-1262 (Aroclor 1262)	ND	ug/kg	46.8	1	11/11/19 17:17	11/14/19 20:23	37324-23-5	
PCB-1268 (Aroclor 1268)	ND	ug/kg	46.8	1	11/11/19 17:17	11/14/19 20:23	11100-14-4	
PCB, Total	ND	ug/kg	46.8	1	11/11/19 17:17	11/14/19 20:23	1336-36-3	
Surrogates								
Tetrachloro-m-xylene (S)	54	%	57-125	1	11/11/19 17:17	11/14/19 20:23	877-09-8	S0
Decachlorobiphenyl (S)	49	%	49-125	1	11/11/19 17:17	11/14/19 20:23	2051-24-3	
WIDRO GCS								
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	9220	mg/kg	2530	50	11/11/19 13:02	11/12/19 17:20		
Surrogates								
n-Triacontane (S)	0	%	50-150	50	11/11/19 13:02	11/12/19 17:20	638-68-6	P3,S4
6010D MET ICP, TCLP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Leachate Method/Date: EPA 1311; 11/12/19 14:20 Initial pH: 8.98; Final pH: 1.87								
Arsenic	ND	mg/L	0.50	1	11/14/19 05:33	11/14/19 15:32	7440-38-2	
Barium	1.2	mg/L	1.0	1	11/14/19 05:33	11/14/19 15:32	7440-39-3	
Cadmium	ND	mg/L	0.050	1	11/14/19 05:33	11/14/19 15:32	7440-43-9	
Chromium	ND	mg/L	0.50	1	11/14/19 05:33	11/14/19 15:32	7440-47-3	
Lead	ND	mg/L	0.50	1	11/14/19 05:33	11/14/19 15:32	7439-92-1	
Selenium	ND	mg/L	0.10	1	11/14/19 05:33	11/14/19 15:32	7782-49-2	
Silver	ND	mg/L	0.10	1	11/14/19 05:33	11/14/19 15:32	7440-22-4	
7470A Mercury, TCLP								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Leachate Method/Date: EPA 1311; 11/12/19 14:20 Initial pH: 8.98; Final pH: 1.87								
Mercury	ND	ug/L	0.60	1	11/14/19 09:28	11/15/19 11:04	7439-97-6	
Dry Weight / %M by ASTM D2974								
Analytical Method: ASTM D2974								
Percent Moisture	29.6	%	0.10	1		11/14/19 13:40		N2
8270D MSSV TCLP								
Analytical Method: EPA 8270D Preparation Method: EPA 3510								
Leachate Method/Date: EPA 1311; 11/12/19 14:20 Initial pH: 8.98; Final pH: 1.87								
1,4-Dichlorobenzene	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32	106-46-7	
2,4-Dinitrotoluene	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32	121-14-2	
Hexachloro-1,3-butadiene	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32	87-68-3	
Hexachlorobenzene	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32	118-74-1	
Hexachloroethane	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

Sample: Nemadji Sub **Lab ID: 10498837001** Collected: 11/08/19 02:07 Received: 11/08/19 14:00 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270D MSSV TCLP		Analytical Method: EPA 8270D Preparation Method: EPA 3510						
		Leachate Method/Date: EPA 1311; 11/12/19 14:20 Initial pH: 8.98; Final pH: 1.87						
Nitrobenzene	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32	98-95-3	
Pentachlorophenol	ND	ug/L	200	1	11/13/19 13:28	11/13/19 23:32	87-86-5	
Pyridine	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32	110-86-1	
2,4,5-Trichlorophenol	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	78	%	57-125	1	11/13/19 13:28	11/13/19 23:32	4165-60-0	
2-Fluorobiphenyl (S)	71	%	48-125	1	11/13/19 13:28	11/13/19 23:32	321-60-8	
p-Terphenyl-d14 (S)	102	%	53-125	1	11/13/19 13:28	11/13/19 23:32	1718-51-0	
Phenol-d6 (S)	34	%	10-128	1	11/13/19 13:28	11/13/19 23:32	13127-88-3	
2-Fluorophenol (S)	54	%	30-125	1	11/13/19 13:28	11/13/19 23:32	367-12-4	
2,4,6-Tribromophenol (S)	80	%	45-125	1	11/13/19 13:28	11/13/19 23:32	118-79-6	
8260B MSV TCLP		Analytical Method: EPA 8260B Leachate Method/Date: EPA 1311; 11/11/19 16:14						
Benzene	ND	ug/L	25.0	1		11/14/19 06:11	71-43-2	
2-Butanone (MEK)	ND	ug/L	125	1		11/14/19 06:11	78-93-3	
Carbon tetrachloride	ND	ug/L	25.0	1		11/14/19 06:11	56-23-5	
Chlorobenzene	ND	ug/L	25.0	1		11/14/19 06:11	108-90-7	
Chloroform	ND	ug/L	25.0	1		11/14/19 06:11	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	25.0	1		11/14/19 06:11	106-46-7	
1,2-Dichloroethane	ND	ug/L	25.0	1		11/14/19 06:11	107-06-2	
1,1-Dichloroethene	ND	ug/L	25.0	1		11/14/19 06:11	75-35-4	
Tetrachloroethene	ND	ug/L	25.0	1		11/14/19 06:11	127-18-4	
Trichloroethene	ND	ug/L	10.0	1		11/14/19 06:11	79-01-6	
Vinyl chloride	ND	ug/L	5.0	1		11/14/19 06:11	75-01-4	
Surrogates								
1,2-Dichloroethane-d4 (S)	102	%	75-125	1		11/14/19 06:11	17060-07-0	
Toluene-d8 (S)	81	%	75-125	1		11/14/19 06:11	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125	1		11/14/19 06:11	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

QC Batch: 644684 Analysis Method: EPA 7470A
 QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury TCLP
 Associated Lab Samples: 10498837001

METHOD BLANK: 3470775 Matrix: Water
 Associated Lab Samples: 10498837001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.60	11/15/19 10:52	

METHOD BLANK: 3468794 Matrix: Water
 Associated Lab Samples: 10498837001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.60	11/15/19 11:35	

LABORATORY CONTROL SAMPLE: 3470776

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	15	15.5	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3470777 3470778

Parameter	Units	10498724001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	15	15	15.5	15.4	103	103	80-120	1	20	

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli
Pace Project No.: 10498837

QC Batch: 644686 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010 Analysis Description: 6010D TCLP
Associated Lab Samples: 10498837001

METHOD BLANK: 3470783 Matrix: Water
Associated Lab Samples: 10498837001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.50	11/14/19 15:12	
Barium	mg/L	ND	1.0	11/14/19 15:12	
Cadmium	mg/L	ND	0.050	11/14/19 15:12	
Chromium	mg/L	ND	0.50	11/14/19 15:12	
Lead	mg/L	ND	0.50	11/14/19 15:12	
Selenium	mg/L	ND	0.10	11/14/19 15:12	
Silver	mg/L	ND	0.10	11/14/19 15:12	

METHOD BLANK: 3468794 Matrix: Water
Associated Lab Samples: 10498837001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.50	11/14/19 15:14	
Barium	mg/L	ND	1.0	11/14/19 15:14	
Cadmium	mg/L	ND	0.050	11/14/19 15:14	
Chromium	mg/L	ND	0.50	11/14/19 15:14	
Lead	mg/L	ND	0.50	11/14/19 15:14	
Selenium	mg/L	ND	0.10	11/14/19 15:14	
Silver	mg/L	ND	0.10	11/14/19 15:14	

LABORATORY CONTROL SAMPLE: 3470784

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	5	5.3	106	80-120	
Barium	mg/L	5	5.2	104	80-120	
Cadmium	mg/L	5	5.3	105	80-120	
Chromium	mg/L	5	5.2	104	80-120	
Lead	mg/L	5	5.2	104	80-120	
Selenium	mg/L	5	5.5	109	80-120	
Silver	mg/L	2.5	2.6	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3470785 3470786

Parameter	Units	10498724001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
			Spike Conc.	Spike Conc.							
Arsenic	mg/L	ND	5	5	5.3	5.4	106	108	75-125	2	20

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3470785 3470786											
Parameter	Units	10498724001		MS		MSD		MS		MSD	
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD
Barium	mg/L	ND	5	5	5.3	5.4	100	103	75-125	3	20
Cadmium	mg/L	ND	5	5	5.1	5.2	101	104	75-125	3	20
Chromium	mg/L	ND	5	5	5.1	5.2	101	104	75-125	3	20
Lead	mg/L	ND	5	5	5.0	5.1	100	102	75-125	2	20
Selenium	mg/L	ND	5	5	5.5	5.6	109	112	75-125	2	20
Silver	mg/L	ND	2.5	2.5	2.6	2.7	104	107	75-125	2	20

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

QC Batch: 644825

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight / %M by ASTM D2974

Associated Lab Samples: 10498837001

SAMPLE DUPLICATE: 3471559

Parameter	Units	10498814003 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	5.6	5.9	6	30	N2

SAMPLE DUPLICATE: 3471560

Parameter	Units	10497839003 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	18.3	19.4	6	30	N2

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli
Pace Project No.: 10498837

QC Batch: 644619 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV TCLP
Associated Lab Samples: 10498837001

METHOD BLANK: 3470492 Matrix: Water
Associated Lab Samples: 10498837001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	25.0	11/13/19 11:11	
1,2-Dichloroethane	ug/L	ND	25.0	11/13/19 11:11	
1,4-Dichlorobenzene	ug/L	ND	25.0	11/13/19 11:11	
2-Butanone (MEK)	ug/L	ND	125	11/13/19 11:11	
Benzene	ug/L	ND	25.0	11/13/19 11:11	
Carbon tetrachloride	ug/L	ND	25.0	11/13/19 11:11	
Chlorobenzene	ug/L	ND	25.0	11/13/19 11:11	
Chloroform	ug/L	ND	25.0	11/13/19 11:11	
Tetrachloroethene	ug/L	ND	25.0	11/13/19 11:11	
Trichloroethene	ug/L	ND	10.0	11/13/19 11:11	
Vinyl chloride	ug/L	ND	5.0	11/13/19 11:11	
1,2-Dichloroethane-d4 (S)	%	101	75-125	11/13/19 11:11	
4-Bromofluorobenzene (S)	%	101	75-125	11/13/19 11:11	
Toluene-d8 (S)	%	97	75-125	11/13/19 11:11	

METHOD BLANK: 3468472 Matrix: Solid
Associated Lab Samples: 10498837001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	25.0	11/13/19 11:11	
1,2-Dichloroethane	ug/L	ND	25.0	11/13/19 11:11	
1,4-Dichlorobenzene	ug/L	ND	25.0	11/13/19 11:11	
2-Butanone (MEK)	ug/L	ND	125	11/13/19 11:11	
Benzene	ug/L	ND	25.0	11/13/19 11:11	
Carbon tetrachloride	ug/L	ND	25.0	11/13/19 11:11	
Chlorobenzene	ug/L	ND	25.0	11/13/19 11:11	
Chloroform	ug/L	ND	25.0	11/13/19 11:11	
Tetrachloroethene	ug/L	ND	25.0	11/13/19 11:11	
Trichloroethene	ug/L	ND	10.0	11/13/19 11:11	
Vinyl chloride	ug/L	ND	5.0	11/13/19 11:11	
1,2-Dichloroethane-d4 (S)	%	101	75-125	11/13/19 11:11	
4-Bromofluorobenzene (S)	%	101	75-125	11/13/19 11:11	
Toluene-d8 (S)	%	97	75-125	11/13/19 11:11	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli
Pace Project No.: 10498837

METHOD BLANK: 3469532 Matrix: Solid
Associated Lab Samples: 10498837001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	25.0	11/13/19 11:28	
1,2-Dichloroethane	ug/L	ND	25.0	11/13/19 11:28	
1,4-Dichlorobenzene	ug/L	ND	25.0	11/13/19 11:28	
2-Butanone (MEK)	ug/L	ND	125	11/13/19 11:28	
Benzene	ug/L	ND	25.0	11/13/19 11:28	
Carbon tetrachloride	ug/L	ND	25.0	11/13/19 11:28	
Chlorobenzene	ug/L	ND	25.0	11/13/19 11:28	
Chloroform	ug/L	ND	25.0	11/13/19 11:28	
Tetrachloroethene	ug/L	ND	25.0	11/13/19 11:28	
Trichloroethene	ug/L	ND	10.0	11/13/19 11:28	
Vinyl chloride	ug/L	ND	5.0	11/13/19 11:28	
1,2-Dichloroethane-d4 (S)	%	102	75-125	11/13/19 11:28	
4-Bromofluorobenzene (S)	%	100	75-125	11/13/19 11:28	
Toluene-d8 (S)	%	95	75-125	11/13/19 11:28	

LABORATORY CONTROL SAMPLE: 3470493

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	500	423	85	73-125	
1,2-Dichloroethane	ug/L	500	444	89	75-125	
1,4-Dichlorobenzene	ug/L	500	470	94	75-125	
2-Butanone (MEK)	ug/L	2500	2090	84	67-127	
Benzene	ug/L	500	469	94	75-125	
Carbon tetrachloride	ug/L	500	513	103	73-125	
Chlorobenzene	ug/L	500	517	103	75-125	
Chloroform	ug/L	500	477	95	75-125	
Tetrachloroethene	ug/L	500	559	112	75-125	
Trichloroethene	ug/L	500	504	101	75-125	
Vinyl chloride	ug/L	500	409	82	68-127	
1,2-Dichloroethane-d4 (S)	%			95	75-125	
4-Bromofluorobenzene (S)	%			106	75-125	
Toluene-d8 (S)	%			103	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3470823 3470824

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10499029001 Result	Spike Conc.	Spike Conc.	Result								
1,1-Dichloroethene	ug/L	ND	500	500	626	561	125	112	60-137	11	30		
1,2-Dichloroethane	ug/L	ND	500	500	529	492	106	98	69-125	7	30		
1,4-Dichlorobenzene	ug/L	ND	500	500	537	501	107	100	75-125	7	30		
2-Butanone (MEK)	ug/L	ND	2500	2500	2270	3000	91	120	59-133	28	30		
Benzene	ug/L	2610	500	500	3240	4060	126	290	70-125	23	30	M1	

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

Parameter	Units	10499029001		3470823		3470824		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Carbon tetrachloride	ug/L	ND	500	500	625	685	125	137	67-130	9	30	M1		
Chlorobenzene	ug/L	ND	500	500	559	527	112	105	75-125	6	30			
Chloroform	ug/L	ND	500	500	552	626	110	125	71-125	13	30			
Tetrachloroethene	ug/L	ND	500	500	590	563	118	113	73-126	5	30			
Trichloroethene	ug/L	ND	500	500	555	515	111	103	72-133	8	30			
Vinyl chloride	ug/L	ND	500	500	576	533	115	107	70-134	8	30			
1,2-Dichloroethane-d4 (S)	%						104	103	75-125					
4-Bromofluorobenzene (S)	%						96	103	75-125					
Toluene-d8 (S)	%						97	101	75-125					

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli
Pace Project No.: 10498837

QC Batch: 644184 Analysis Method: EPA 8082A
QC Batch Method: EPA 3550 Analysis Description: 8082A GCS PCB
Associated Lab Samples: 10498837001

METHOD BLANK: 3468508 Matrix: Solid
Associated Lab Samples: 10498837001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	ND	33.0	11/14/19 19:35	
PCB-1221 (Aroclor 1221)	ug/kg	ND	33.0	11/14/19 19:35	
PCB-1232 (Aroclor 1232)	ug/kg	ND	33.0	11/14/19 19:35	
PCB-1242 (Aroclor 1242)	ug/kg	ND	33.0	11/14/19 19:35	
PCB-1248 (Aroclor 1248)	ug/kg	ND	33.0	11/14/19 19:35	
PCB-1254 (Aroclor 1254)	ug/kg	ND	33.0	11/14/19 19:35	
PCB-1260 (Aroclor 1260)	ug/kg	ND	33.0	11/14/19 19:35	
PCB-1262 (Aroclor 1262)	ug/kg	ND	33.0	11/14/19 19:35	
PCB-1268 (Aroclor 1268)	ug/kg	ND	33.0	11/14/19 19:35	
Decachlorobiphenyl (S)	%	82	49-125	11/14/19 19:35	
Tetrachloro-m-xylene (S)	%	87	57-125	11/14/19 19:35	

LABORATORY CONTROL SAMPLE: 3468509

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	667	582	87	69-125	
PCB-1260 (Aroclor 1260)	ug/kg	667	559	84	63-125	
Decachlorobiphenyl (S)	%			85	49-125	
Tetrachloro-m-xylene (S)	%			91	57-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3468544 3468545

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		10498837001 Result	Spike Conc.	Spike Conc.	Result							Result
PCB-1016 (Aroclor 1016)	ug/kg	ND	944	946	654	640	69	68	56-125	2	30	
PCB-1260 (Aroclor 1260)	ug/kg	ND	944	946	568	571	60	60	45-125	0	30	
Decachlorobiphenyl (S)	%						60	62	49-125			
Tetrachloro-m-xylene (S)	%						68	68	57-125			

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

QC Batch: 644645 Analysis Method: EPA 8270D
QC Batch Method: EPA 3510 Analysis Description: 8270D TCLP MSSV
Associated Lab Samples: 10498837001

METHOD BLANK: 3470595 Matrix: Water
Associated Lab Samples: 10498837001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dichlorobenzene	ug/L	ND	100	11/13/19 19:06	
2,4,5-Trichlorophenol	ug/L	ND	100	11/13/19 19:06	
2,4,6-Trichlorophenol	ug/L	ND	100	11/13/19 19:06	
2,4-Dinitrotoluene	ug/L	ND	100	11/13/19 19:06	
2-Methylphenol(o-Cresol)	ug/L	ND	100	11/13/19 19:06	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	100	11/13/19 19:06	
Hexachloro-1,3-butadiene	ug/L	ND	100	11/13/19 19:06	
Hexachlorobenzene	ug/L	ND	100	11/13/19 19:06	
Hexachloroethane	ug/L	ND	100	11/13/19 19:06	
Nitrobenzene	ug/L	ND	100	11/13/19 19:06	
Pentachlorophenol	ug/L	ND	200	11/13/19 19:06	
Pyridine	ug/L	ND	100	11/13/19 19:06	
2,4,6-Tribromophenol (S)	%	82	45-125	11/13/19 19:06	
2-Fluorobiphenyl (S)	%	72	48-125	11/13/19 19:06	
2-Fluorophenol (S)	%	54	30-125	11/13/19 19:06	
Nitrobenzene-d5 (S)	%	77	57-125	11/13/19 19:06	
p-Terphenyl-d14 (S)	%	108	53-125	11/13/19 19:06	
Phenol-d6 (S)	%	33	10-128	11/13/19 19:06	

LABORATORY CONTROL SAMPLE: 3470596

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	500	272	54	34-125	
2,4,5-Trichlorophenol	ug/L	500	420	84	70-125	
2,4,6-Trichlorophenol	ug/L	500	408	82	70-125	
2,4-Dinitrotoluene	ug/L	500	435	87	55-125	
2-Methylphenol(o-Cresol)	ug/L	500	365	73	43-125	
3&4-Methylphenol(m&p Cresol)	ug/L	500	335	67	41-125	
Hexachloro-1,3-butadiene	ug/L	500	206	41	40-125	
Hexachlorobenzene	ug/L	500	399	80	72-125	
Hexachloroethane	ug/L	500	251	50	30-125	
Nitrobenzene	ug/L	500	370	74	62-125	
Pentachlorophenol	ug/L	500	322	64	36-125	
Pyridine	ug/L	500	183	37	30-125	
2,4,6-Tribromophenol (S)	%			78	45-125	
2-Fluorobiphenyl (S)	%			77	48-125	
2-Fluorophenol (S)	%			53	30-125	
Nitrobenzene-d5 (S)	%			77	57-125	
p-Terphenyl-d14 (S)	%			92	53-125	
Phenol-d6 (S)	%			33	10-128	

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

Parameter	Units	10499029001		3470597		3470598		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
1,4-Dichlorobenzene	ug/L	ND	500	500	287	236	57	47	70-130	20	30	M1		
2,4,5-Trichlorophenol	ug/L	ND	500	500	390	370	78	74	70-130	5	30			
2,4,6-Trichlorophenol	ug/L	ND	500	500	397	351	79	70	70-130	12	30			
2,4-Dinitrotoluene	ug/L	ND	500	500	415	372	83	74	70-130	11	30			
2-Methylphenol(o-Cresol)	ug/L	ND	500	500	369	331	70	62	70-130	11	30	M1		
3&4-Methylphenol(m&p Cresol)	ug/L	ND	500	500	360	319	67	59	70-130	12	30	M1		
Hexachloro-1,3-butadiene	ug/L	ND	500	500	243	212	49	42	70-130	13	30	M1		
Hexachlorobenzene	ug/L	ND	500	500	378	334	76	67	70-130	12	30	M1		
Hexachloroethane	ug/L	ND	500	500	278	242	56	48	70-130	14	30	M1		
Nitrobenzene	ug/L	ND	500	500	386	329	77	66	70-130	16	30	M1		
Pentachlorophenol	ug/L	ND	500	500	309	279	62	56	70-130	10	30	M1		
Pyridine	ug/L	ND	500	500	156	134	31	27	70-130	15	30	M1		
2,4,6-Tribromophenol (S)	%						73	69	45-125					
2-Fluorobiphenyl (S)	%						77	71	48-125					
2-Fluorophenol (S)	%						54	48	30-125					
Nitrobenzene-d5 (S)	%						80	68	57-125					
p-Terphenyl-d14 (S)	%						93	84	53-125					
Phenol-d6 (S)	%						34	30	10-128					

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

QC Batch: 644171	Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO	Analysis Description: WIDRO GCS
Associated Lab Samples: 10498837001	

METHOD BLANK: 3468463 Matrix: Solid

Associated Lab Samples: 10498837001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
WDRO C10-C28	mg/kg	ND	10.0	11/12/19 17:07	
n-Triacontane (S)	%.	89	50-150	11/12/19 17:07	

LABORATORY CONTROL SAMPLE & LCSD: 3468464

3468465

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/kg	80	61.7	60.7	77	76	70-120	2	20	
n-Triacontane (S)	%.				90	88	50-150			

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

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-M Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

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

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.

P3 Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.

S0 Surrogate recovery outside laboratory control limits.

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10498837001	Nemadji Sub	EPA 3550	644184	EPA 8082A	645040
10498837001	Nemadji Sub	WI MOD DRO	644171	WI MOD DRO	644499
10498837001	Nemadji Sub	EPA 3010	644686	EPA 6010D	644988
10498837001	Nemadji Sub	EPA 7470A	644684	EPA 7470A	645053
10498837001	Nemadji Sub	ASTM D2974	644825		
10498837001	Nemadji Sub	EPA 3510	644645	EPA 8270D	644783
10498837001	Nemadji Sub	EPA 8260B	644619		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt **Client Name:** Minnesota Power **Project #:** **WO#: 10498837**

Courier: Fed Ex UPS USPS Client
 Pace Speedee Commercial See Exceptions

Tracking Number: _____

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(0489) **Type of Ice:** Wet Blue None Dry Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks) MK2 11-8-19

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 15.6 3.6 °C **Average Corrected Temp (no temp blank only):** See Exceptions

Correction Factor: -0.1 **Cooler Temp Corrected w/temp blank:** MK2 15.5 3.5 °C 1 Container

USDA Regulated Soil: (N/A, water sample/Other: _____) 11-8-19 **Date/Initials of Person Examining Contents:** MK2 11-8-19

Did samples originate in a quarantine zone within the United States: AL, AR, 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 (F-MN-Q-338) and include with SCUR/COC paperwork.

		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.
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 Chrome <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 Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. If no, write ID/ Date/Time on Container Below: <input type="checkbox"/> See Exception
Matrix: <input type="checkbox"/> Water <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Oil <input type="checkbox"/> Other _____		
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 #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , <2pH, NaOH >9 Sulfide, NaOH >12 Cyanide)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> NaOH <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Positive for Res. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> See Exception
		Chlorine? <input type="checkbox"/> No pH Paper Lot# <input type="checkbox"/>
		Res. Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Headspace in VOA Vials (greater than 6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> See Exception
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
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 **Field Data Required?** Yes No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Anna Asp **Date:** 11/11/19

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).



Notification of Waste Acceptance

11/18/2019

CUSTOMER INFORMATION

Superior Water, Light & Power Co
Nemadji Substation
Hill Ave & Stinson Ave
Superior, WI 54880
Contact: Greg Prom
Phone: (218) 355-3191

INVOICE INFORMATION

Bill #: 2636
Superior Water, Light & Power Co
2915 Hill Ave
Superior, WI 54880
Contact: Accounts Payable
Phone: (218) 355-3191

Waste Stream #: CL19-0049
Waste Name: Oil Impacted Soil/Debris

Thank you for selecting SHAMROCK LANDFILL for your waste management requirements. Your waste stream has been reviewed and is acceptable for management at our facility based on the information provided in the profile sheet number listed above and conditions below. Our facility has the necessary permits to allow the storage, treatment, or disposal of this waste. The above referenced acceptance number should be listed on all shipping documents and correspondence. Please retain these documents for your records and future reference.

To schedule a shipment, or should you have any questions, please contact the facility at (218) 878-0112.

ACCEPTANCE INFORMATION

The waste stream identified by the reference above is acceptable for disposal.

This waste is acceptable for delivery beginning on 11/18/2019 thru 11/8/2021 at which time the material will need to be reanalyzed and recertified.

Spill Reporting Reminder: MPCA spill reporting procedures must be followed.

Free Liquid Statement: Free liquids will not be placed in cells at Shamrock Landfill. Free liquids must be solidified either prior to shipment to Shamrock Landfill or at Shamrock Landfill.

Shipping Requirements A NON-HAZARDOUS certificate is required to be on file, certifying the waste is non-hazardous as specified per 40 CFR 261.4. The shipment may be accompanied with an Shamrock Landfill manifest.

AUTHORIZATION

Approval: Heath Genzly Date: 11-18-19

We want to assist you with the proper completion of the Shipping Manifest for this waste stream. Based on our analytical data from WS # CL19-0049, we suggest your waste stream should be shipped using the following information...

Non Hazardous Industrial Waste Shamrock Landfill

Shipping Manifest		1. Generator's US EPA ID No. (if any)		2. Page 1 of _____ page(s)	
3. Generator's Name and Facility Address: Superior Water, Light & Power Co Hill Ave & Stinson Ave Superior, WI 54880			Mailing Address: Superior Water, Light & Power Co Nemadji Substat 2915 Hill Ave Superior, WI 54880		
4. Generator's Phone (218) 355-3191			Fax		
5. Transporter 1 Company Name					
Phone:					
6. Transporter 2 Company Name					
Phone:					
7. Designated Facility Name and Site Address 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 (Oil Impacted Soil/Debris)					
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 CL19-0049 Oil Impacted Soil/Debris					
b. CL					
c. CL					
d. CL					
15. Special Handling Instructions and Additional Information				Office Use Only:	
Emergency Contact: GENERATORS MUST SUPPLY EMERGENCY CONTACT NUMBER!!				Load # _____	
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		Signature		Month	Day
PLEASE BE SURE GENERATOR HAS SIGNED AND DATED IN THIS SECTION OF THE MANIFEST!!					
17. Transporter 1 Acknowledged Receipt of Materials					
Printed/Typed Name		Signature		Month	Day
18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature		Month	Day
19. Discrepancy Indication Space					
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		Signature		Month	Day

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Pink - Transporter

Canary - Facility Copy

Goldenrod - Generator Copy



November 18, 2019

Accounts Payable
Superior Water, Light & Power Co
2915 Hill Ave
Superior, WI 54880

RE: CL19-0049 Oil Impacted Soil/Debris

Dear Sir/Madam:

This agreement will confirm the price and length of service for disposal and /or transportation of your non-hazardous industrial material at our facility. This agreement is for the term of the Waste Approval granted by Shamrock Landfill and is for all services ordered and performance initiated within such period and does include the disposal surcharge fees which you are obligated to pay as of the date of this agreement. Shamrock Landfill may incur additional costs including but not limited to increases in state and local taxes. Shamrock Landfill may pass these costs on to the customer only after notification to the Customer. This agreement grants Shamrock Landfill the exclusive right to dispose of the referenced waste for the term of this agreement. This agreement shall automatically renew thereafter for an additional term of 24 months "Renewal Term" unless either party gives the other party written notification of termination at least 90 days prior to the termination of the then-existing term. Shamrock Landfill will notify the customer prior to the expiration of the agreement of any rate changes prior to the start of the Renewal Term.

Payment and terms are net thirty (30) days. Interest will be charged at a rate of 1 1/2% per month (18% annually) on any unpaid balance 30 days after the date of the invoice. In the event Customer terminates this Agreement prior to its expiration other than as a result of a breach by Shamrock Landfill or Shamrock Landfill terminates this agreement for Customer's breach (including nonpayment) Customer agrees to pay to Shamrock Landfill as liquidated damages a sum calculated as follows: (1) if the remaining term under this agreement is six or more months Customer shall pay its average monthly charges multiplied by six; or (2) if the remaining term under this agreement is less than six months Customer shall pay its average monthly charge multiplied by the number of months remaining in the term. Customer expressly acknowledges that in the event of an unauthorized termination of this agreement the anticipated loss to Shamrock Landfill in such event is estimated to be the amount set forth in the foregoing liquidated damages provision and such estimated value is reasonable and is not imposed as a penalty.

These prices are based on an approved waste stream composition. In the event that a non-conforming waste is received, you will be notified of additional charges, when applicable.

To accept this agreement, please sign one copy and return it to Shamrock Landfill, PO Box 2232, Cloquet, MN 55720 or email to janetb@wasteconnections.com.

For all Terms and Conditions please refer to Contract Purchase Agreement # 7311008059

Shamrock Landfill

Customer ACCEPTED BY: (name, position)

Env. Specialist

DATE: 11/18/2019

WASTE APPROVAL Period: 11/18/2019 to 11/8/2021

BILL TO ACCOUNT

2636 Superior Water Light & Power C

SUPSR

Superior Water - Nemadji Subst

Hill Ave & Stinson Ave

Superior, WI 54880

TICKET	Manifest	DATE	Waste Stream	Waste Name	TONS
48693	65386	11/19/19	19-0049	Oil Impacted Soil/Debris	12.82
48694	65385	11/19/19	19-0049	Oil Impacted Soil/Debris	12.74
48697	65387	11/19/19	19-0049	Oil Impacted Soil/Debris	17.27
48698	65388	11/19/19	19-0049	Oil Impacted Soil/Debris	17.38
48700	65389	11/19/19	19-0049	Oil Impacted Soil/Debris	20.18
48705	69648	11/19/19	19-0049	Oil Impacted Soil/Debris	20.15
48706	69649	11/19/19	19-0049	Oil Impacted Soil/Debris	18.25
48707	65390	11/19/19	19-0049	Oil Impacted Soil/Debris	10.45
48710	69650	11/19/19	19-0049	Oil Impacted Soil/Debris	16.35
48711	69651	11/19/19	19-0049	Oil Impacted Soil/Debris	18.10
48712	69652	11/19/19	19-0049	Oil Impacted Soil/Debris	14.82
48714	69653	11/19/19	19-0049	Oil Impacted Soil/Debris	14.74
48716	69655	11/19/19	19-0049	Oil Impacted Soil/Debris	15.59
48718	69656	11/19/19	19-0049	Oil Impacted Soil/Debris	16.91
48719	69654	11/19/19	19-0049	Oil Impacted Soil/Debris	17.57
48720	69657	11/19/19	19-0049	Oil Impacted Soil/Debris	18.67
48722	69658	11/19/19	19-0049	Oil Impacted Soil/Debris	17.27
48724	69659	11/19/19	19-0049	Oil Impacted Soil/Debris	16.60
48726	69660	11/19/19	19-0049	Oil Impacted Soil/Debris	11.16
48728	69662	11/19/19	19-0049	Oil Impacted Soil/Debris	19.63
48729	69663	11/19/19	19-0049	Oil Impacted Soil/Debris	16.32
48730	69664	11/19/19	19-0049	Oil Impacted Soil/Debris	16.53
48731	69661	11/19/19	19-0049	Oil Impacted Soil/Debris	8.40
48732	69665	11/19/19	19-0049	Oil Impacted Soil/Debris	15.38
48733	69666	11/19/19	19-0049	Oil Impacted Soil/Debris	19.24
48735	69667	11/19/19	19-0049	Oil Impacted Soil/Debris	18.55
48736	69668	11/19/19	19-0049	Oil Impacted Soil/Debris	18.75
48738	69669	11/19/19	19-0049	Oil Impacted Soil/Debris	18.22
48739	69670	11/19/19	19-0049	Oil Impacted Soil/Debris	17.04
48740	69671	11/19/19	19-0049	Oil Impacted Soil/Debris	20.12
48743	69672	11/19/19	19-0049	Oil Impacted Soil/Debris	19.54

BILL TO ACCOUNT

48744	69673	11/19/19 19-0049	Oil Impacted Soil/Debris	16.38
48745	69674	11/19/19 19-0049	Oil Impacted Soil/Debris	13.17
48747	69675	11/19/19 19-0049	Oil Impacted Soil/Debris	19.48
48748	69676	11/19/19 19-0049	Oil Impacted Soil/Debris	15.75
48750	69678	11/19/19 19-0049	Oil Impacted Soil/Debris	16.40
48753	69677	11/19/19 19-0049	Oil Impacted Soil/Debris	16.75
48754	69680	11/19/19 19-0049	Oil Impacted Soil/Debris	17.84
48755	69681	11/19/19 19-0049	Oil Impacted Soil/Debris	14.86
48756	69679	11/19/19 19-0049	Oil Impacted Soil/Debris	13.79
48757	69682	11/19/19 19-0049	Oil Impacted Soil/Debris	18.46
48761	69683	11/19/19 19-0049	Oil Impacted Soil/Debris	20.03
48762	69684	11/19/19 19-0049	Oil Impacted Soil/Debris	16.52
48763	69685	11/19/19 19-0049	Oil Impacted Soil/Debris	18.38
48764	69686	11/19/19 19-0049	Oil Impacted Soil/Debris	10.50
48765	69687	11/19/19 19-0049	Oil Impacted Soil/Debris	17.66
48767	69688	11/19/19 19-0049	Oil Impacted Soil/Debris	24.48
48768	69689	11/19/19 19-0049	Oil Impacted Soil/Debris	19.68
48770	69690	11/19/19 19-0049	Oil Impacted Soil/Debris	18.63
48774	69691	11/19/19 19-0049	Oil Impacted Soil/Debris	11.13
48780	69693	11/20/19 19-0049	Oil Impacted Soil/Debris	9.79
48781	69692	11/20/19 19-0049	Oil Impacted Soil/Debris	8.82
48789	69694	11/20/19 19-0049	Oil Impacted Soil/Debris	12.46
48792	69695	11/20/19 19-0049	Oil Impacted Soil/Debris	12.99
48798	69696	11/20/19 19-0049	Oil Impacted Soil/Debris	8.93
48807	69697	11/20/19 19-0049	Oil Impacted Soil/Debris	11.36
48816	69698	11/20/19 19-0049	Oil Impacted Soil/Debris	13.07
48817	69699	11/20/19 19-0049	Oil Impacted Soil/Debris	13.06
48821	66951	11/21/19 19-0049	Oil Impacted Soil/Debris	9.06
48823	66950	11/21/19 19-0049	Oil Impacted Soil/Debris	12.81
48833	66952	11/21/19 19-0049	Oil Impacted Soil/Debris	12.57
48846	66953	11/21/19 19-0049	Oil Impacted Soil/Debris	14.11
48858	66954	11/21/19 19-0049	Oil Impacted Soil/Debris	14.16

of Loads: 63


SUBTOTAL FOR Waste Stream

987.82

GRAND TOTALS

987.82



Shamrock Landfill 

Non Hazardous Industrial Waste

65385

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)		
3. Generator's Name and Facility Address <i>SWLP 11.11 Ave S. 27 25th Ave 54701 MN 55803</i>		Mailing Address <i>ATTENTION: TOWER 3030 SUPERDOME ST. DULUTH, MN 55819 54710</i>					
4. Generator's Phone: <i>218-878-1112</i>		Fax: _____					
5. Transporter 1 Company Name <i>SHAMROCK TRUCKING</i>		Phone: <i>218-878-0112</i>					
6. Transporter 2 Company Name		Phone: _____					
7. Designated Facility Name and Site Address		<i>SKB/Shamrock Environmental, LLC 761 MN Highway 45 Cloquet, MN 55720</i>				Phone: <i>218-878-0112</i>	
8. U.S. DOT Description (including Proper Shipping name)		9. Containers		10. Total Quantity	11. Unit Wt/Vol	12. Waste Profile Sheet#	
a. <i>Non Hazardous Industrial Waste (OIL CONTAMINATED DEBRIS)</i>		No.	Type				
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							
b. CL <i>18-0049</i>							
c. CL <i>CL15-0000 OIL CONTAMINATED DEBRIS -</i>							
d. CL <i>DISTRICT OPS</i>							
15. Special Handling Instructions and Additional Information Emergency Contact:		SKB Use Only Load # _____					
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 <i>L. K. OXON</i>		Signature <i>[Signature]</i>			Month	Day	Year
17. Transporter 1 Acknowledged of Receipt of Materials		Printed/Typed Name <i>DAVID LECHE</i>			Signature <i>[Signature]</i>		
18. Transporter 2 Acknowledgement of Receipt of Materials		Printed/Typed Name			Signature		
19. Discrepancy Indication Space							
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		Signature			Month	Day	Year

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

65386

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address <i>1111 Ave S St. SW-P Superior WI 54980</i>				Mailing Address <i>3072 DEERBROOK ST, CLOQUET, MN 55716</i>						
4. Generator's Phone: <i>218-305-3191</i>				Fax: <i>Superior WI 54980</i>						
5. Transporter 1 Company Name SHAMROCK TRUCKING				Phone: <i>218-878-0112</i>						
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 (OIL CONTAMINATED DEBRIS)						
				b.						
				c.						
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below)				14. Special Handling Procedures for Wastes Listed Above						
a. CL										
b. CL <i>COFIS OHS</i> OIL CONTAMINATED DEBRIS -										
c. CL DISTRICT OPS										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load # _____				
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 <i>L. J. Dixon</i>				Signature <i>[Signature]</i>		Month	Day	Year		
17. Transporter 1 Acknowledged of Receipt of Materials				Printed/Typed Name <i>Chris Robinson</i>		Signature <i>[Signature]</i>		Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials				Printed/Typed Name		Signature		Month	Day	Year
19. Discrepancy Indication Space										
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				Signature		Month	Day	Year		

GENERATOR
TRANSPORTER
FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

65387

Shipping Manifest		1. Generator's US EPA ID No. (if any)		1. Page 1 of _____ page(s)			
3. Generator's Name and Facility Address <i>SWLP 1411 Ave G St. Cloquet, MN 55720</i>			Mailing Address <i>ALL INFORMATION 3201 SUPERIOR ST. DULUTH, MN 55816</i>				
4. Generator's Phone: <i>218-878-3191</i>		Fax: <i>218-878-5480</i>					
5. Transporter 1 Company Name SHAMROCK TRUCKING			Phone: 218-878-0112				
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 (OIL CONTAMINATED DEBRIS)							
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							
b. CL							
c. CL <i>PLAS OIL CONTAMINATED DEBRIS - DISTRICT OPS</i>							
d. CL							
15. Special Handling Instructions and Additional Information Emergency Contact:					SKB Use Only Load #		
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 <i>LUKAS DIXON</i>			Signature <i>[Signature]</i>		Month Day Year <i>11 19 19</i>		
17. Transporter 1 Acknowledged of Receipt of Materials							
Printed/Typed Name <i>AI-EMISS</i>			Signature <i>[Signature]</i>		Month Day Year <i>11 19 19</i>		
18. Transporter 2 Acknowledgement of Receipt of Materials							
Printed/Typed Name			Signature		Month Day Year		
19. Discrepancy Indication Space							
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			Signature		Month Day Year		

GENERATOR

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

65388

Shipping Manifest		1. Generator's US EPA ID No. (if any)		1. Page 1 of page(s)	
3. Generator's Name and Facility Address <i>SWLP 11111 N. Highway 45 Superior, WI 54880</i>			Mailing Address <i>2415 N. Highway 45 Superior, WI 54880</i>		
4. Generator's Phone: <i>715-395-3771</i>			Fax: <i>30 W SUPERIOR ST. DULUTH, MN 55816</i>		
5. Transporter 1 Company Name			Phone:		
6. Transporter 2 Company Name			Phone: <i>218-878-0112</i>		
7. Designated Facility Name and Site Address SKB/Shamrock Environmental, LLC 761 MN Highway 45 Cloquet, MN 55720			Phone: <i>218-878-0112</i>		
8. U.S. DOT Description (including Proper Shipping name)		9. Containers	10. Total Quantity	11. Unit Wt/Vol	12. Waste Profile Sheet#
a. <i>Non Hazardous Industrial Waste (OIL CONTAMINATED DEBRIS)</i>		No. Type			
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 <i>619-0049</i>					
b. CL					
c. CL					
d. CL <i>CL13-0030 OIL CONTAMINATED DEBRIS - DISTRICT 109</i>					
15. Special Handling Instructions and Additional Information Emergency Contact:				SKB Use Only Load #	
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 <i>LORRY DIXON</i>		Signature <i>[Signature]</i>		Month <i>11</i>	Day <i>17</i>
17. Transporter 1 Acknowledged of Receipt of Materials					
Printed/Typed Name <i>Richard Lora</i>		Signature <i>[Signature]</i>		Month <i>11</i>	Day <i>18</i>
18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature		Month	Day
19. Discrepancy Indication Space					
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		Signature		Month	Day

GENERATOR

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

65389

Shipping Manifest		1. Generator's US EPA ID No. (if any)		1. Page 1 of _____ page(s)	
3. Generator's Name and Facility Address <i>SUEP Hill Ave 5 Lincoln Ave Superior WI 54980 218-355-3171</i>		Mailing Address <i>SUEP 8715 N.H. Ave Superior WI 54980</i>			
4. Generator's Phone:		Fax: <i>40 W SUPERIOR ST. ELLIOTT, MN 55816</i>			
5. Transporter 1 Company Name		Phone:			
6. Transporter 2 Company Name		Phone: <i>218-878-0112</i>			
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
		No.	Type		
a. Non Hazardous Industrial Waste (OIL CONTAMINATED DEBRIS)					
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 <i>CL19-0049</i>					
b. CL					
c. CL					
d. CL <i>CL15-0030 OIL CONTAMINATED DEBRIS - DISTRICT OPS</i>					
15. Special Handling Instructions and Additional Information Emergency Contact:		SKB Use Only Load # _____			
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 <i>LUKAS DIXON</i>		Signature <i>[Signature]</i>		Month <i>11</i>	Day <i>17</i>
17. Transporter 1 Acknowledged of Receipt of Materials		Signature <i>[Signature]</i>		Month <i>11</i>	Day <i>19</i>
Printed/Typed Name <i>WAYNE BOEIK</i>		Signature <i>[Signature]</i>		Month <i>11</i>	Day <i>19</i>
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Month	Day
Printed/Typed Name		Signature		Month	Day
19. Discrepancy Indication Space					
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		Signature		Month	Day

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

65390

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)		
3. Generator's Name and Facility Address <i>SWLP Full Ave, Superior Ave Superior, WI 54880</i>				Mailing Address <i>SWLP 2415 Hill Ave Superior, WI 54880</i>			
4. Generator's Phone: <i>920-307-3111</i>				Fax: <i>30 W SUPERIOR ST. DULUTH, MN 55816</i>			
5. Transporter 1 Company Name				Phone:			
6. Transporter 2 Company Name				Phone: <i>218-878-0112</i>			
7. Designated Facility Name and Site Address SKB/Shamrock Environmental, LLC 761 MN Highway 45 Cloquet, MN 55720				Phone: <i>218-878-0112</i>			
8. U.S. DOT Description (including Proper Shipping name)		9. Containers		10. Total Quantity	11. Unit Wt/Vol	12. Waste Profile Sheet#	
a. <i>Non Hazardous Industrial Waste (OIL CONTAMINATED DEBRIS)</i>		No. Type					
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 <i>2619-0049</i>							
b. CL							
c. CL							
d. CL <i>CL15-0030 OIL CONTAMINATED DEBRIS - INDUSTRIAL OIL</i>							
15. Special Handling Instructions and Additional Information Emergency Contact:					SKB Use Only Load #		
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 <i>LUCAS DIXON</i>				Signature <i>[Signature]</i>		Month Day Year <i>11 19 11</i>	
17. Transporter 1 Acknowledged of Receipt of Materials							
Printed/Typed Name <i>[Signature]</i>				Signature <i>[Signature]</i>		Month Day Year <i>11 19 11</i>	
18. Transporter 2 Acknowledgement of Receipt of Materials							
Printed/Typed Name				Signature		Month Day Year	
19. Discrepancy Indication Space							
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				Signature		Month Day Year	

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy

76



Shamrock Landfill



Non Hazardous Industrial Waste

66951

GENERATOR	Shipping Manifest		1. Generator's US EPA ID No. (if any)				1. Page 1 of _____ page(s)				
	3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO BERNARDI BLVD MILL AVE & PINEAUX AVE SUPERIOR, WI 54980						Mailing Address SUPERIOR WATER LIGHT & POWER CO 2015 HILL AVE SUPERIOR, WI 54980				
4. Generator's Phone: 218-888-2101						Fax:					
5. Transporter 1 Company Name						Phone:					
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					
TRANSPORTER	8. U.S. DOT Description (including Proper Shipping name)				9. Containers		10. Total Quantity		11. Unit Wt/Vol	12. Waste Profile Sheet#	
	a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)				No. Type						
	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											
b. CL 11-0002 OIL IMPACTED SOIL/DEBRIS											
c. CL											
d. CL											
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load # _____					
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 Lukas Dixon				Signature <i>[Signature]</i>				Month	Day	Year	
17. Transporter 1 Acknowledged of Receipt of Materials				Printed/Typed Name Jake Endres				Month	Day	Year	
18. Transporter 2 Acknowledgement of Receipt of Materials				Printed/Typed Name				Month	Day	Year	
19. Discrepancy Indication Space											
FACILITY	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				Signature				Month	Day	Year


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

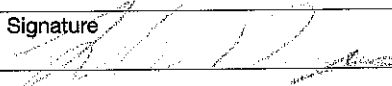

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

66950

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)		
3. Generator's Name and Facility Address				Mailing Address			
SUPERIOR WATER LIGHT & POWER CO NEWMAENI COURT 1111 AVE & STURCKON AVE SUPERIOR, WI 54980				SUPERIOR WATER LIGHT & POWER CO 6015 HILL AVE SUPERIOR, WI 54980			
4. Generator's Phone: _____				Fax: _____			
5. Transporter 1 Company Name				Phone: _____			
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 (OIL IMPACTED SOIL/DEBRIS)							
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							
b. CL 2119-0019 OIL IMPACTED SOIL/DEBRIS							
c. CL							
d. CL							
15. Special Handling Instructions and Additional Information					SKB Use Only		
Emergency Contact: _____					Load # _____		
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				Signature		Month Day Year	
LUKAS D... ..						11 21 19	
17. Transporter 1 Acknowledged of Receipt of Materials				Signature		Month Day Year	
Printed/Typed Name				Signature		Month Day Year	
TERRY W... ..						11 25 19	
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature		Month Day Year	
Printed/Typed Name				Signature		Month Day Year	
19. Discrepancy Indication Space				Signature		Month Day Year	
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this Manifest except as noted in item 19.				Signature		Month Day Year	
Printed/Typed Name				Signature		Month Day Year	

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Pink - Transporter

Canary - Facility Copy

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

66952

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)			
3. Generator's Name and Facility Address				Mailing Address				
SUPERIOR WATER LIGHT & POWER CO MEMPHIS SUPPLY HILL AVE & STINSON AVE. BOSTON, WI 53840				SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE. SUPERIOR, WI 53089				
4. Generator's Phone:				Fax:				
5. Transporter 1 Company Name				Phone:				
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. Like Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)								
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								
b. CL 119-0049 OIL IMPACTED SOIL/DEBRIS								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information						SKB Use Only		
Emergency Contact:						Load # _____		
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				Signature		Month	Day	Year
L. K. S. Dixon						11	21	19
17. Transporter 1 Acknowledged of Receipt of Materials				Signature		Month	Day	Year
Printed/Typed Name				Signature		Month	Day	Year
T. K. R. Evans						11	21	19
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature		Month	Day	Year
Printed/Typed Name				Signature		Month	Day	Year
FACILITY				Signature		Month	Day	Year
19. Discrepancy Indication Space				Signature		Month	Day	Year
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this Manifest except as noted in item 19.				Signature		Month	Day	Year
Printed/Typed Name				Signature		Month	Day	Year

GENERATOR

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

66953

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)		
3. Generator's Name and Facility Address		Mailing Address					
SUPERIOR WATER LIGHT & POWER CO HERMANN STREET, HILL AVE & STEINBOCK AVE SUPERIOR, WI 54880		SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54880					
4. Generator's Phone: 218-888-2101		Fax:					
5. Transporter 1 Company Name		Phone:					
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		
GENERATOR	8. U.S. DOT Description (including Proper Shipping name)		9. Containers		10. Total Quantity	11. Unit Wt/Vol	12. Waste Profile Sheet#
	a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)		No.	Type			
	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 OIL IMPACTED SOIL/DEBRIS							
b. CL							
c. CL							
d. CL							
15. Special Handling Instructions and Additional Information Emergency Contact:					SKB Use Only Load # _____		
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 TODD'S		Signature <i>[Signature]</i>			Month 11	Day 21	Year 19
TRANSPORTER	17. Transporter 1 Acknowledged of Receipt of Materials		Signature <i>[Signature]</i>		Month 11	Day 21	Year 19
	Printed/Typed Name TODD'S		Signature <i>[Signature]</i>		Month 11	Day 21	Year 19
	18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Month	Day	Year
Printed/Typed Name		Signature		Month	Day	Year	
FACILITY	19. Discrepancy Indication Space						
	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		Signature			Month	Day	Year


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

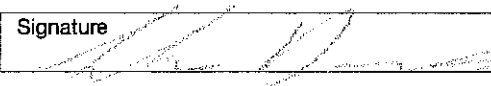
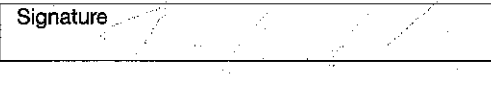
Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

66954

GENERATOR	Shipping Manifest		1. Generator's US EPA ID No. (if any)				1. Page 1 of page(s)						
	3. Generator's Name and Facility Address						Mailing Address						
	SUPERIOR WATER LIGHT & POWER CO NEMADON BURNI HILL AVE & HIGSON AVE SCORWADE, WI 54850						SUPERIOR WATER LIGHT & POWER CO HIGSON AVE SCORWADE, WI 54850						
	4. Generator's Phone:						Fax:						
	5. Transporter 1 Company Name						Phone:						
	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#	
	a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)						No. Type						
	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													
b. CL 19-0049 OIL IMPACTED SOIL/DEBRIS													
c. CL													
d. CL													
15. Special Handling Instructions and Additional Information						SKB Use Only							
Emergency Contact:						Load #							
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				Signature				Month	Day	Year			
Linda D...								11	21	19			
TRANSPORTER	17. Transporter 1 Acknowledged of Receipt of Materials						Printed/Typed Name		Signature		Month	Day	Year
	Terry...								11	21	19		
	18. Transporter 2 Acknowledgement of Receipt of Materials						Printed/Typed Name		Signature		Month	Day	Year
19. Discrepancy Indication Space						Printed/Typed Name		Signature		Month	Day	Year	
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		Signature		Month	Day	Year	
FACILITY							Printed/Typed Name		Signature		Month	Day	Year


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

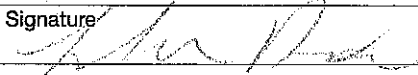
Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

63648

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)			
3. Generator's Name and Facility Address				Mailing Address				
4. Generator's Phone: SUPERIOR WATER LIGHT & POWER CO MEMPHIS BLVD. SHELBYVILLE, TN 37080				FAX: SUPERIOR WATER LIGHT & POWER CO 15 MILL AVE. SUPERIOR, WI 54980				
5. Transporter 1 Company Name				Phone:				
6. Transporter 2 Company Name				Phone:				
7. Designated Facility Name and Site Address				Phone: 218-878-0112				
SKB/Shamrock Environmental, LLC 761 MN Highway 45 Cloquet, MN 55720								
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 (OIL IMPACTED SOIL/DEBRIS)								
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								
b. CL 119-0002 OIL IMPACTED SOIL/DEBRIS								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information						SKB Use Only		
Emergency Contact:						Load # _____		
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				Signature		Month	Day	Year
LUKEAS DIXON						11	19	11
17. Transporter 1 Acknowledged of Receipt of Materials								
Printed/Typed Name				Signature		Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials								
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69649

GENERATOR	Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)				
	3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMPHIS SUBST. HILL AVE & STINSON AVE SUPERIOR, WI 53080					Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 53080				
4. Generator's Phone: 262-553-3151					Fax:					
5. Transporter 1 Company Name					Phone:					
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					
TRANSPORTER	8. U.S. DOT Description (including Proper Shipping name)					9. Containers		10. Total Quantity	11. Unit Wt/Vol	12. Waste Profile Sheet#
	a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)					No.	Type			
	b.									
	c.									
	d.									
13. Additional Descriptions for Materials Listed Above (Indicate waste stream Approval # below) a. CL12-0047 OIL IMPACTED SOIL/DEBRIS b. CL c. CL d. CL					14. Special Handling Procedures for Wastes Listed Above					
15. Special Handling Instructions and Additional Information Emergency Contact:					SKB Use Only Load #					
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 LUKAS DIXON					Signature <i>[Signature]</i>			Month 11	Day 17	Year 14
17. Transporter 1 Acknowledged of Receipt of Materials										
Printed/Typed Name DREW LESNY					Signature <i>[Signature]</i>			Month 11	Day 17	Year 14
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name					Signature			Month	Day	Year
FACILITY	19. Discrepancy Indication Space									
	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					Signature			Month	Day	Year

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill

Non Hazardous Industrial Waste

69650

↑	Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)			
	3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO BELLAIR BLVD MILL AVE & STATE ST SW SUPERIOR, WI 54080				Mailing Address SUPERIOR WATER LIGHT & POWER CO 3015 MILL AVE SUPERIOR, WI 54080				
4. Generator's Phone: 218-855-3141				Fax:					
5. Transporter 1 Company Name				Phone:					
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					
Y G E N E R A T O R A	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 (OIL IMPACTED SOIL/DEBRIS)								
	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 10-0149 OIL IMPACTED SOIL/DEBRIS									
b. CL									
c. CL									
d. CL									
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load # _____			
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 <i>LUKAS DIXON</i>				Signature <i>[Signature]</i>			Month <i>11</i>	Day <i>15</i>	Year <i>17</i>
17. Transporter 1 Acknowledged of Receipt of Materials									
Printed/Typed Name <i>[Signature]</i>				Signature <i>[Signature]</i>			Month <i>11</i>	Day <i>15</i>	Year <i>17</i>
18. Transporter 2 Acknowledgement of Receipt of Materials									
Printed/Typed Name				Signature			Month	Day	Year
19. Discrepancy Indication Space									
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				Signature			Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69651

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMADJI SUBST. HILL AVE. & STUBBINS AVE SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2015 HILL AVE SUPERIOR, WI 54880				
4. Generator's Phone: 218-359-3101				Fax:				
5. Transporter 1 Company Name				Phone:				
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 (OIL IMPACTED SOIL/DEBRIS)								
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 019-0049 OIL IMPACTED SOIL/DEBRIS								
b. CL								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information Emergency Contact:					SKB Use Only Load #			
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 Lukasz Dixon				Signature <i>[Signature]</i>		Month 11	Day 17	Year 12
17. Transporter 1 Acknowledged of Receipt of Materials								
Printed/Typed Name Chad Warner				Signature <i>[Signature]</i>		Month 11	Day 17	Year 12
18. Transporter 2 Acknowledgement of Receipt of Materials								
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69852

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)								
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMPHIS SUBST. HILL AVE & STINSON AVE. COVENTRY, WI 53000				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2913 HILL AVE. SUITE 200, WI 53000									
4. Generator's Phone: 218-333-3191				Fax:									
5. Transporter 1 Company Name				Phone:									
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 (OIL IMPACTED SOIL/DEBRIS)													
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 119-0049 OIL IMPACTED SOIL/DEBRIS													
b. CL													
c. CL													
d. CL													
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load # _____							
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				Signature				Month		Day		Year	
17. Transporter 1 Acknowledged of Receipt of Materials								11		17		19	
Printed/Typed Name				Signature				Month		Day		Year	
18. Transporter 2 Acknowledgement of Receipt of Materials													
Printed/Typed Name				Signature				Month		Day		Year	
19. Discrepancy Indication Space													
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				Signature				Month		Day		Year	

GENERATOR

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69653

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMBER TRUST HILL AVE & STINSON AVE. SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54880						
4. Generator's Phone: 920-855-3101				Fax:						
5. Transporter 1 Company Name				Phone:						
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 (OIL IMPACTED SOIL/DEBRIS)										
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 117-0049 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load # _____			
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 <i>LUCAS DIXON</i>				Signature <i>[Signature]</i>			Month <i>11</i>	Day <i>17</i>	Year <i>11</i>	
17. Transporter 1 Acknowledged of Receipt of Materials										
Printed/Typed Name <i>Jeremy Johnson</i>				Signature <i>[Signature]</i>			Month <i>11</i>	Day <i>17</i>	Year <i>11</i>	
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69654

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO BELMONT JUNCTION HILL AVE & STINSON AVE SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2015 HILL AVE SUPERIOR, WI 54980						
4. Generator's Phone 218-398-2123				Fax:						
5. Transporter 1 Company Name				Phone:						
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 (OIL IMPACTED SOIL/DEBRIS)										
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 0115-0049 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load # _____			
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				Signature			Month	Day	Year	
17. Transporter 1 Acknowledged of Receipt of Materials							11	17	17	
Printed/Typed Name				Signature			Month	Day	Year	
18. Transporter 2 Acknowledgement of Receipt of Materials							11	17	17	
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

GENERATOR
TRANSPORTER
FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

63655

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMPHIS DISTRICT HILL AVE & STURZEN AVE SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2019 HILL AVE SUPERIOR, WI 54980						
4. Generator's Phone: 218-853-3171				Fax:						
5. Transporter 1 Company Name				Phone:						
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#	
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)					No. Type					
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 218-0049 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load # _____			
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 <i>Ryan Young</i>				Signature <i>[Signature]</i>			Month	Day	Year	
17. Transporter 1 Acknowledged of Receipt of Materials										
Printed/Typed Name <i>Ryan Young</i>				Signature <i>[Signature]</i>			Month	Day	Year	
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69656

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO FEMADMI SUBST. 101 L AVE & STEVENSON AVE. SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE. SUPERIOR, WI 54880				
4. Generator's Phone: 218-343-3191				Fax:				
5. Transporter 1 Company Name				Phone:				
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 (OIL IMPACTED SOIL/DEBRIS)								
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 119-0019 OIL IMPACTED SOIL/DEBRIS								
b. CL								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load #		
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				Signature		Month	Day	Year
17. Transporter 1 Acknowledged of Receipt of Materials						11	17	19
Printed/Typed Name				Signature		Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials						11	17	19
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

63657

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMADJI SUBST. HILL AVE. & HENSEN AVE. SUPERIOR, WI 54080				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE. SUPERIOR, WI 54080						
4. Generator's Phone: 218-355-3191				Fax:						
5. Transporter 1 Company Name				Phone:						
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 (OIL IMPACTED SOIL/DEBRIS)										
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 19-0019 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load # _____			
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 LORRY DAVIS				Signature <i>Lorry Davis</i>			Month 11	Day 17	Year 17	
17. Transporter 1 Acknowledged of Receipt of Materials										
Printed/Typed Name Wayne Boelk				Signature <i>Wayne Boelk</i>			Month 11	Day 17	Year 17	
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69658

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)								
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMADJI BURST HILL AVE & STUBBEN AVE SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54980									
4. Generator's Phone: (8-355-3101)				Fax:									
5. Transporter 1 Company Name <i>NIC #4</i>				Phone:									
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 (OIL IMPACTED SOIL/DEBRIS)													
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 019-0019 OIL IM CTED SOIL/DEBRIS													
b. CL													
c. CL													
d. CL													
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load # _____							
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 <i>Chris Ribnow</i>				Signature <i>[Signature]</i>				Month		Day		Year	
17. Transporter 1 Acknowledged of Receipt of Materials								11		17		14	
Printed/Typed Name <i>Chris Ribnow</i>				Signature <i>[Signature]</i>				Month		Day		Year	
18. Transporter 2 Acknowledgement of Receipt of Materials								11		19		14	
Printed/Typed Name				Signature				Month		Day		Year	
19. Discrepancy Indication Space													
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				Signature				Month		Day		Year	

GENERATOR

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

68659

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)		
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMADJI SUBST. HILL AVE & HUNTER AVE SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54880			
4. Generator's Phone: 218-355-3191				Fax:			
5. Transporter 1 Company Name A I EXPRESS MIDG				Phone:			
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#
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)		No.	Type				
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 19-049 OIL IMPACTED SOIL/DEBRIS							
b. CL							
c. CL							
d. CL							
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load #	
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 LUCAS WILSON				Signature <i>Lucas Wilson</i>		Month Day Year 11 17 17	
17. Transporter 1 Acknowledged of Receipt of Materials							
Printed/Typed Name CRAIG LESNY				Signature <i>Craig Lesny</i>		Month Day Year 11 17 17	
18. Transporter 2 Acknowledgement of Receipt of Materials							
Printed/Typed Name				Signature		Month Day Year	
19. Discrepancy Indication Space							
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				Signature		Month Day Year	

GENERATOR

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69660

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)		
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO DEMAND SUBST 1011 AVE & STINSON AVE SUPERIOR, WI 54660				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2015 HILL AVE SUPERIOR, WI 54660			
4. Generator's Phone: 218-355-3101				Fax:			
5. Transporter 1 Company Name				Phone:			
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 (OIL IMPACTED SOIL/DEBRIS)							
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 0119-0019 OIL IMPACTED SOIL/DEBRIS							
b. CL							
c. CL							
d. CL							
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load # _____	
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 <i>L. White</i>				Signature <i>[Signature]</i>		Month Day Year 11 19 19	
17. Transporter 1 Acknowledged of Receipt of Materials							
Printed/Typed Name <i>Mike Padros</i>				Signature <i>[Signature]</i>		Month Day Year 11 19 19	
18. Transporter 2 Acknowledgement of Receipt of Materials							
Printed/Typed Name				Signature		Month Day Year	
19. Discrepancy Indication Space							
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				Signature		Month Day Year	

GENERATOR
 TRANSPORTER
 FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69661

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NERIAJJI BUSTY HILL AVE & STANBEN AVE SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54980				
4. Generator's Phone: 218-353-3191				Fax:				
5. Transporter 1 Company Name				Phone:				
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 (OIL IMPACTED SOIL/DEBRIS)								
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 119-0049 OIL IMPACTED SOIL/DEBRIS								
b. CL								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information Emergency Contact:					SKB Use Only Load # _____			
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 <i>Lukas Dixon</i>				Signature <i>[Signature]</i>		Month <i>11</i>	Day <i>17</i>	Year <i>19</i>
17. Transporter 1 Acknowledged of Receipt of Materials								
Printed/Typed Name <i>[Signature]</i>				Signature <i>[Signature]</i>		Month <i>11</i>	Day <i>17</i>	Year <i>19</i>
18. Transporter 2 Acknowledgement of Receipt of Materials								
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy

76



Shamrock Landfill



Non Hazardous Industrial Waste

69662

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMPHIS SUBMIT. HILL AVE & STINSEN AVE SUPERIOR, WI 54660				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2013 HILL AVE SUPERIOR, WI 54660				
4. Generator's Phone: 218-355-3191				Fax:				
5. Transporter 1 Company Name				Phone:				
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 (OIL IMPACTED SOIL/DEBRIS)								
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 CL19-0019 OIL IMPACTED SOIL/DEBRIS								
b. CL								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load #		
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				Signature		Month	Day	Year
17. Transporter 1 Acknowledged of Receipt of Materials						11	19	19
Printed/Typed Name				Signature		Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials						11	19	19
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

59663

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMPHIS SUBST. HILL AVE. & STANBEN AVENUE SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54980						
4. Generator's Phone: 218-878-3191				Fax:						
5. Transporter 1 Company Name				Phone:						
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 (OIL IMPACTED SOIL/DEBRIS)										
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 19-0049 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load # _____			
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 T. SKA...				Signature <i>[Signature]</i>			Month	Day	Year	
17. Transporter 1 Acknowledged of Receipt of Materials				Signature <i>[Signature]</i>			Month	Day	Year	
Printed/Typed Name R. V. ...				Signature <i>[Signature]</i>			Month	Day	Year	
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature			Month	Day	Year	
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

GENERATOR

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69664

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMADJI SUBST MILL AVE & STINSON AVE SUPERIOR, WI 54230				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2015 HILL AVE SUPERIOR, WI 54230						
4. Generator's Phone: 218-354-3191				Fax:						
5. Transporter 1 Company Name				Phone:						
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 (OIL IMPACTED SOIL/DEBRIS)										
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 19-0049 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load #			
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				Signature			Month	Day	Year	
17. Transporter 1 Acknowledged of Receipt of Materials							11	13	10	
Printed/Typed Name				Signature			Month	Day	Year	
18. Transporter 2 Acknowledgement of Receipt of Materials							11	11	9119	
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

99665

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NIEMADJI SUBST. HILL AVE & STUBBIN AVE. SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE. SUPERIOR, WI 54880				
4. Generator's Phone: 218-388-3191				Fax:				
5. Transporter 1 Company Name				Phone:				
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 (OIL IMPACTED SOIL/DEBRIS)								
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 19-0049 OIL IMPACTED SOIL/DEBRIS								
b. CL								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load #		
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 <i>Thomas Dixon</i>				Signature <i>[Signature]</i>		Month 11	Day 17	Year 11
17. Transporter 1 Acknowledged of Receipt of Materials								
Printed/Typed Name <i>Ryan [unclear]</i>				Signature <i>[Signature]</i>		Month 11	Day 17	Year 11
18. Transporter 2 Acknowledgement of Receipt of Materials								
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

89666

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO WEMADJI SUBST. HILL AVE & STIMBEN AVE SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 3915 HILL AVE SUPERIOR, WI 54880						
4. Generator's Phone: 218-878-3101				Fax:						
5. Transporter 1 Company Name				Phone:						
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 (OIL IMPACTED SOIL/DEBRIS)										
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 19-0049 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load # _____			
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 <i>LUKAS D...</i>				Signature <i>[Signature]</i>			Month	Day	Year	
17. Transporter 1 Acknowledged of Receipt of Materials										
Printed/Typed Name <i>Jeremy Johnson</i>				Signature <i>[Signature]</i>			Month	Day	Year	
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

63667

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMADUN STREET HILL AVE. & STINSEN AVE. SUPERIOR, WI 54600				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE. SUPERIOR, WI 54600				
4. Generator's Phone: 218-353-3191				Fax:				
5. Transporter 1 Company Name				Phone:				
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#
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)				No.	Type			
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 0019 OIL IMPACTED SOIL/DEBRIS								
b. CL								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load #		
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 LUKAS DIXON				Signature <i>[Signature]</i>		Month 11	Day 17	Year 19
17. Transporter 1 Acknowledged of Receipt of Materials								
Printed/Typed Name Richard Korva				Signature <i>[Signature]</i>		Month 11	Day 19	Year 19
18. Transporter 2 Acknowledgement of Receipt of Materials								
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69668

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)		
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO HEMADJI BURET HILL AVE. & STUBSEN AVE. SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2015 HILL AVE. SUPERIOR, WI 54880			
4. Generator's Phone: 218-355-3191				Fax:			
5. Transporter 1 Company Name				Phone:			
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#
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)		No. Type					
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 19-0049 OIL IMPACTED SOIL/DEBRIS							
b. CL							
c. CL							
d. CL							
15. Special Handling Instructions and Additional Information Emergency Contact:					SKB Use Only Load #		
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 <i>Wayne Boelk</i>				Signature <i>Wayne Boelk</i>		Month Day Year 11 19 19	
17. Transporter 1 Acknowledged of Receipt of Materials							
Printed/Typed Name <i>Wayne Boelk</i>				Signature <i>Wayne Boelk</i>		Month Day Year 11 19 19	
18. Transporter 2 Acknowledgement of Receipt of Materials							
Printed/Typed Name				Signature		Month Day Year	
19. Discrepancy Indication Space							
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				Signature		Month Day Year	

GENERATOR
TRANSPORTER
FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

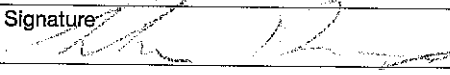
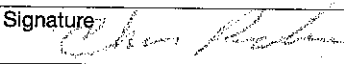
Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69669

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)								
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMAUNI QUEST. HILL AVE. & STINSEN AVE. SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE. SUPERIOR, WI 54880									
4. Generator's Phone: 218-333-3191				Fax:									
5. Transporter 1 Company Name NIC #41				Phone:									
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 (OIL IMPACTED SOIL/DEBRIS)													
b.													
c.													
d.													
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below)				14. Special Handling Procedures for Wastes Listed Above									
a. CL19-0049 OIL IMPACTED SOIL/DEBRIS													
b. CL													
c. CL													
d. CL													
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only							
						Load # _____							
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 LUKAS DIXON				Signature 				Month 11		Day 11		Year 11	
17. Transporter 1 Acknowledged of Receipt of Materials													
Printed/Typed Name Chris Robinson				Signature 				Month 11		Day 11		Year 11	
18. Transporter 2 Acknowledgement of Receipt of Materials													
Printed/Typed Name				Signature				Month		Day		Year	
19. Discrepancy Indication Space													
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				Signature				Month		Day		Year	

GENERATOR

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69670

GENERATOR	Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)					
	3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMORIAL SUBST. HILL AVE. & STINSEN AVE. SUPERIOR, WI 54880					Mailing Address SUPERIOR WATER LIGHT & POWER CO 2015 HILL AVE. SUPERIOR, WI 54880					
4. Generator's Phone: 218-335-3191					Fax:						
5. Transporter 1 Company Name AI EXPRESS 1126					Phone:						
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						
TRANSPORTER	8. U.S. DOT Description (including Proper Shipping name)					9. Containers		10. Total Quantity	11. Unit Wt/Vol	12. Waste Profile Sheet#	
	a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)					No.	Type				
	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 19-0049 OIL IMPACTED SOIL/DEBRIS											
b. CL											
c. CL											
d. CL											
15. Special Handling Instructions and Additional Information Emergency Contact:					SKB Use Only Load # _____						
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 LUKAS J...					Signature <i>[Signature]</i>			Month 11	Day 11	Year 19	
17. Transporter 1 Acknowledged of Receipt of Materials					Signature <i>[Signature]</i>			Month 11	Day 11	Year 19	
Printed/Typed Name DAVID LESNY					Signature <i>[Signature]</i>			Month 11	Day 11	Year 19	
18. Transporter 2 Acknowledgement of Receipt of Materials					Signature			Month	Day	Year	
Printed/Typed Name					Signature			Month	Day	Year	
19. Discrepancy Indication Space											
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					Signature			Month	Day	Year	

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69671

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMAHA COUNTY RD L AVE & STINSON AVE SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54980				
4. Generator's Phone: 218-385-3191				Fax:				
5. Transporter 1 Company Name				Phone:				
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 (Oil, Impacted Soils/Sediment)								
b.								
c.								
d.								
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below) a. CL 119-0019 OF IMPACTED SOILS/SEDIMENT b. CL c. CL d. CL				14. Special Handling Procedures for Wastes Listed Above				
15. Special Handling Instructions and Additional Information Emergency Contact:				SKB Use Only Load # _____				
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 <i>[Signature]</i>			Signature <i>[Signature]</i>			Month 11	Day 17	Year 11
17. Transporter 1 Acknowledged of Receipt of Materials								
Printed/Typed Name			Signature			Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials								
Printed/Typed Name <i>[Signature]</i>			Signature <i>[Signature]</i>			Month	Day	Year
19. Discrepancy Indication Space								
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			Signature			Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69672

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)				
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO HILL AVE. & STINBEN AVE. SUDAS, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUDAS, WI 54980					
4. Generator's Phone: 218-335-2101				Fax:					
5. Transporter 1 Company Name				Phone:					
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#	
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)					No.	Type			
b.									
c.									
d.									
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below) a. CL 1119-0049 OIL IMPACTED SOIL/DEBRIS b. CL c. CL d. CL					14. Special Handling Procedures for Wastes Listed Above				
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load #			
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				Signature			Month	Day	Year
17. Transporter 1 Acknowledged of Receipt of Materials							11	11	17
Printed/Typed Name				Signature			Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials							11	18	17
Printed/Typed Name				Signature			Month	Day	Year
19. Discrepancy Indication Space									
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				Signature			Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69673

GENERATOR	Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)						
	3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMPHIS SUBST. HILL AVE. & STINEBAUGH AVE. SUPERIOR, WI 54880					Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE. SUPERIOR, WI 54880						
4. Generator's Phone: 218-355-3191					Fax:							
5. Transporter 1 Company Name					Phone:							
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							
TRANSPORTER	8. U.S. DOT Description (including Proper Shipping name)					9. Containers		10. Total Quantity		11. Unit Wt/Vol	12. Waste Profile Sheet#	
	a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)											
	b.											
	c.											
	d.											
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below) a. CL 01-19-0049 OIL IMPACTED SOIL/DEBRIS b. CL c. CL d. CL					14. Special Handling Procedures for Wastes Listed Above							
15. Special Handling Instructions and Additional Information Emergency Contact:					SKB Use Only Load # _____							
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 <i>W. K. ...</i>					Signature <i>[Signature]</i>			Month	Day	Year		
17. Transporter 1 Acknowledged of Receipt of Materials					Printed/Typed Name <i>Ron ...</i>			Signature <i>[Signature]</i>			Month Day Year <i>11/19/19</i>	
18. Transporter 2 Acknowledgement of Receipt of Materials					Printed/Typed Name			Signature			Month Day Year	
19. Discrepancy Indication Space												
FACILITY	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					Signature			Month	Day	Year	

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69874

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMADJI SUBST. TULL AVE. & STINSON AVE. SUPERIOR, WI 54660				Mailing Address SUPERIOR WATER LIGHT & POWER CO 3715 HILL AVE. SUPERIOR, WI 54660						
4. Generator's Phone: 216-325-1111				Fax:						
5. Transporter 1 Company Name				Phone:						
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 (SOIL IMPACTED SOIL/DEBRIS)										
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 119-0049 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load #			
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				Signature			Month	Day	Year	
17. Transporter 1 Acknowledged of Receipt of Materials							11	11	19	
Printed/Typed Name				Signature			Month	Day	Year	
18. Transporter 2 Acknowledgement of Receipt of Materials							11	19	19	
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

GENERATOR
TRANSPORTER
FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste


69675

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMADJI STREET HILL AVE & STINEBAY AVE SUPERIOR, WI 54660				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54660						
4. Generator's Phone: 216-335-3191				Fax:						
5. Transporter 1 Company Name <i>AI-EXPRESS 117</i>				Phone:						
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 (OIL IMPACTED SOIL/DEBRIS)										
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 19-0049 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load # _____			
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				Signature			Month	Day	Year	
<i>[Signature]</i>				<i>[Signature]</i>			11	11	11	
17. Transporter 1 Acknowledged of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
<i>Ken Young</i>				<i>[Signature]</i>			11	11	11	
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator Canary - Facility Copy Pink - Transporter Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69576

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of - page(s)				
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO BELMONT ST. HILL AVE. S. SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE. SUPERIOR, WI 54880					
4. Generator's Phone: 218-325-3191				Fax:					
5. Transporter 1 Company Name				Phone:					
6. Transporter 2 Company Name NIC				Phone: 715-398-7561					
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#
a. Non Hazardous industrial Waste (OIL IMPACTED SOIL/DEBRIS)					No. Type				
b.									
c.									
d.									
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below) a. CL 119-0019 OIL IMPACTED SOIL/DEBRIS b. CL c. CL d. CL					14. Special Handling Procedures for Wastes Listed Above				
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load #		
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				Signature			Month	Day	Year
17. Transporter 1 Acknowledged of Receipt of Materials				Signature			Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature			Month	Day	Year
19. Discrepancy Indication Space									
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				Signature			Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Pink - Transporter

Canary - Facility Copy

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69677

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO INC (A) 112 WEST HILL AVE & STINEB AVE SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54880						
4. Generator's Phone: 218-285-3101				Fax:						
5. Transporter 1 Company Name <i>NIC #6</i>				Phone:						
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 (OIL IMPACTED SOIL/DEBRIS)										
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 <i>CL 19-0019 OIL IMPACTED SOIL/DEBRIS</i>										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load # _____				
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 <i>LUKAS WILSON</i>				Signature <i>[Signature]</i>		Month	Day	Year		
17. Transporter 1 Acknowledged of Receipt of Materials				Printed/Typed Name <i>Wayne Bark</i>		Signature <i>[Signature]</i>		Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials				Printed/Typed Name		Signature		Month	Day	Year
19. Discrepancy Indication Space										
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				Signature		Month	Day	Year		

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill

Non Hazardous Industrial Waste

69678

Shipping Manifest		1. Generator's US EPA ID No. (if any)		1. Page 1 of page(s)	
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMPHIS SUBST. BILL AVE & STINSON AVE SUPERIOR, WI 54280			Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 ED.L AVE SUPERIOR, WI 54280		
4. Generator's Phone: 218-355-2171		Fax:			
5. Transporter 1 Company Name <i>Northwestern Intergate Const</i>		Phone:			
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#
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)		No.	Type		
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 111-0042 OIL IMPACTED SOIL/DEBRIS					
b. CL					
c. CL					
d. CL					
15. Special Handling Instructions and Additional Information Emergency Contact:			SKB Use Only Load #		
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		Signature		Month Day Year	
<i>[Signature]</i>		<i>[Signature]</i>		11/19/19	
17. Transporter 1 Acknowledged of Receipt of Materials					
Printed/Typed Name		Signature		Month Day Year	
<i>[Signature]</i>		<i>[Signature]</i>		11/19/19	
18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space					
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		Signature		Month Day Year	

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69679

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMADJI SUBST. HILL AVE. & STINSON AVE. SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54880						
4. Generator's Phone: 218-845-3101				Fax:						
5. Transporter 1 Company Name				Phone:						
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 (OIL IMPACTED SOIL/DEBRIS)										
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 0119-0049 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load # _____				
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 LUCAS DORRIS				Signature <i>[Signature]</i>		Month	Day	Year		
17. Transporter 1 Acknowledged of Receipt of Materials				Printed/Typed Name TERRY ARROLL		Signature <i>[Signature]</i>		Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials				Printed/Typed Name		Signature		Month	Day	Year
19. Discrepancy Indication Space										
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				Signature		Month	Day	Year		

GENERATOR A

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy

76



Shamrock Landfill



Non Hazardous Industrial Waste

69680

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMADJI SUBST. HILL AVE. & STINSON AVE. SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2015 HILL AVE. SUPERIOR, WI 54980				
4. Generator's Phone: (218-335-319)				Fax:				
5. Transporter 1 Company Name NIC #4				Phone:				
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#
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)				No.	Type			
b.								
c.								
d.								
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below) a. CL 17-0049 OIL IMPACTED SOIL/DEBRIS b. CL c. CL d. CL				14. Special Handling Procedures for Wastes Listed Above				
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load #		
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				Signature		Month	Day	Year
17. Transporter 1 Acknowledged of Receipt of Materials				Signature		Month	Day	Year
Printed/Typed Name				Signature		Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature		Month	Day	Year
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill Non Hazardous Industrial Waste

69681

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO HILL AVE & STINSON AVE SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2918 HILL AVE SUPERIOR, WI 54880						
4. Generator's Phone: 218-333-3101				Fax:						
5. Transporter 1 Company Name <i>M1 EXPRESS AIR26</i>				Phone:						
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#	
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)					No. Type					
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 0119-0049 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load # _____			
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				Signature			Month	Day	Year	
<i>[Signature]</i>				<i>[Signature]</i>						
17. Transporter 1 Acknowledged of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
DAVID LESNY				<i>[Signature]</i>						
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

89682

Shipping Manifest		1. Generator's US EPA ID No. (if any)		1. Page 1 of _____ page(s)	
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO. N. MADISON ST. HILL AVE. & STINSON AVE. SUPERIOR, WI 54980			Mailing Address SUPERIOR WATER LIGHT & POWER CO. 2015 HILL AVE. SUPERIOR, WI 54980		
4. Generator's Phone: 218-878-1101			Fax:		
5. Transporter 1 Company Name			Phone:		
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#
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)		No. Type			
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 119-0049 OIL IMPACTED SOIL/DEBRIS					
b. CL					
c. CL					
d. CL					
15. Special Handling Instructions and Additional Information Emergency Contact:				SKB Use Only Load # _____	
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		Signature		Month Day Year	
17. Transporter 1 Acknowledged of Receipt of Materials		Signature		Month Day Year	
Printed/Typed Name		Signature		Month Day Year	
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Month Day Year	
Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space					
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		Signature		Month Day Year	

GENERATOR
TRANSPORTER
FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

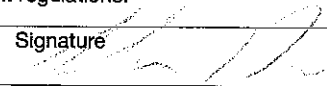
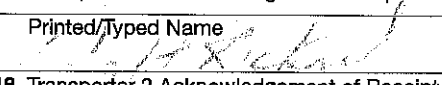
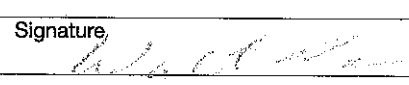
Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

83683

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)				
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMPHIS SUBST. HILL AVE & HINSON AVE. BLUETRIER, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE. SUPERIOR, WI 54880					
4. Generator's Phone: 218-325-2121				Fax:					
5. Transporter 1 Company Name				Phone:					
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 (OIL IMPACTED SOIL/DEBRIS)									
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 0115-0049 OIL IMPACTED SOIL/DEBRIS									
b. CL									
c. CL									
d. CL									
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load # _____			
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 LUCAS DIXON				Signature 		Month 11		Day 17	Year 11
17. Transporter 1 Acknowledged of Receipt of Materials									
Printed/Typed Name 				Signature 		Month 11		Day 19	Year 11
18. Transporter 2 Acknowledgement of Receipt of Materials									
Printed/Typed Name				Signature		Month		Day	Year
19. Discrepancy Indication Space									
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				Signature		Month		Day	Year

GENERATOR FACILITY TRANSPORTER


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69684

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMADU SUBST. HILL AVE & STANBOM AVE SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54880						
4. Generator's Phone: 218-355-3101				Fax:						
5. Transporter 1 Company Name				Phone:						
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 (OIL IMPACTED SOIL/DEBRIS)										
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 19-0049 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load #			
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				Signature			Month	Day	Year	
17. Transporter 1 Acknowledged of Receipt of Materials							11	19	13	
Printed/Typed Name				Signature			Month	Day	Year	
18. Transporter 2 Acknowledgement of Receipt of Materials							11	17	13	
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

GENERATOR

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69685

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEUMATAH SUBST. HILL AVE & STINSON AVE SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54880						
4. Generator's Phone: 920-333-2101				Fax:						
5. Transporter 1 Company Name				Phone:						
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 (OIL IMPACTED SOIL/DEBRIS)										
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 117-0019 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load #			
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 [Signature]				Signature [Signature]			Month	Day	Year	
17. Transporter 1 Acknowledged of Receipt of Materials										
Printed/Typed Name [Signature]				Signature [Signature]			Month	Day	Year	
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69686

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)				
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMAHA BLVD HILL AVE & STATION AVE SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54980					
4. Generator's Phone: 218-3-3101				Fax:					
5. Transporter 1 Company Name				Phone:					
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 (OIL IMPACTED SOIL/DEBRIS)									
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 19-0049 OIL IMPACTED SOIL/DEBRIS									
b. CL									
c. CL									
d. CL									
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load # _____		
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 <i>Lukas Meyer</i>				Signature <i>[Signature]</i>			Month Day Year 11/19/19		
17. Transporter 1 Acknowledged of Receipt of Materials									
Printed/Typed Name <i>[Name]</i>				Signature <i>[Signature]</i>			Month Day Year 11/19/19		
18. Transporter 2 Acknowledgement of Receipt of Materials									
Printed/Typed Name				Signature			Month Day Year		
19. Discrepancy Indication Space									
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				Signature			Month Day Year		

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill




Non Hazardous Industrial Waste

59587

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO. NEMADJI SUBST. BILL AVE. & STINSON AVE. SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO. 2013 BILL AVE. SUPERIOR, WI 54880				
4. Generator's Phone 218-215-2101				Fax:				
5. Transporter 1 Company Name <i>AI-Express</i>				Phone: <i>117</i>				
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#
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)				No. Type				
b.								
c.								
d.								
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below) a. CL 218-0049 OIL IMPACTED SOIL/DEBRIS b. CL c. CL d. CL				14. Special Handling Procedures for Wastes Listed Above				
15. Special Handling Instructions and Additional Information Emergency Contact:				SKB Use Only Load #				
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 <i>William Dixon</i>				Signature <i>William Dixon</i>		Month Day Year <i>11/17/19</i>		
17. Transporter 1 Acknowledged of Receipt of Materials								
Printed/Typed Name <i>William Dixon</i>				Signature <i>William Dixon</i>		Month Day Year <i>11/17/19</i>		
18. Transporter 2 Acknowledgement of Receipt of Materials								
Printed/Typed Name				Signature		Month Day Year		
19. Discrepancy Indication Space								
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				Signature		Month Day Year		

GENERATOR
TRANSPORTER
FACILITY



Shamrock Landfill 

Non Hazardous Industrial Waste

69688

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO HEMADJI STREET HILL AVE. & SIMPSON AVE. SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 213 HILL AVE. SUPERIOR, WI 54880						
4. Generator's Phone: (920) 353-3101				Fax:						
5. Transporter 1 Company Name <i>NIC</i>				Phone: <i>715-398-7561</i>						
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#	
a. Non Hazardous industrial Waste (OIL IMPACTED SOIL/DIBERIS)					No. Type					
b.										
c.										
d.										
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below) a. CL 119-0019 OIL IMPACTED SOIL/DIBERIS b. CL c. CL d. CL					14. Special Handling Procedures for Wastes Listed Above					
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load # _____			
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				Signature			Month	Day	Year	
<i>[Signature]</i>				<i>[Signature]</i>			11	11	11	
17. Transporter 1 Acknowledged of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
<i>[Signature]</i>				<i>[Signature]</i>			11	11	11	
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
<i>[Signature]</i>				<i>[Signature]</i>			11	11	11	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	
<i>[Signature]</i>				<i>[Signature]</i>			11	11	11	

GENERATOR
TRANSPORTER
FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69689

GENERATOR	Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)						
	3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO. HEMLOCK SUBST. HILL AVE & THURON AVE SUPERIOR, WI 54880					Mailing Address SUPERIOR WATER LIGHT & POWER CO. 2915 HILL AVE SUPERIOR, WI 54880						
4. Generator's Phone: 715-325-3191					Fax:							
5. Transporter 1 Company Name <i>MIC</i>					Phone:							
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							
TRANSPORTER	8. U.S. DOT Description (including Proper Shipping name)					9. Containers		10. Total Quantity	11. Unit Wt/Vol	12. Waste Profile Sheet#		
	a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)					No.	Type					
	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 C119-0019 OIL IMPACTED SOIL/DEBRIS												
b. CL												
c. CL												
d. CL												
15. Special Handling Instructions and Additional Information Emergency Contact:					SKB Use Only Load # _____							
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 <i>L. Williams</i>					Signature <i>[Signature]</i>			Month 11	Day 19	Year 11		
17. Transporter 1 Acknowledged of Receipt of Materials					Printed/Typed Name <i>Chris Robinson</i>			Signature <i>[Signature]</i>			Month 11	
18. Transporter 2 Acknowledgement of Receipt of Materials					Printed/Typed Name			Signature			Month	
19. Discrepancy Indication Space												
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					Signature			Month	Day	Year		


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69690

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)												
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO METWADJI STREET, HILL AVE. & HILLBORN AVE SUPERIOR, WI 53080				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2015 HILL AVE SUPERIOR, WI 53080													
4. Generator's Phone: 218-233-2111				Fax:													
5. Transporter 1 Company Name <i>WALMART EXPRESS #126</i>				Phone:													
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 (OIL IMPACTED SOIL/DEBRIS)																	
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 019-0019 OIL IMPACTED SOIL/DEBRIS																	
b. CL																	
c. CL																	
d. CL																	
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load #											
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				Signature				Month		Day		Year					
<i>[Signature]</i>				<i>[Signature]</i>				7		11		19					
17. Transporter 1 Acknowledged of Receipt of Materials				Printed/Typed Name				Signature		Month		Day		Year			
				<i>DAVID LESAY</i>				<i>[Signature]</i>				7		11		19	
18. Transporter 2 Acknowledgement of Receipt of Materials				Printed/Typed Name				Signature		Month		Day		Year			
19. Discrepancy Indication Space																	
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				Signature				Month		Day		Year					

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69691

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMORIAL BUDGET MILL AVE & SUTHERLAND AVE SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54880				
4. Generator's Phone: 218-233-7191				Fax:				
5. Transporter 1 Company Name				Phone:				
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#
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)				No.	Type			
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 117-0049 OIL IMPACTED ECL/DEBRIS								
b. CL								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information Emergency Contact:				SKB Use Only Load #				
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 <i>Laura Dixon</i>				Signature <i>[Signature]</i>		Month 11	Day 19	Year 19
17. Transporter 1 Acknowledged of Receipt of Materials								
Printed/Typed Name <i>[Signature]</i>				Signature <i>[Signature]</i>		Month 11	Day 19	Year 19
18. Transporter 2 Acknowledgement of Receipt of Materials								
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR A

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69692

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMAHA STREET, 1111 AVE & HUNTER AVE SUPERIOR, WI 54660				Mailing Address SUPERIOR WATER LIGHT & POWER CO 215 HILL AVE SUPERIOR, WI 54660				
4. Generator's Phone: 218-335-3791				Fax:				
5. Transporter 1 Company Name				Phone:				
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 (OIL IMPACTED SOIL/DIRT)								
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 OIL IMPACTED SOIL/DIRT								
b. CL								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load #		
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				Signature		Month	Day	Year
17. Transporter 1 Acknowledged of Receipt of Materials						11	20	19
Printed/Typed Name				Signature		Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials						11	20	19
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator


Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy

76



Shamrock Landfill 

Non Hazardous Industrial Waste

69693

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO 1111 AVE. & HUNTER AVE. SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO 7015 HILL AVE SUPERIOR, WI 54980				
4. Generator's Phone: 218-335-2191				Fax:				
5. Transporter 1 Company Name				Phone:				
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 (CL IMPACTED SOIL/SEDIMENT)								
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 119-0001 CL IMPACTED SOIL/SEDIMENT								
b. CL								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load # _____		
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 <i>L. A. Dixon</i>				Signature <i>L. A. Dixon</i>		Month <i>11</i>	Day <i>20</i>	Year <i>19</i>
17. Transporter 1 Acknowledged of Receipt of Materials								
Printed/Typed Name <i>Terry Carroll</i>				Signature <i>T. Carroll</i>		Month <i>11</i>	Day <i>21</i>	Year <i>19</i>
18. Transporter 2 Acknowledgement of Receipt of Materials								
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR A

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69594

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)				
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO HEMLOCK SUBST. HILL AVE & EATSON AVE SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54880					
4. Generator's Phone: 218-335-3191				Fax:					
5. Transporter 1 Company Name				Phone:					
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 (OIL IMPACTED SOIL/DROPS)									
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 019-0019 OIL IMPACTED SOIL/DROPS									
b. CL									
c. CL									
d. CL									
15. Special Handling Instructions and Additional Information Emergency Contact:				SKB Use Only Load #					
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 L. Weiss Dixon				Signature <i>[Signature]</i>		Month Day Year 11 20 19			
17. Transporter 1 Acknowledged of Receipt of Materials				Printed/Typed Name John E. [Signature]		Signature <i>[Signature]</i>		Month Day Year 11 20 19	
18. Transporter 2 Acknowledgement of Receipt of Materials				Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space									
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				Signature		Month Day Year			

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

89695

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO BELMONT WASTW HILL AVE & BOSTON AVE BOSTON, VT 05600				Mailing Address SUPERIOR WATER LIGHT & POWER CO BOSTON AVE BOSTON, VT 05600				
4. Generator's Phone: 218-325-8151				Fax:				
5. Transporter 1 Company Name				Phone:				
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 (OIL IMPACTED SOIL/DEBRIS)								
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 218-0049 OIL IMPACTED SOIL/DEBRIS								
b. CL								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load #		
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 KIM DUBOIS				Signature <i>[Signature]</i>		Month 11	Day 20	Year 19
17. Transporter 1 Acknowledged of Receipt of Materials				Signature <i>[Signature]</i>		Month 11	Day 20	Year 19
Printed/Typed Name TERRY J. [unclear]				Signature <i>[Signature]</i>		Month 11	Day 20	Year 19
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature		Month	Day	Year
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69696

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)										
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWDR CO 761 MN HWY 45 CLOQUET, MN 55720				Mailing Address SUPERIOR WATER LIGHT & POWDR CO 761 MN HWY 45 CLOQUET, MN 55720											
4. Generator's Phone: 218-853-3191				Fax:											
5. Transporter 1 Company Name				Phone:											
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 (Oil Impacted Soil/Dregs)															
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 261.9-0019 OIL IMPACTED W/ DREGS															
b. CL															
c. CL															
d. CL															
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load # _____									
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 <i>[Signature]</i>				Signature <i>[Signature]</i>			Month 11			Day 20			Year 19		
17. Transporter 1 Acknowledged of Receipt of Materials															
Printed/Typed Name <i>[Signature]</i>				Signature <i>[Signature]</i>			Month 11			Day 20			Year 19		
18. Transporter 2 Acknowledgement of Receipt of Materials															
Printed/Typed Name				Signature			Month			Day			Year		
19. Discrepancy Indication Space															
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				Signature			Month			Day			Year		

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69697

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO. HEMLOCK BLVD. MILL AVE. & CEDAR AVE. SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO. 2015 MILL AVE. SUPERIOR, WI 54880				
4. Generator's Phone: 218-235-3101				Fax:				
5. Transporter 1 Company Name				Phone:				
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#
a. Non-Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)				No.	Type			
b.								
c.								
d.								
13. Additional Descriptions for Materials Listed Above (Indicate waste stream Approval # below) a. CLP 100-001 OIL IMPACTED SOIL/DEBRIS b. CL c. CL d. CL				14. Special Handling Procedures for Wastes Listed Above				
15. Special Handling Instructions and Additional Information Emergency Contact:				SKB Use Only Load #				
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 LUKE'S DIXON				Signature <i>[Signature]</i>		Month Day Year 11/10/19		
17. Transporter 1 Acknowledged of Receipt of Materials				Printed/Typed Name Sue Erdos		Signature <i>[Signature]</i>		Month Day Year 11/10/19
18. Transporter 2 Acknowledgement of Receipt of Materials				Printed/Typed Name		Signature		Month Day Year
19. Discrepancy Indication Space								
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				Signature		Month Day Year		

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69698

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)		
3. Generator's Name and Facility Address				Mailing Address			
4. Generator's Phone: SUPERIOR WATER LIGHT & POWER CO MEMPHIS STREET				Fax: SUPERIOR WATER LIGHTS & POWER CO			
5. Transporter 1 Company Name				Phone:			
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							
b. (OIL IMPREGNATED SOLID DEBRIS)							
c.							
d.							
13. Additional Descriptions for Materials Listed Above (Indicate waste stream Approval # below)				14. Special Handling Procedures for Wastes Listed Above			
a. CL							
b. CL							
c. CL 119-0049 OIL IMPREGNATED SOLID DEBRIS							
d. CL							
15. Special Handling Instructions and Additional Information					SKB Use Only		
Emergency Contact:					Load # _____		
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				Signature		Month Day Year	
17. Transporter 1 Acknowledged of Receipt of Materials				Signature		Month Day Year	
Printed/Typed Name				Signature		Month Day Year	
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature		Month Day Year	
Printed/Typed Name				Signature		Month Day Year	
19. Discrepancy Indication Space							
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				Signature		Month Day Year	

GENERATOR
TRANSPORTER
FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69699

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMORIAL BLDG. 701 L AVE. & BRINSON AVE. SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 5015 HILL AVE. SUPERIOR, WI 54880						
4. Generator's Phone: (919) 355-3191				Fax:						
5. Transporter 1 Company Name				Phone:						
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#	
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)					No. Type					
b.										
c.										
d.										
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below) a. CL-119-0019 OIL IMPACTED SOIL/DEBRIS b. CL c. CL d. CL					14. Special Handling Procedures for Wastes Listed Above					
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load # _____			
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 LORAN DIXON				Signature <i>[Signature]</i>			Month 11	Day 20	Year 11	
17. Transporter 1 Acknowledged of Receipt of Materials										
Printed/Typed Name Jesse Endres				Signature <i>[Signature]</i>			Month 11	Day 20	Year 11	
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy

Attachment D – Maintenance Plans and Photographs

D.1 Description of Maintenance Actions (Not Applicable)*

D.2 Location Maps (Not Applicable)*

D.3 Photographs (Not Applicable)*

D.4 Inspection Log (Not Applicable)*

***There is no site maintenance in relation to the site**

Attachment E – Monitoring Well Information

Not Applicable - All monitoring wells on-site are part the Husky Energy facility-wide monitoring program and were not installed as part of the site investigation.

Attachment F – Source Legal Documents

F.1 Property Deed

F.2 Certified Survey Map*

F.3 Verification of Zoning

F.4 Signed Statement

*** There is no certified survey map to include**

845763

Document Number

SPECIAL WARRANTY DEED

Document Name

DOCUMENT# 845763

Recorded or Filed on
October 04, 2011 9:15 AM
GAYLE I. WANNER
DOUGLAS COUNTY RECORDER
SUPERIOR, WI 54880-2769
Fee Amount: \$30.00
Transfer Fee: \$47,052.00
Total Pages 13

THIS DEED, made between MURPHY OIL USA, INC., a Delaware corporation, as to Tracts A, D, E, F, G, H and J; MURPHY OIL USA, INC., a Delaware corporation, f/k/a New Murphy Oil USA, Inc., f/k/a Murphy Oil Corporation, as to Tracts B and I; and MURPHY OIL USA, INC., a Delaware corporation, f/k/a Murphy Corporation, a Louisiana corporation, as to Tract C and Tract K ("Grantor," whether one or more), and CALUMET SUPERIOR, LLC, a Delaware limited liability company ("Grantee"),

for and in consideration of good and valuable consideration paid by Grantee, Grantor hereby grants, sells and conveys to Grantee the following described real estate, together with the rents, profits, fixtures, improvements, structures and other appurtenant interests constituting real property, located in Douglas County, State of Wisconsin ("Property"); subject, however, to (i) all easements, rights-of-way, covenants, restrictions, agreements, claims or other matters, rights or encumbrances of record (or referred to or described or discoverable in recorded documents or otherwise known to Grantee), (ii) liens for governmental taxes, assessments or charges, (iii) public or private rights used, laid out or dedicated for road or highway purposes, (iv) rights of owners and governmental regulation of pipelines through public rights of way or privately owned land, respectively, (v) rights of easement, or any encroachments, in and to all railroad switches, sidetracks, spur tracks or similar rights of way, and (vi) any or all reservations of minerals and mineral rights (collectively, "Permitted Encumbrances").

See Attachment A - Legal Description.

Together with all of Grantor's rights and interests in and to all pipelines serving the Property described in Attachment A and all easements and rights appurtenant thereto, and all interest of Grantor, being no less than a 12% interest, in a 7.5 mile 10" gas main extending from the Great Lakes Gas Transmission mainline to a delivery point near the Superior Refinery as more fully described in the Construction, Ownership & Operating Agreement for a Natural Gas Main in Superior, WI, dated as of November 1, 2000, between Superior Water Light & Power Company and Murphy Oil USA, Inc.

Grantor does hereby bind Grantor and Grantor's successors and assigns to forever warrant and defend that the title to the Property is good, indefeasible, in fee simple and free and clear of all encumbrances arising by, through, or under Grantor, except for Permitted Encumbrances.

Dated September 30, 2011

MURPHY OIL USA, INC.

By: [Signature] [(SEAL)]

Name: Thomas McKinlay

Title: President

ACKNOWLEDGMENT

STATE OF ARKANSAS

Union COUNTY

Personally came before me on September 30, 2011

the above-named Thomas McKinlay

to me known to be the person(s) who executed the foregoing instrument and acknowledged the same.

* [Signature]

Notary Public, State of ARKANSAS

My Commission (is permanent) (expires: 2-1-2013)

THIS INSTRUMENT DRAFTED BY:

Bryan C. Esch, Esq.
DeWitt Ross & Stevens S.C.

Recording Area

Name and Return Address

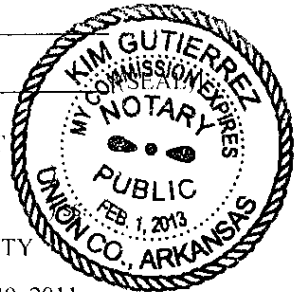
Tamara R. Feigl, Esq.
Fulbright & Jaworski L.L.P.
Fulbright Tower
1301 McKinney, Suite 5100
Houston, TX 77010-3095
First Am.
30ck

See Attachment "A"

Parcel Identification Number (PIN)

This is not homestead property.

(#) (is not)



845763

**Attachment A
to Special Warranty Deed
from Murphy Oil USA, Inc. to Calumet Superior, LLC
dated September 30, 2011**

Legal Description

TRACT A:

Lots 354 through 368, even numbers inclusive, West 18th Street, Bay Front Division. (Doc. No. 805831).

Parcel No. 02-802-01033-00.

Lots 322 through 352, even numbers inclusive, West 19th Street, Bay Front Division. (Doc. No. 766342).

Parcel No. 01-801-04149-00.

Fractional Lots 345 through 351, odd numbers inclusive, West 19th Street, Bay Front Division. (Doc. No. 806050).

Parcel No. 01-801-04161-00.

Lots 353 through 367, odd numbers inclusive, on West 19th Street, Bay Front Division. (Doc. No. 805831).

Parcel No. 02-202-01041-00.

Lots 354 through 384, even numbers inclusive, on West 19th Street, Bay Front Division. (Doc. Nos. 766342 & 805831).

Parcel No. 02-202-01054-00.

Lots 290 through 320, even numbers inclusive, West 20th Street, Bay Front Division. (Doc. No. 766342).

Parcel No. 01-801-04169-00.

Lots 321 through 352, inclusive, West 20th Street, Bay Front Division. (Doc. Nos. 766342 & 806050).

Parcel No. 01-801-04185-00.

Lots 386 through 400, even numbers inclusive, West 20th Street, Bay Front Division. (Doc. Nos. 805831, 806050 & 807145).

Parcel No. 02-802-01099-00.

Lots 353 through 384, inclusive, West 20th Street, Bay Front Division. (Doc. Nos. 766342 & 806050).

Parcel No. 02-802-01066-00.

Lots 289 through 319, odd numbers inclusive, West 21st Street, Bay Front Division. (Doc. Nos. 766342 & 805069).

Parcel No. 01-801-04218-00.

845763

Lots 321 through 351, odd numbers inclusive, West 21st Street, Bay Front Division. (Doc. Nos. 766342 & 800813).

Parcel No. 01-801-04250-00.

Lots 353 through 415, odd numbers inclusive, West 21st Street, Bay Front Division. (Doc. No. 766342).

Parcel No. 02-802-01105-00.

Lots 385 through 416, inclusive, Herrick's Subdivision of Block 25, West 15th Street. (Doc. No. 794160).

Parcel No. 02-802-02810-00.

Lots 321 to 351, odd numbers inclusive, Linler Place, West 15th Street. (Doc. No. 794160).

Parcel No. 01-801-04630-00.

Lots 289 through 293, Block 20, McBean Blocks, West Thirteenth Street, Lots on West Fourteenth Street; together with that part of the alley which accrued thereto by reason of the vacation thereof. (Doc. Nos. 766592 & 802863).

Parcel No. 01-801-04674-00.

Lots 338 through 352, even numbers inclusive, Block 21, 16th Street, McBean Blocks West 17th Street. (Doc. No. 794160).

Parcel No. 01-801-04738-00.

Lots 1 through 18, inclusive, and Lots 20 through 26, inclusive, Block 5; Lots 1, 2 and 3 and Lots 21 through 26, inclusive, Block 6, Lots 15, 16, 17, 18, and 19, Block 4, all in Dudley Park Addition to South Superior; together with that part of the alleys, Caitlin Avenue, Fisher Avenue & Fifty-Third Street which accrued thereto by reason of the vacation thereof. (Doc. Nos. 835187 & 837523).

Parcel Nos. 08-808-03384-00, 08-808-03409-00, 08-808-03372-00 & 08-808-03412-00.

Lots 23, 24, 25 and 26, Block 5, Lots 2 through 9, inclusive, Block 6, all in Harriet Place Addition to South Superior; together with that part of Caitlin Avenue and Fifty-Third Street which accrued thereto by reason of the vacation thereof. (Doc. Nos. 835187 & 837523).

Parcel Nos. 08-808-04104-00 & 08-808-04109-00.

Lots 329 through 351, odd numbers inclusive, West 13th Street, Burhan's Subdivision of Blocks 21 & 22, West 13th Street.

Lots 322 through 352, even numbers inclusive, West 13th Street, Burhan's Subdivision of Blocks 21 & 22, West 13th Street.

Lots 321 through 351, odd numbers inclusive, West 14th Street, Burhan's Subdivision of Blocks 21 & 22, West 13th Street.

Lots 322 through 330, even numbers inclusive, West 12th Street, Burhan's Subdivision of Blocks 21 & 22, West 13th Street.

Lots 321 through 327, odd numbers inclusive, West 13th Street, Burhan's Subdivision of Blocks 21 & 22, West 13th Street.

Together with that part of 12th Street which accrued thereto by reason of the vacation thereof.

(Doc. Nos. 806050, 806973 and 723202).

Parcel Nos. 01-801-04426-00, 01-801-04442-00, 01-801-04410-00, 01-801-04397-00 & 01-801-04412-00.

Lots 225 through 271, odd numbers inclusive, Frey's Subdivision of Block 16 and of the Southeasterly One Half of Block 18, on West 19th Street. (Doc. No. 766342).

Parcel No. 01-801-04551-00.

Lots 226 through 272, even numbers inclusive, Frey's Subdivision of Block 16 and of the Southeasterly One Half of Block 18, on West 19th Street. (Doc. No. 766342).

Parcel No. 01-801-04528-00.

Lots 273 through 287, odd numbers inclusive, Hanson and Streatfield's Subdivision of Block 18 West Thirteenth Street, Lots on West Fourteenth Street. (Doc. No. 803730).

Parcel No. 01-801-04593-00.

Lots 257 through 265, inclusive, and Lots 267 through 271, odd numbers inclusive, Hanson and Streatfield's Subdivision of Block 18 West Thirteenth Street, Lots on West Fourteenth Street. (Doc. No. 804858).

Parcel Nos. 01-801-04583-00 and 01-801-04566-00.

Blocks 17, 19 and 22 and the Northeast Quarter and the South Half of Block 21, Townsite of Superior West 17th Street. (Doc. No. 794160).

Parcel No. 01-801-03209-00.

The Northeast Quarter of Section 12, Township 48 North, Range 14 West, except that part thereof lying North of County Highway A, and except Railroad Rights of Way, and except the following described property: That part of the Southeast Quarter of the Northeast Quarter of Section 12, Township 48 North, Range 14 West, described as follows: Beginning at the Southeast corner of the Northeast Quarter of Section 12; thence North 0 degrees 35 minutes 7 seconds East, along the East line of said Northeast Quarter, a distance of 362.02 feet; thence South 39 degrees 47 minutes 53 seconds West, a distance of 466.60 feet to the South line of said Northeast Quarter; thence South 89 degrees 19 minutes 05 seconds East, along said South line, a distance of 294.98 feet to the point of beginning; and except the following described property: That part of the Southeast Quarter of the Northeast Quarter of Section 12, Township 48 North, Range 14 West, described as follows: Commencing at the Southeast corner of the Northeast Quarter of Section 12, thence North 0 degrees 35 minutes 07 seconds East, along the East line of said Northeast Quarter, a distance of 362.02 feet to the point of beginning; thence continuing North 0 degrees 35 minutes 07 seconds East, along said East line, a distance of 656.36 feet; thence South 34 degrees 03 minutes 51 seconds West a distance of 1219.58 feet to the South line of said Northeast Quarter; thence South 89 degrees 19 minutes 05 seconds East, along said South line, a distance of 377.78 feet; thence North 39 degrees 47 minutes 53 seconds East a distance of 466.60 feet to the point of beginning. (Doc. No. 832177)

Parcel Nos. TS-030-01326-00, TS-030-01329-00, TS-030-01327-00 & TS-030-01328-00.

Lots 14 through 26, inclusive, Block 5, Lots 1 through 17, inclusive, Block 6, Lots 5 through 8, inclusive, Block 7, Lots 1 through 8, inclusive, Block 8, all of Block 9, all in Short Line Addition to South Superior;

845763

together with that part of the alleys, Fifty-Fourth Street, Fifty-Fifth Street, Clough Avenue and Weeks Avenue which accrued thereto by reason of the vacation thereof. (Doc. Nos. 835187 and 837523).

Parcel Nos. 08-808-07179-00, 08-808-07197-00, 08-808-07214-00, 08-808-07218-00 & 08-808-07226-00.

Lots 481 through 512, inclusive, Lots on West 20th and West 21st Streets, in W.H. Webb's Subdivision of Block Thirty-one (31) on West 21st Street. (Doc. No. 805831).

Parcel No. 02-802-06749-00.

The Southeast Quarter of the Northeast Quarter of the Northwest Quarter of Section 2, Township 48 North, Range 14 West. (Doc. No. 835187).

Parcel No. 08-808-09932-00.

Block 13, Townsite of Superior West 13th Street, City of Superior. (Doc. No. 794162).
Parcel No. 01-801-03032-00.

Lots 258 through 288, even numbers inclusive, and Lots 257 through 287, odd numbers inclusive, SW 17th Street, Subdivision of Block 18 West 17th Street, City of Superior. (Doc. No. 794160).

Parcel No. 01-801-04019-00.

Block 23, West 13th Street, Townsite of Superior. (Doc. Nos. 803374, 804371 & 806050).

Parcel Nos. 02-802-00698-01, 02-802-00698-00, 02-802-00699-00, 02-802-00734-00, 02-802-00736-00 and 02-802-00700-00.

Lots 300, 302, 304, 1301, 1303 and 1305, Subdivision of Part of the Northeast Quarter of Block 20, West Thirteenth Street, Lots on Becker Avenue, City of Superior; together with the alley which accrued thereto by reason of the vacation thereof. (Doc. Nos. 802863 and 806050)

Parcel Nos. 01-801-03856-00 & 01-801-03852-00.

All of Block 31 on West 14th Street, except right of way for Bardon Avenue, Townsite of Superior. (Doc. No. 801654).

Parcel No. 02-802-00735-00.

Lots 225 through 255, odd numbers inclusive, in the Subdivision of Blocks 16 and 17, West 12th Street, Townsite of Superior. (Doc. Nos. 808863, 812595 & 819919).

Parcel Nos. 01-801-03808-00, 01-801-03814-00 & 01-801-03815-00.

The Southeast Quarter and the Southwest Quarter and the East Half of the Northwest Quarter and the West 150 feet of the Northeast Quarter, Block 18, Townsite of Superior, West 15th Street.

The West Half of the Northwest Quarter, Block 18, West Fifteenth Street, Townsite of Superior. The Westerly Quarter of the Northeast Quarter of Block 20, Townsite of Superior, West Fifteenth Street.

The East 3/8ths of the Northeast Quarter and the East 2/5ths of the West 5/8ths of the Northeast Quarter, Block 20, West Fifteenth Street, Townsite of Superior.

The East 25 feet of the West 3/8ths of the Northeast Quarter of Block 20, West Fifteenth Street, Townsite of Superior.

The Northwest Quarter, Block 20, Townsite of Superior, West Fifteenth Street.
The Southwest Quarter, Block 20, Townsite of Superior, West Fifteenth Street.
The Southeast Quarter, Block 20, Townsite of Superior, West Fifteenth Street.
The North Half of Block 21, Townsite of Superior, West Fifteenth Street.
Block 22, Townsite of Superior, West Fifteenth Street.

(Doc. Nos. 794160 and 801793)

Parcel Nos. 01-801-03133-00, 01-801-03147-00 & 01-801-03148-00.

A certain piece of land located in the Northeast Quarter of Block Twenty, on West Thirteenth Street, in Townsite of Superior, City of Superior, Douglas County, Wisconsin, described as follows: Beginning at a point on the Westerly side of Becker Avenue Seventy-eight feet Southerly from the Northeasterly corner of the Northeasterly Quarter of Block 20 on West Thirteenth Street; thence running Southerly along Becker Avenue Fifty feet to the Southeasterly corner of said Quarter Block; thence Westerly along the Southerly line of said Block and at right angles to Becker Avenue One Hundred Seventeen feet; thence Northerly and parallel to Becker Avenue Fifty feet; thence Easterly and parallel to West Thirteenth Street One Hundred Seventeen feet to the place of beginning; together with that portion of vacated alley abutting Block.

(Doc. Nos. 766592 and 802863)

Parcel No. 01-801-03855-00.

Block 23 & East 14th Street Vacated, Townsite of Superior, West 15th Street.
Block 24, Townsite of Superior, West 15th Street.
Block 26, Townsite of Superior, West 15th Street.
Block 27 & Bardon Avenue Vacated, Townsite of Superior, West 15th Street.
Block 28 & Bardon Avenue Vacated, Townsite of Superior, West 15th Street.
Block 29, Townsite of Superior, West 15th Street.
SW 1/4, Block 30, Townsite of Superior, West 15th Street.
Fractional Block 31, Except R/W, Townsite of Superior, West 15th Street.
Block 32, Except R/W, Townsite of Superior, West 15th Street.
Block 34, Except R/W, Townsite of Superior, West 15th Street.

(Doc. Nos. 794160, 801654 & Volume 508, Page 705).

Parcel No. 02-802-00736-00.

The Southwest Quarter of Block 23 on West 17th Street, Townsite of Superior.
The Northwest Quarter of Block 24 on West 17th Street, Townsite of Superior.
Block 29 on West 17th Street, Townsite of Superior.
The South Half of Block 30 on West 17th Street, Townsite of Superior.
The Northwest Quarter of Block 32 on West 17th Street, Townsite of Superior.
Block 36, except Railroad right of way and North 28th Street, on West 17th Street, Townsite of Superior.

(Doc. No. 801654)

The East Half of Block 23 on West 17th Street, Townsite of Superior.
The Northwest Quarter of Block 23 on West 17th Street, Townsite of Superior.
The West Half of the Northeast Quarter of Block 24 on West 17th Street, Townsite of Superior.
The East Half of the Northeast Quarter of Block 24 on West 17th Street, Townsite of Superior.
The South Half of Block 24 and Bardon Avenue Vacated on West 17th Street, Townsite of Superior.
Block 25 and Bardon Avenue Vacated on West 17th Street, Townsite of Superior.
Block 27 on West 17th Street, Townsite of Superior.

The North Half, the Southeast Quarter and the East Half of the Southwest Quarter of Block 28 on West 17th Street, Townsite of Superior.

The West Half of the Southwest Quarter of Block 28 on West 17th Street, Townsite of Superior.

The Northwest Quarter of Block 30 on West 17th Street, Townsite of Superior.

The West Half of the Northeast Quarter of Block 30 on West 17th Street, Townsite of Superior.

The East Half of the Northeast Quarter of Block 30 on West 17th Street, Townsite of Superior.

Block 31 on West 17th Street, Townsite of Superior.

The Northeast Quarter of Block 32 on West 17th Street, Townsite of Superior.

The South Half of Block 32 on West 17th Street, Townsite of Superior.

The Fractional Block 33, except Right of Way, on West 17th Street, Townsite of Superior.

The Southwest Quarter and the Southeast Quarter of Block 34 on West 17th Street, Townsite of Superior.

The East Quarter of the Northwest Quarter of Block 34 on West 17th Street, Townsite of Superior.

The East 3/4 of the Northeast Quarter of Block 34 on West 17th Street, Townsite of Superior.

(Doc. No. 794160)

Parcel No. 02-802-00763-00.

Blocks 15, 17 and 19, Townsite of Superior on West 19th Street.

The West Half of Block 18, Townsite of Superior on West 19th Street.

The Fractional Blocks of 20 and 21, Townsite of Superior on West 19th Street.

Blocks 13 and 14, Townsite of Superior on West 19th Street.

(Doc. No. 766342)

Parcel No. 01-801-03246-00.

Lots 353, 355 and 371, Bay Front Division, West 23rd Street.

Lots 401 and 403, Bay Front Division, West 22nd Street.

Lots 380, 382 and 384, Bay Front Division, West 22nd Street.

(Doc. Nos. 624956, 603131, 630951 and 807780).

Parcel No. 02-802-00872-00.

TRACT B:

Lots 354 through 416, even numbers inclusive, West 21st Street, Bay Front Division. (Doc. No. 528677).

Parcel No. 02-802-01104-00.

Blocks 28, 30 and 32, Townsite of Superior, West 21st Street.

Blocks 25, 27, 29, 31 and 32, Townsite of Superior, West 23rd Street.

Lots 354 through 400, even numbers inclusive, Bay Front Division, West 21st Street.

Lots 353 through 383, odd numbers inclusive, Bay Front Division, West 22nd Avenue.

Lots 385 through 399, odd numbers inclusive, Bay Front Division, West 22nd Street.

Lots 405 through 415, odd numbers inclusive, Bay Front Division, West 22nd Street.

Lots 354 through 378, even numbers inclusive, Bay Front Division, West 22nd Street.

Lots 357 through 369, odd numbers inclusive and Lots 373 through 383, odd numbers inclusive, Bay Front Division, West 23rd Street.

(Doc. Nos. 505366, 518749 and 528677).

Parcel No. 02-802-00872-00.

Lots 290 through 320, even numbers inclusive, Bay Front Division, West 21st Street.
Lots 322 through 352, even numbers inclusive, Bay Front Division, West 21st Street.
Lots 305 through 351, odd numbers inclusive, Bay Front Division, West 22nd Street.
Lots 314 through 352, even numbers inclusive, Bay Front Division, West 22nd Street.
Lots 321 through 341, odd numbers inclusive, Bay Front Division, West 23rd Street.
Lots 344 through 352, even numbers inclusive, Bay Front Division, West 23rd Street.
Lots 347, 349 and 351, Bay Front Division, West 23rd Street.
Lots 289 through 303, odd numbers inclusive, Nobles Subdivision of Block 20, West 21st Street.
Block 18, Townsite of Superior, West 21st Street.
Southwest Quarter of Block Seventeen, Townsite of Superior, West 23rd Street.
Lots 343 through 351, odd numbers inclusive, Bay Front Division, West 24th Street.

(Doc. Nos. 505366, 513195, 514949, 520340 and 528677).
Parcel No. 01-801-03339-00.

TRACT C:

Blocks 24, 26, 28 and 30, Townsite of Superior, West 23rd Street;
Blocks 22, 23, 24, 25, 26, 27, 28, 29 and 30, Townsite of Superior, West 25th Street;
Block 32, Townsite of Superior, West 26th Street;
Blocks 23, 24, 25, 26, 27, 28, 29, 30, 31 and 32, Townsite of Superior, West 27th Street, together with that part of West 27th Street which accrued thereto by reason of the vacation thereof.
Blocks 23, 24, 25, 26, 27, 28, 29, 30 and 31, Townsite of Superior, West 29th Street, together with that part of West 29th Street which accrued thereto by reason of the vacation thereof, except those parts of Blocks 30 and 31 lying East of the East line of the Wisconsin Central Railway Company Right-of-Way.

(Doc. Nos. 453215, 405966 and 458930).
Parcel No. 02-802-00872-00.

Blocks 15, 16, 18, and 20, Townsite of Superior, West 23rd Street.
The North Half and the Southeast Quarter of Block 17, Townsite of Superior, West 23rd Street.
Blocks 19 and 22, Townsite of Superior, West 23rd Street, except Lots 314, 316, 318 and 320, Bay Front Division, West 22nd Street, and Lots 343 through 352, inclusive, Bay Front Division.
Blocks 13, 14, 15, 16, 17, 18, 19, 20, 21 and 22, Townsite of Superior, West 25th Street.
Blocks 13, 14, 15, 16, 17, 18, 19, 20, 21 and 22, Townsite of Superior, West 27th Street.
Blocks 13, 15, 17, 19 and 21, Townsite of Superior, West 29th Street.
Together with that part of the streets and avenues which accrued thereto by reason of the vacation thereof.

(Doc. Nos. 405966 and 453215).
Parcel No. 01-801-03339-00.

TRACT D:

Lots 354 through 384, even numbers inclusive, Bay Front Division, West 23rd Street. (Doc. No. 453215).

Parcel No. 02-802-00872-00.

Lots 330 through 342, even numbers inclusive, Bay Front Division, West 23rd Street.
Lots 337, 339 and 341, Bay Front Division, West 24th Street.

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(Doc. No. 453215).
Parcel No. 01-801-03339-00.

TRACT E:

Lot 386, Bay Front Division, West 22nd Street. (Doc. No. 315814).

Parcel No. 02-802-00872-00.

TRACT F:

Block 23, Townsite of Superior, West 23rd Street (V 143 P 609).

Parcel No. 02-802-00872-00.

TRACT G:

That certain triangular shaped tract of land described last in deed dated August 30, 1957, from Northwestern Improvement Company to Northern Pacific Railway Company recorded January 2, 1958, in Book 254, Page 427, records of Douglas County, Wisconsin, said tract being described in said deed for reference as follows:

"A triangle of land comprising all of the Northwest Quarter Southwest Quarter (NW 1/4SW 1/4) of Section 36, Township 49 North, Range 14 West, Fourth Principal Meridian, which is situated Northwesterly of the right of way of the Northern Pacific Railway Company, being the same premises described as Parcel No. 1 in deeds recorded in Book 109 of Deeds on Pages 526 and 528, as Document Nos. 186157 and 186158 respectively, records of said county." (Document No. 840739)

Parcel No. 08-808-10047-00.

TRACT H:

The Southeast Quarter of Block 30 on West Nineteenth Street, Townsite of Superior, Douglas County, Wisconsin. (Document No. 840739)

Parcel No. 02-802-00830-00.

TRACT I:

North Half (N 1/2) of Fractional Block Thirteen (13), West Thirty-fifth (35th) Street, Townsite of Superior, according to the recorded plat or plats thereof on file and of record in the Office of the Register of Deeds in and for Douglas County, Wisconsin; together with that part of West 34th Street which accrued thereto by reason of the vacation thereof.

Block 18, West 21st Street, Townsite of Superior, Douglas County, Wisconsin.

(Doc. Nos. 522304, 528677 & 777319).
Parcel Nos. 08-808-09743-00 & 01-801-03304-00.

TRACT J:

The Southwest Quarter (SW 1/4) of Block Twenty-five (25), Townsite of Superior West 31st Street, according to the recorded plat or plats thereof on file and of record in the Office of the Register of Deeds in and for Douglas County, Wisconsin.

The Southeast Quarter (SE 1/4) of Block Fifteen (15), Townsite of Superior West 37th Street, according to the recorded plat or plats thereof on file and of record in the Office of the Register of Deeds in and for Douglas County, Wisconsin.

The Southeasterly One Hundred Seventy-five feet (SEly 175') of the Southwesterly Half (SWly 1/2) of Block Twenty (20), West Eleventh Street, Township of Superior (Southwestern Division), in the City of Superior, Douglas County, Wisconsin.

The Northwesterly One Hundred Twenty-five feet (NWly 125') of the Southwesterly One-Half (SWly 1/2) of Block Twenty (20), West Eleventh Street, Townsite of Superior, in the City of Superior, Douglas County, Wisconsin, being that part of said Block 20 which is bound on the Southwest by West Twelfth Street (now East Twelfth Street); on the Northeast by a line running midway between and parallel with West Eleventh Street and West Twelfth Street (now East Eleventh and Twelfth Streets); on the Northwest by Nettleton Avenue (now Twenty-first Avenue East); and the Southeast by a line One Hundred Twenty-five feet (125') Southeasterly from, and parallel to the Northwesterly boundary of Block 20.

The Southerly One Hundred feet (Sly 100') of Northwesterly Two Hundred Twenty-five feet (NWly 225') of Southwesterly one-half (SWly 1/2) of Block Twenty (20), on West Eleventh Street, Townsite of Superior, in the City of Superior, Douglas County, Wisconsin.

Lots 450 through 480, Even Numbers inclusive, Subdivision of North 1/2 & SE 1/4 Block 30 on West 15th Street, Lots on West 15th Street, Douglas County, Wisconsin.

Lots 449 through 463, Odd Numbers inclusive, Subdivision of North 1/2 & SE 1/4 Block 30 on West 15th Street, Lots on West 16th Street, Douglas County, Wisconsin.

Lots 386 through 416 Even Numbers inclusive, Chrisfield Johnson's Subdivision of Block 26, West 17th Street, Douglas County, Wisconsin.

Lots 385 through 415 Odd Numbers inclusive, Chrisfield Johnson's Subdivision of Block 26, West 17th Street, Douglas County, Wisconsin.

Lots 226 through 256, Even Numbers inclusive, West 17th Street, Subdivision of Block 16 West 17th Street, Douglas County, Wisconsin.

Lots 225 through 255, Odd Numbers inclusive, Southwest 18th Street, Subdivision of Block 16 West 17th Street, Douglas County, Wisconsin.

The Northeast Quarter (NE 1/4) and the East Half of the East Half of the Northwest Quarter (E 1/2 E 1/2 NW 1/4), Block Seventeen (17), West Fifteenth Street, in Townsite of Superior, City of Superior, Douglas County, Wisconsin.

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The West Half of the East Half of the Northwest Quarter (W 1/2 of E 1/2 of NW 1/4) of Block Seventeen (17), West Fifteenth Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin.

The West Half of the Northwest Quarter (W 1/2 NW 1/4) of Block Seventeen (17), West Fifteenth Street, Townsite of Superior, in the City of Superior, Douglas County, Wisconsin.

The East 1/4 of SE 1/4, Block 17, Townsite of Superior West 15th Street, Douglas County, Wisconsin.

The West 3/4 of SE 1/4, Block 17, Townsite of Superior West 15th Street, Douglas County, Wisconsin.

The North Half (N 1/2) of Block Seventeen (17), West Thirteenth Street, Townsite of Superior, (Superior Division), in City of Superior, Douglas County, Wisconsin.

The South Half (S 1/2) of Block Seventeen (17), West Thirteenth Street, Townsite of Superior, (Superior Division), in City of Superior, Douglas County, Wisconsin.

Fractional Lots Two Hundred Fifty-seven (257), Two Hundred Fifty-nine (259), Two Hundred Sixty-one (261), Two Hundred Sixty-three (263) and Two Hundred Sixty-five (265), West Twelfth Street, Subdivision of Block Eighteen (18), West Eleventh Street, in Townsite of Superior, City of Superior, Douglas County, Wisconsin, together with that part of the West Half (W 1/2) of vacated Villard Street abutting said lots.

All of Block Sixteen (16), on West Twenty-First Street, in the City of Superior, Douglas County, Wisconsin.

All of Block Thirteen (13), excluding right of way, West 21st Street, Townsite of Superior, Douglas County, Wisconsin.

The Northwest Quarter (NW 1/4) and the Southwest Quarter (SW 1/4) of Block Twenty (20), Townsite of Superior West 16th Street, Douglas County, Wisconsin.

The West Half of the West Half of the Northwest Quarter (W 1/2 W 1/2 NW 1/4) of Block Nineteen (19), West Thirteenth Street, Townsite of Superior, in the City of Superior, Douglas County, Wisconsin.

The Southeast Quarter (SE 1/4) of Block Nineteen (19), West Thirteenth Street, Townsite of Superior, (Southwestern Division), in the City of Superior, Douglas County, Wisconsin.

The East One Hundred Twenty feet (E 120') of the Northeast Quarter (NE 1/4) of Block Nineteen (19), West Thirteenth Street, Townsite of Superior, (Southwestern Division), in the City of Superior, Douglas County, Wisconsin.

The Southwest Quarter (SW 1/4) of Block Nineteen (19), West 13th Street, Townsite of Superior, City of Superior, County of Douglas, Wisconsin.

The East Three-Fourths of the Northwest Quarter (E 3/4 NW 1/4), except the East Half of the East Half (E 1/2 E 1/2), Block Nineteen (19), West 13th Street, Townsite of Superior, City of Superior, County of Douglas, Wisconsin.

The East Half of the East Half of the Northwest Quarter (E 1/2 E 1/2 NW 1/4) and the West Eighty feet (W 80') of the Northeast Quarter (NE 1/4) of Block Nineteen (19), West Thirteenth Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin.

The East One-half (E 1/2) of the Northeast Quarter (NE 1/4) and the East One-half (E 1/2) of the Southeast Quarter (SE 1/4) of Block Nineteen (19), West Fifteenth Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin.

The NW 1/4 & W 1/2 of NE 1/4 and W 1/4 of SE 1/4 & E 3/4 of SW 1/4, Block 19, Townsite of Superior of Superior West 15th Street, Douglas County, Wisconsin.

The W 1/2 of the W 1/4 of the SW 1/4 of Block 19, Townsite of Superior West 15th Street, Douglas County, Wisconsin.

Lots 290 through 320, Even Numbers inclusive, West 17th Street, Subdivision of Block 20 West 17th Street, Douglas County, Wisconsin.

Lots 289 through 319, Odd Numbers inclusive, West 18th Street, Subdivision of Block 20 West 17th Street, Douglas County, Wisconsin.

Lots 258 through 288, Even Numbers inclusive, West 20th Street, AND Lots 257 through 287, Odd Numbers inclusive, West 21st Street, all in the Subdivision of Block 17, on West 21st Street, Townsite of Superior, Douglas County, Wisconsin.

Lots 273 through 287, Odd Numbers inclusive, West Fifteenth Street, in Plat of McBean Blocks, being a Subdivision of the Southwest Quarter (SW 1/4) of Block Seventeen (17), West Fifteenth Street, Townsite of Superior, (Southwestern Division), in the City of Superior, Douglas County, Wisconsin.

Lots 258 and 260, Block 18, 15th Street, McBean Blocks, Douglas County, Wisconsin.

Lots 299, 301 & 303, Block 20, 14th Street & alley vacated, McBean Blocks, West 13th Street, Douglas County, Wisconsin.

Lots 393 through 399, Odd Numbers inclusive, Block 25, McBean Blocks, West Thirteenth Street, City of Superior, Douglas County, Wisconsin.

Lots 281 through 287, Odd Numbers inclusive, on West Twelfth Street, in Subdivision of Block Eighteen, West Eleventh Street, Townsite of Superior (Southwestern Division), City of Superior, Douglas County, Wisconsin.

Lots 267 through 279, Odd Numbers inclusive, on West Twelfth Street, in Subdivision of Block Eighteen (18), West Eleventh Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin.

Block Thirteen (13), West Twenty-third Street, except right-of-way, in Townsite of Superior, City of Superior, Douglas County, Wisconsin, together with that part of the West 23rd Street which accrued thereto by reason of vacation thereof.

E 3/4 of Block 12 on West 37th Street, Townsite of Superior, Douglas County, Wisconsin, except right of way.

E 3/4 of Block 11 on West 39th Street, Townsite of Superior, Douglas County, Wisconsin, except right of way.

E 3/4 of Block 12 on West 39th Street, Townsite of Superior, Douglas County, Wisconsin, except right of way.

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NE 1/4 of Block 12 on West 43rd Street, Townsite of Superior, Douglas County, Wisconsin.

That part of Block 10, West 41st Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin, lying north of the following described line: Beginning at the most northerly corner of Fractional Block 8, West 41st Street, Townsite of Superior, thence westerly and parallel with the south line of the Southeast Quarter of Section 35, Township Forty-Nine North, Range 14 West to the northeasterly line of Fractional Block 9, West 43rd Street, Townsite of Superior, and said line there terminating.

That part of Block 11, West 41st Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin lying East of the East right of way line of the former Soo Line Railroad.

Lots 225 through 255, Odd Numbers inclusive, Lots on 16th Street, in the Subdivision of Block 16 on West 15th Street, in the City of Superior, Douglas County, Wisconsin.

Lots 226 through 256, Even Numbers inclusive, Lots on West 15th Street, in the Subdivision of Block 16 on West 15th Street, in the City of Superior, Douglas County, Wisconsin.

(Doc. Nos. 624023, 633082, 725853, 766342, 794160, 795896, 799526, 801654, 802205, 803377, 803498, 803978, 803979, 803733, 803734, 804451, 804524, 804525, 804706, 806050, 806592, 806593, 806973, 809578, 808862, 809996, 810193, 813026, 828601, 829415 & 829526).

Parcel Nos. 02-802-00947-00, 01-801-02976-01, 01-801-02976-03, 01-801-02976-05, 02-802-06614-00, 02-802-01293-00, 01-801-03987-00, 01-801-03125-00, 01-801-03131-00, 01-801-03129-00, 01-801-03128-00, 01-801-03123-00, 01-801-03042-00, 01-801-03046-00, 01-801-03805-00, 01-801-03302-00, 01-801-03294-00, 01-801-03055-00, 01-801-03047-00, 01-801-03047-01, 01-801-03047-02, 01-801-03047-03, 01-801-03047-04, 01-801-03048-00, 01-801-03136-00, 01-801-03145-00, 01-801-04051-00, 01-801-04083-00, 01-801-04706-00, 01-801-04713-00, 01-801-04679-00, 02-802-03804-00, 01-801-03807-00, 01-801-03806-00, 01-801-03326-00, 08-808-09780-00, 08-808-09821-00, 08-808-09823-00, 08-808-09892-00, 08-808-09854-00, 08-808-09856-00, 01-801-03971-00 & 01-801-03955-00.

TRACT K:

That part of the West Half (W 1/2) of Section Thirty-six (36), Township forty-nine (49) North, Range Fourteen (14) West, Douglas County, Wisconsin, more fully described as follows: Commencing at the North quarter corner of said Section 36, Township 49 North, Range 14 West, thence due south along the north-south quarter line, said quarter line being the center line of Bardon Avenue, a distance of 1,456.64 feet to the south property line of 26th Avenue extended, thence south 48 degrees and 36 minutes west along the south property line of 26th Avenue, a distance of 481 feet to the point of beginning, thence continuing in the same straight line a distance of 1,323.53 feet to a point, thence south 89 degrees and 46 minutes west a distance of 151.91 feet to a point, thence South 48 degrees 36 minutes West a distance of 162.43 feet to a point, thence South 41 degrees 24 minutes east a distance of 751 feet to a point, thence north 48 degrees and 36 minutes East a distance of 1,463.36 feet to a point on the west line of Bardon Avenue a distance of 207.10 feet to a point, thence north 41 degrees and 24 minutes west a distance of 495.66 feet to the point of beginning.

(Doc. No. 459590 V 271 P 358)

Parcel No. 01-801-05132-00.

DOCUMENT NO.

AFFIDAVIT OF CORRECTION

DOCUMENT# 890824

Recorded or filed on 08-03-2017 at 02:22 PM TRACY A MIDDLETON DOUGLAS COUNTY RECORDER Fee Amount: \$30.00 FEE EXEMPT: 3 Total Pages: 15 ELECTRONICALLY RECORDED DOCUMENT

This document is exempt from transfer fee pursuant to Wis. Stats. 77.23(3): correction of a document previously recorded.

AFFIANT, John A. Moore, on behalf of the undersigned Murphy Oil USA, Inc., a Delaware corporation, hereby swears or affirms that a certain document titled Special Warranty Deed recorded on the 4th day of October, 2011, as Document Number 845763 which was recorded in Douglas County, State of Wisconsin, contained the following error (if more space is needed, please attach addendum):

The legal description set forth in Attachment A of said document is incomplete.

AFFIANT makes this Affidavit for the purpose of correcting the above document as follows (if more space is needed, please attach addendum):

RETURN TO Danielle M. Bergner, Esq. Michael Best & Friedrich LLP 100 East Wisconsin Ave., Ste. 3300 Milwaukee, WI 53202

The legal descriptions set forth on Exhibit A attached hereto and made a part hereof are hereby incorporated and made part of Attachment A to the above-referenced Special Warranty Deed.

See Attached Exhibit A Parcel Identification Number (PIN)

AFFIANT is the (check one):

- Owner of the property described in the document being corrected. Other (explain: Affiant is the authorized representative of the Grantor named in the above-referenced deed).

The original document (in part or whole) is is not attached to this Affidavit (if original document is not attached, please attach legal description and names of grantors and grantees).

MURPHY OIL USA, INC. Signed: John A. Moore Name/Title: John A. Moore, Sr. Vice President & General Counsel

State of Arkansas) County of Union) ss.

Subscribed and sworn to (or affirmed) before me this 1st day of July, 2017.

Tammy Taylor

TAMMY TAYLOR UNION COUNTY NOTARY PUBLIC - ARKANSAS My Commission Expires September 07, 2024 Commission No. 12400715

Grantor: Murphy Oil USA, INC., a Delaware corporation Grantee: Calumet Superior, LLC, a Delaware corporation

Notary Public, State of Arkansas My Commission (expires) (is): 09/07/2024

THIS INSTRUMENT WAS DRAFTED BY: Danielle M. Berger, Esq. Michael Best & Friedrich LLP

This instrument is not (check one) a conveyance of real property as per s. 77.21(1) Wisconsin Statutes. (A Wisconsin Real Estate Transfer Return is required for instruments that do convey real property).

EXHIBIT A
LEGAL DESCRIPTIONS INCORPORATED AND MADE PART OF
ATTACHMENT A TO SPECIAL WARRANTY DEED DOCUMENT NO. 845763

Parcel 1:

Block Thirteen (13) on West 31st Street, Block Fourteen (14) on West 31st Street, Block Thirteen (13) on West 33rd Street, Fractional Block Fourteen (14) on West 33rd Street, Block Fourteen (14) on West 29th Street, Subject to Northern Pacific Railway Company easement for right-of-way on Newton Avenue, Block Sixteen (16) on West 29th Street, Block Eighteen (18) on West 29th Street, Block Twenty (20) on West 29th Street and Block Twenty-two (22) on West 29th Street, all in the Townsite of Superior, now City of Superior, Douglas County, Wisconsin, together with vacated West 30th, 31st, 32nd, 33rd, and 34th streets and vacated 21st, 22nd and 23rd avenues East, lying East of Hill Avenue.

Parcel 2:

Blocks Fifteen (15), Sixteen (16) and Seventeen (17) of West 31st Street, that part lying East of the East line of Hill Avenue of Blocks, Eighteen (18), Nineteen (19) and Twenty (20) on West 31st Street, Block Fifteen (15) on West 33rd Street and that part lying East of the East line of Hill Avenue of Blocks Sixteen (16) and Seventeen (17) on West 33rd Street, all in the Townsite of Superior, Now City of Superior, Douglas County, Wisconsin, together with the vacated West 30th, 31st, 32nd, 33rd, and 34th streets and Vacated 21st, 22nd and 23rd avenues East, lying East of Hill Avenue.

Parcel No. 08-808-09689-00

Property Address: 4210 Hill Avenue, Superior, WI

AND

Block 30 on W 19th Street, EXCEPT the Southeast Quarter (SE1/4), the West One-half of Block 23 on W 19th Street, Northwest Quarter (NW1/4) of Block 25 on W 21st Street, and all of Blocks 25, 26, 27, 28, 29, 31 and 32 on W 19th Street and Blocks 27 and 29 on West 21st Street, all in the Townsite of Superior, City of Superior, Douglas County, Wisconsin.

Part of Parcel No. 02-802-00815-00

Property Address: Vacant Land on Hill Avenue

845763

SPECIAL WARRANTY DEED

Document Number

Document Name

DOCUMENT# 845763

Recorded or Filed on
October 04, 2011 9:15 AM
GAYLE I. WAHNER
DOUGLAS COUNTY RECORDER
SUPERIOR, WI 54880-2769
Fee Amount: \$30.00
Transfer Fee: \$47,052.00
Total Pages 13

THIS DEED, made between MURPHY OIL USA, INC., a Delaware corporation, as to Tracts A, D, E, F, G, H and J; MURPHY OIL USA, INC., a Delaware corporation, f/k/a New Murphy Oil USA, Inc., f/k/a Murphy Oil Corporation, as to Tracts B and I; and MURPHY OIL USA, INC., a Delaware corporation, f/k/a Murphy Corporation, a Louisiana corporation, as to Tract C and Tract K ("Grantor," whether one or more), and CALUMET SUPERIOR, LLC, a Delaware limited liability company ("Grantee"),

for and in consideration of good and valuable consideration paid by Grantee, Grantor hereby grants, sells and conveys to Grantee the following described real estate, together with the rents, profits, fixtures, improvements, structures and other appurtenant interests constituting real property, located in Douglas County, State of Wisconsin ("Property"); subject, however, to (i) all easements, rights-of-way, covenants, restrictions, agreements, claims or other matters, rights or encumbrances of record (or referred to or described or discoverable in recorded documents or otherwise known to Grantee), (ii) liens for governmental taxes, assessments or charges, (iii) public or private rights used, laid out or dedicated for road or highway purposes, (iv) rights of owners and governmental regulation of pipelines through public rights of way or privately owned land, respectively, (v) rights of easement, or any encroachments, in and to all railroad switches, sidetracks, spur tracks or similar rights of way, and (vi) any or all reservations of minerals and mineral rights (collectively, "Permitted Encumbrances").

See Attachment A - Legal Description.

Together with all of Grantor's rights and interests in and to all pipelines serving the Property described in Attachment A and all easements and rights appurtenant thereto, and all interest of Grantor, being no less than a 12% interest, in a 7.5 mile 10" gas main extending from the Great Lakes Gas Transmission mainline to a delivery point near the Superior Refinery as more fully described in the Construction, Ownership & Operating Agreement for a Natural Gas Main in Superior, WI, dated as of November 1, 2000, between Superior Water Light & Power Company and Murphy Oil USA, Inc.

Grantor does hereby bind Grantor and Grantor's successors and assigns to forever warrant and defend that the title to the Property is good, indefeasible, in fee simple and free and clear of all encumbrances arising by, through, or under Grantor, except for Permitted Encumbrances.

Dated September 30, 2011

MURPHY OIL USA, INC.

By: [Signature] [(SEAL)]

Name: Thomas McKinlay

Title: President

ACKNOWLEDGMENT

STATE OF ARKANSAS

Union COUNTY

Personally came before me on September 30, 2011

the above-named Thomas McKinlay

to me known to be the person(s) who executed the foregoing instrument and acknowledged the same.

* [Signature]

Notary Public, State of ARKANSAS

My Commission (is permanent) (expires: 2-1-2013)

THIS INSTRUMENT DRAFTED BY:

Bryan C. Esch, Esq.

DeWitt Ross & Stevens S.C.

Recording Area

Name and Return Address

Tamarah R. Feigl, Esq.
Fulbright & Jaworski L.L.P.

Fulbright Tower

1301 McKinney, Suite 5100

Houston, TX 77010-3095

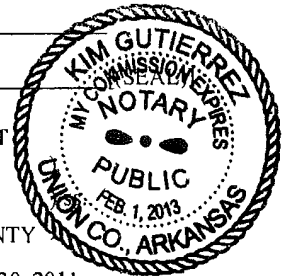
First Am.
30ck

See Attachment "A"

Parcel Identification Number (PIN)

This is not homestead property.

(is) (is not)



845763

**Attachment A
to Special Warranty Deed
from Murphy Oil USA, Inc. to Calumet Superior, LLC
dated September 30, 2011**

Legal Description

TRACT A:

Lots 354 through 368, even numbers inclusive, West 18th Street, Bay Front Division. (Doc. No. 805831).

Parcel No. 02-802-01033-00.

Lots 322 through 352, even numbers inclusive, West 19th Street, Bay Front Division. (Doc. No. 766342).

Parcel No. 01-801-04149-00.

Fractional Lots 345 through 351, odd numbers inclusive, West 19th Street, Bay Front Division. (Doc. No. 806050).

Parcel No. 01-801-04161-00.

Lots 353 through 367, odd numbers inclusive, on West 19th Street, Bay Front Division. (Doc. No. 805831).

Parcel No. 02-202-01041-00.

Lots 354 through 384, even numbers inclusive, on West 19th Street, Bay Front Division. (Doc. Nos. 766342 & 805831).

Parcel No. 02-202-01054-00.

Lots 290 through 320, even numbers inclusive, West 20th Street, Bay Front Division. (Doc. No. 766342).

Parcel No. 01-801-04169-00.

Lots 321 through 352, inclusive, West 20th Street, Bay Front Division. (Doc. Nos. 766342 & 806050).

Parcel No. 01-801-04185-00.

Lots 386 through 400, even numbers inclusive, West 20th Street, Bay Front Division. (Doc. Nos. 805831, 806050 & 807145).

Parcel No. 02-802-01099-00.

Lots 353 through 384, inclusive, West 20th Street, Bay Front Division. (Doc. Nos. 766342 & 806050).

Parcel No. 02-802-01066-00.

Lots 289 through 319, odd numbers inclusive, West 21st Street, Bay Front Division. (Doc. Nos. 766342 & 805069).

Parcel No. 01-801-04218-00.

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Lots 321 through 351, odd numbers inclusive, West 21st Street, Bay Front Division. (Doc. Nos. 766342 & 800813).

Parcel No. 01-801-04250-00.

Lots 353 through 415, odd numbers inclusive, West 21st Street, Bay Front Division. (Doc. No. 766342).

Parcel No. 02-802-01105-00.

Lots 385 through 416, inclusive, Herrick's Subdivision of Block 25, West 15th Street. (Doc. No. 794160).

Parcel No. 02-802-02810-00.

Lots 321 to 351, odd numbers inclusive, Linler Place, West 15th Street. (Doc. No. 794160).

Parcel No. 01-801-04630-00.

Lots 289 through 293, Block 20, McBean Blocks, West Thirteenth Street, Lots on West Fourteenth Street; together with that part of the alley which accrued thereto by reason of the vacation thereof. (Doc. Nos. 766592 & 802863).

Parcel No. 01-801-04674-00.

Lots 338 through 352, even numbers inclusive, Block 21, 16th Street, McBean Blocks West 17th Street. (Doc. No. 794160).

Parcel No. 01-801-04738-00.

Lots 1 through 18, inclusive, and Lots 20 through 26, inclusive, Block 5; Lots 1, 2 and 3 and Lots 21 through 26, inclusive, Block 6, Lots 15, 16, 17, 18, and 19, Block 4, all in Dudley Park Addition to South Superior; together with that part of the alleys, Caitlin Avenue, Fisher Avenue & Fifty-Third Street which accrued thereto by reason of the vacation thereof. (Doc. Nos. 835187 & 837523).

Parcel Nos. 08-808-03384-00, 08-808-03409-00, 08-808-03372-00 & 08-808-03412-00.

Lots 23, 24, 25 and 26, Block 5, Lots 2 through 9, inclusive, Block 6, all in Harriet Place Addition to South Superior; together with that part of Caitlin Avenue and Fifty-Third Street which accrued thereto by reason of the vacation thereof. (Doc. Nos. 835187 & 837523).

Parcel Nos. 08-808-04104-00 & 08-808-04109-00.

Lots 329 through 351, odd numbers inclusive, West 13th Street, Burhan's Subdivision of Blocks 21 & 22, West 13th Street.

Lots 322 through 352, even numbers inclusive, West 13th Street, Burhan's Subdivision of Blocks 21 & 22, West 13th Street.

Lots 321 through 351, odd numbers inclusive, West 14th Street, Burhan's Subdivision of Blocks 21 & 22, West 13th Street.

Lots 322 through 330, even numbers inclusive, West 12th Street, Burhan's Subdivision of Blocks 21 & 22, West 13th Street.

Lots 321 through 327, odd numbers inclusive, West 13th Street, Burhan's Subdivision of Blocks 21 & 22, West 13th Street.

Together with that part of 12th Street which accrued thereto by reason of the vacation thereof.

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(Doc. Nos. 806050, 806973 and 723202).

Parcel Nos. 01-801-04426-00, 01-801-04442-00, 01-801-04410-00, 01-801-04397-00 & 01-801-04412-00.

Lots 225 through 271, odd numbers inclusive, Frey's Subdivision of Block 16 and of the Southeasterly One Half of Block 18, on West 19th Street. (Doc. No. 766342).

Parcel No. 01-801-04551-00.

Lots 226 through 272, even numbers inclusive, Frey's Subdivision of Block 16 and of the Southeasterly One Half of Block 18, on West 19th Street. (Doc. No. 766342).

Parcel No. 01-801-04528-00.

Lots 273 through 287, odd numbers inclusive, Hanson and Streatfield's Subdivision of Block 18 West Thirteenth Street, Lots on West Fourteenth Street. (Doc. No. 803730).

Parcel No. 01-801-04593-00.

Lots 257 through 265, inclusive, and Lots 267 through 271, odd numbers inclusive, Hanson and Streatfield's Subdivision of Block 18 West Thirteenth Street, Lots on West Fourteenth Street. (Doc. No. 804858).

Parcel Nos. 01-801-04583-00 and 01-801-04566-00.

Blocks 17, 19 and 22 and the Northeast Quarter and the South Half of Block 21, Townsite of Superior West 17th Street. (Doc. No. 794160).

Parcel No. 01-801-03209-00.

The Northeast Quarter of Section 12, Township 48 North, Range 14 West, except that part thereof lying North of County Highway A, and except Railroad Rights of Way, and except the following described property: That part of the Southeast Quarter of the Northeast Quarter of Section 12, Township 48 North, Range 14 West, described as follows: Beginning at the Southeast corner of the Northeast Quarter of Section 12; thence North 0 degrees 35 minutes 7 seconds East, along the East line of said Northeast Quarter, a distance of 362.02 feet; thence South 39 degrees 47 minutes 53 seconds West, a distance of 466.60 feet to the South line of said Northeast Quarter; thence South 89 degrees 19 minutes 05 seconds East, along said South line, a distance of 294.98 feet to the point of beginning; and except the following described property: That part of the Southeast Quarter of the Northeast Quarter of Section 12, Township 48 North, Range 14 West, described as follows: Commencing at the Southeast corner of the Northeast Quarter of Section 12, thence North 0 degrees 35 minutes 07 seconds East, along the East line of said Northeast Quarter, a distance of 362.02 feet to the point of beginning; thence continuing North 0 degrees 35 minutes 07 seconds East, along said East line, a distance of 656.36 feet; thence South 34 degrees 03 minutes 51 seconds West a distance of 1219.58 feet to the South line of said Northeast Quarter; thence South 89 degrees 19 minutes 05 seconds East, along said South line, a distance of 377.78 feet; thence North 39 degrees 47 minutes 53 seconds East a distance of 466.60 feet to the point of beginning. (Doc. No. 832177)

Parcel Nos. TS-030-01326-00, TS-030-01329-00, TS-030-01327-00 & TS-030-01328-00.

Lots 14 through 26, inclusive, Block 5, Lots 1 through 17, inclusive, Block 6, Lots 5 through 8, inclusive, Block 7, Lots 1 through 8, inclusive, Block 8, all of Block 9, all in Short Line Addition to South Superior;

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together with that part of the alleys, Fifty-Fourth Street, Fifty-Fifth Street, Clough Avenue and Weeks Avenue which accrued thereto by reason of the vacation thereof. (Doc. Nos. 835187 and 837523).

Parcel Nos. 08-808-07179-00, 08-808-07197-00, 08-808-07214-00, 08-808-07218-00 & 08-808-07226-00.

Lots 481 through 512, inclusive, Lots on West 20th and West 21st Streets, in W.H. Webb's Subdivision of Block Thirty-one (31) on West 21st Street. (Doc. No. 805831).

Parcel No. 02-802-06749-00.

The Southeast Quarter of the Northeast Quarter of the Northwest Quarter of Section 2, Township 48 North, Range 14 West. (Doc. No. 835187).

Parcel No. 08-808-09932-00.

Block 13, Townsite of Superior West 13th Street, City of Superior. (Doc. No. 794162).

Parcel No. 01-801-03032-00.

Lots 258 through 288, even numbers inclusive, and Lots 257 through 287, odd numbers inclusive, SW 17th Street, Subdivision of Block 18 West 17th Street, City of Superior. (Doc. No. 794160).

Parcel No. 01-801-04019-00.

Block 23, West 13th Street, Townsite of Superior. (Doc. Nos. 803374, 804371 & 806050).

Parcel Nos. 02-802-00698-01, 02-802-00698-00, 02-802-00699-00, 02-802-00734-00, 02-802-00736-00 and 02-802-00700-00.

Lots 300, 302, 304, 1301, 1303 and 1305, Subdivision of Part of the Northeast Quarter of Block 20, West Thirteenth Street, Lots on Becker Avenue, City of Superior; together with the alley which accrued thereto by reason of the vacation thereof. (Doc. Nos. 802863 and 806050)

Parcel Nos. 01-801-03856-00 & 01-801-03852-00.

All of Block 31 on West 14th Street, except right of way for Bardon Avenue, Townsite of Superior. (Doc. No. 801654).

Parcel No. 02-802-00735-00.

Lots 225 through 255, odd numbers inclusive, in the Subdivision of Blocks 16 and 17, West 12th Street, Townsite of Superior. (Doc. Nos. 808863, 812595 & 819919).

Parcel Nos. 01-801-03808-00, 01-801-03814-00 & 01-801-03815-00.

The Southeast Quarter and the Southwest Quarter and the East Half of the Northwest Quarter and the West 150 feet of the Northeast Quarter, Block 18, Townsite of Superior, West 15th Street.

The West Half of the Northwest Quarter, Block 18, West Fifteenth Street, Townsite of Superior. The Westerly Quarter of the Northeast Quarter of Block 20, Townsite of Superior, West Fifteenth Street.

The East 3/8ths of the Northeast Quarter and the East 2/5ths of the West 5/8ths of the Northeast Quarter, Block 20, West Fifteenth Street, Townsite of Superior.

The East 25 feet of the West 3/8ths of the Northeast Quarter of Block 20, West Fifteenth Street, Townsite of Superior.

The Northwest Quarter, Block 20, Townsite of Superior, West Fifteenth Street.
The Southwest Quarter, Block 20, Townsite of Superior, West Fifteenth Street.
The Southeast Quarter, Block 20, Townsite of Superior, West Fifteenth Street.
The North Half of Block 21, Townsite of Superior, West Fifteenth Street.
Block 22, Townsite of Superior, West Fifteenth Street.

(Doc. Nos. 794160 and 801793)
Parcel Nos. 01-801-03133-00, 01-801-03147-00 & 01-801-03148-00.

A certain piece of land located in the Northeast Quarter of Block Twenty, on West Thirteenth Street, in Townsite of Superior, City of Superior, Douglas County, Wisconsin, described as follows: Beginning at a point on the Westerly side of Becker Avenue Seventy-eight feet Southerly from the Northeasterly corner of the Northeasterly Quarter of Block 20 on West Thirteenth Street; thence running Southerly along Becker Avenue Fifty feet to the Southeasterly corner of said Quarter Block; thence Westerly along the Southerly line of said Block and at right angles to Becker Avenue One Hundred Seventeen feet; thence Northerly and parallel to Becker Avenue Fifty feet; thence Easterly and parallel to West Thirteenth Street One Hundred Seventeen feet to the place of beginning; together with that portion of vacated alley abutting Block.

(Doc. Nos. 766592 and 802863)
Parcel No. 01-801-03855-00.

Block 23 & East 14th Street Vacated, Townsite of Superior, West 15th Street.
Block 24, Townsite of Superior, West 15th Street.
Block 26, Townsite of Superior, West 15th Street.
Block 27 & Bardon Avenue Vacated, Townsite of Superior, West 15th Street.
Block 28 & Bardon Avenue Vacated, Townsite of Superior, West 15th Street.
Block 29, Townsite of Superior, West 15th Street.
SW 1/4, Block 30, Townsite of Superior, West 15th Street.
Fractional Block 31, Except R/W, Townsite of Superior, West 15th Street.
Block 32, Except R/W, Townsite of Superior, West 15th Street.
Block 34, Except R/W, Townsite of Superior, West 15th Street.

(Doc. Nos. 794160, 801654 & Volume 508, Page 705).
Parcel No. 02-802-00736-00.

The Southwest Quarter of Block 23 on West 17th Street, Townsite of Superior.
The Northwest Quarter of Block 24 on West 17th Street, Townsite of Superior.
Block 29 on West 17th Street, Townsite of Superior.
The South Half of Block 30 on West 17th Street, Townsite of Superior.
The Northwest Quarter of Block 32 on West 17th Street, Townsite of Superior.
Block 36, except Railroad right of way and North 28th Street, on West 17th Street, Townsite of Superior.

(Doc. No. 801654)

The East Half of Block 23 on West 17th Street, Townsite of Superior.
The Northwest Quarter of Block 23 on West 17th Street, Townsite of Superior.
The West Half of the Northeast Quarter of Block 24 on West 17th Street, Townsite of Superior.
The East Half of the Northeast Quarter of Block 24 on West 17th Street, Townsite of Superior.
The South Half of Block 24 and Bardon Avenue Vacated on West 17th Street, Townsite of Superior.
Block 25 and Bardon Avenue Vacated on West 17th Street, Townsite of Superior.
Block 27 on West 17th Street, Townsite of Superior.

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The North Half, the Southeast Quarter and the East Half of the Southwest Quarter of Block 28 on West 17th Street, Townsite of Superior.

The West Half of the Southwest Quarter of Block 28 on West 17th Street, Townsite of Superior.

The Northwest Quarter of Block 30 on West 17th Street, Townsite of Superior.

The West Half of the Northeast Quarter of Block 30 on West 17th Street, Townsite of Superior.

The East Half of the Northeast Quarter of Block 30 on West 17th Street, Townsite of Superior.

Block 31 on West 17th Street, Townsite of Superior.

The Northeast Quarter of Block 32 on West 17th Street, Townsite of Superior.

The South Half of Block 32 on West 17th Street, Townsite of Superior.

The Fractional Block 33, except Right of Way, on West 17th Street, Townsite of Superior.

The Southwest Quarter and the Southeast Quarter of Block 34 on West 17th Street, Townsite of Superior.

The East Quarter of the Northwest Quarter of Block 34 on West 17th Street, Townsite of Superior.

The East 3/4 of the Northeast Quarter of Block 34 on West 17th Street, Townsite of Superior.

(Doc. No. 794160)

Parcel No. 02-802-00763-00.

Blocks 15, 17 and 19, Townsite of Superior on West 19th Street.

The West Half of Block 18, Townsite of Superior on West 19th Street.

The Fractional Blocks of 20 and 21, Townsite of Superior on West 19th Street.

Blocks 13 and 14, Townsite of Superior on West 19th Street.

(Doc. No. 766342)

Parcel No. 01-801-03246-00.

Lots 353, 355 and 371, Bay Front Division, West 23rd Street.

Lots 401 and 403, Bay Front Division, West 22nd Street.

Lots 380, 382 and 384, Bay Front Division, West 22nd Street.

(Doc. Nos. 624956, 603131, 630951 and 807780).

Parcel No. 02-802-00872-00.

TRACT B:

Lots 354 through 416, even numbers inclusive, West 21st Street, Bay Front Division. (Doc. No. 528677).

Parcel No. 02-802-01104-00.

Blocks 28, 30 and 32, Townsite of Superior, West 21st Street.

Blocks 25, 27, 29, 31 and 32, Townsite of Superior, West 23rd Street.

Lots 354 through 400, even numbers inclusive, Bay Front Division, West 21st Street.

Lots 353 through 383, odd numbers inclusive, Bay Front Division, West 22nd Avenue.

Lots 385 through 399, odd numbers inclusive, Bay Front Division, West 22nd Street.

Lots 405 through 415, odd numbers inclusive, Bay Front Division, West 22nd Street.

Lots 354 through 378, even numbers inclusive, Bay Front Division, West 22nd Street.

Lots 357 through 369, odd numbers inclusive and Lots 373 through 383, odd numbers inclusive, Bay Front Division, West 23rd Street.

(Doc. Nos. 505366, 518749 and 528677).

Parcel No. 02-802-00872-00.

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Lots 290 through 320, even numbers inclusive, Bay Front Division, West 21st Street.
Lots 322 through 352, even numbers inclusive, Bay Front Division, West 21st Street.
Lots 305 through 351, odd numbers inclusive, Bay Front Division, West 22nd Street.
Lots 314 through 352, even numbers inclusive, Bay Front Division, West 22nd Street.
Lots 321 through 341, odd numbers inclusive, Bay Front Division, West 23rd Street.
Lots 344 through 352, even numbers inclusive, Bay Front Division, West 23rd Street.
Lots 347, 349 and 351, Bay Front Division, West 23rd Street.
Lots 289 through 303, odd numbers inclusive, Nobles Subdivision of Block 20, West 21st Street.
Block 18, Townsite of Superior, West 21st Street.
Southwest Quarter of Block Seventeen, Townsite of Superior, West 23rd Street.
Lots 343 through 351, odd numbers inclusive, Bay Front Division, West 24th Street.

(Doc. Nos. 505366, 513195, 514949, 520340 and 528677).
Parcel No. 01-801-03339-00.

TRACT C:

Blocks 24, 26, 28 and 30, Townsite of Superior, West 23rd Street;
Blocks 22, 23, 24, 25, 26, 27, 28, 29 and 30, Townsite of Superior, West 25th Street;
Block 32, Townsite of Superior, West 26th Street;
Blocks 23, 24, 25, 26, 27, 28, 29, 30, 31 and 32, Townsite of Superior, West 27th Street, together with that part of West 27th Street which accrued thereto by reason of the vacation thereof.
Blocks 23, 24, 25, 26, 27, 28, 29, 30 and 31, Townsite of Superior, West 29th Street, together with that part of West 29th Street which accrued thereto by reason of the vacation thereof, except those parts of Blocks 30 and 31 lying East of the East line of the Wisconsin Central Railway Company Right-of-Way.

(Doc. Nos. 453215, 405966 and 458930).
Parcel No. 02-802-00872-00.

Blocks 15, 16, 18, and 20, Townsite of Superior, West 23rd Street.
The North Half and the Southeast Quarter of Block 17, Townsite of Superior, West 23rd Street.
Blocks 19 and 22, Townsite of Superior, West 23rd Street, except Lots 314, 316, 318 and 320, Bay Front Division, West 22nd Street, and Lots 343 through 352, inclusive, Bay Front Division.
Blocks 13, 14, 15, 16, 17, 18, 19, 20, 21 and 22, Townsite of Superior, West 25th Street.
Blocks 13, 14, 15, 16, 17, 18, 19, 20, 21 and 22, Townsite of Superior, West 27th Street.
Blocks 13, 15, 17, 19 and 21, Townsite of Superior, West 29th Street.
Together with that part of the streets and avenues which accrued thereto by reason of the vacation thereof.

(Doc. Nos. 405966 and 453215).
Parcel No. 01-801-03339-00.

TRACT D:

Lots 354 through 384, even numbers inclusive, Bay Front Division, West 23rd Street. (Doc. No. 453215).

Parcel No. 02-802-00872-00.

Lots 330 through 342, even numbers inclusive, Bay Front Division, West 23rd Street.
Lots 337, 339 and 341, Bay Front Division, West 24th Street.

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(Doc. No. 453215).
Parcel No. 01-801-03339-00.

TRACT E:

Lot 386, Bay Front Division, West 22nd Street. (Doc. No. 315814).
Parcel No. 02-802-00872-00.

TRACT F:

Block 23, Townsite of Superior, West 23rd Street (V 143 P 609).
Parcel No. 02-802-00872-00.

TRACT G:

That certain triangular shaped tract of land described last in deed dated August 30, 1957, from Northwestern Improvement Company to Northern Pacific Railway Company recorded January 2, 1958, in Book 254, Page 427, records of Douglas County, Wisconsin, said tract being described in said deed for reference as follows:

“A triangle of land comprising all of the Northwest Quarter Southwest Quarter (NW 1/4SW 1/4) of Section 36, Township 49 North, Range 14 West, Fourth Principal Meridian, which is situated Northwesterly of the right of way of the Northern Pacific Railway Company, being the same premises described as Parcel No. 1 in deeds recorded in Book 109 of Deeds on Pages 526 and 528, as Document Nos. 186157 and 186158 respectively, records of said county.” (Document No. 840739)

Parcel No. 08-808-10047-00.

TRACT H:

The Southeast Quarter of Block 30 on West Nineteenth Street, Townsite of Superior, Douglas County, Wisconsin. (Document No. 840739)

Parcel No. 02-802-00830-00.

TRACT I:

North Half (N 1/2) of Fractional Block Thirteen (13), West Thirty-fifth (35th) Street, Townsite of Superior, according to the recorded plat or plats thereof on file and of record in the Office of the Register of Deeds in and for Douglas County, Wisconsin; together with that part of West 34th Street which accrued thereto by reason of the vacation thereof.

Block 18, West 21st Street, Townsite of Superior, Douglas County, Wisconsin.

(Doc. Nos. 522304, 528677 & 777319).
Parcel Nos. 08-808-09743-00 & 01-801-03304-00.

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TRACT J:

The Southwest Quarter (SW 1/4) of Block Twenty-five (25), Townsite of Superior West 31st Street, according to the recorded plat or plats thereof on file and of record in the Office of the Register of Deeds in and for Douglas County, Wisconsin.

The Southeast Quarter (SE 1/4) of Block Fifteen (15), Townsite of Superior West 37th Street, according to the recorded plat or plats thereof on file and of record in the Office of the Register of Deeds in and for Douglas County, Wisconsin.

The Southeasterly One Hundred Seventy-five feet (SEly 175') of the Southwesterly Half (SWly 1/2) of Block Twenty (20), West Eleventh Street, Township of Superior (Southwestern Division), in the City of Superior, Douglas County, Wisconsin.

The Northwesterly One Hundred Twenty-five feet (NWly 125') of the Southwesterly One-Half (SWly 1/2) of Block Twenty (20), West Eleventh Street, Townsite of Superior, in the City of Superior, Douglas County, Wisconsin, being that part of said Block 20 which is bound on the Southwest by West Twelfth Street (now East Twelfth Street); on the Northeast by a line running midway between and parallel with West Eleventh Street and West Twelfth Street (now East Eleventh and Twelfth Streets); on the Northwest by Nettleton Avenue (now Twenty-first Avenue East); and the Southeast by a line One Hundred Twenty-five feet (125') Southeasterly from, and parallel to the Northwesterly boundary of Block 20.

The Southerly One Hundred feet (Sly 100') of Northwesterly Two Hundred Twenty-five feet (NWly 225') of Southwesterly one-half (SWly 1/2) of Block Twenty (20), on West Eleventh Street, Townsite of Superior, in the City of Superior, Douglas County, Wisconsin.

Lots 450 through 480, Even Numbers inclusive, Subdivision of North 1/2 & SE 1/4 Block 30 on West 15th Street, Lots on West 15th Street, Douglas County, Wisconsin.

Lots 449 through 463, Odd Numbers inclusive, Subdivision of North 1/2 & SE 1/4 Block 30 on West 15th Street, Lots on West 16th Street, Douglas County, Wisconsin.

Lots 386 through 416 Even Numbers inclusive, Chrisfield Johnson's Subdivision of Block 26, West 17th Street, Douglas County, Wisconsin.

Lots 385 through 415 Odd Numbers inclusive, Chrisfield Johnson's Subdivision of Block 26, West 17th Street, Douglas County, Wisconsin.

Lots 226 through 256, Even Numbers inclusive, West 17th Street, Subdivision of Block 16 West 17th Street, Douglas County, Wisconsin.

Lots 225 through 255, Odd Numbers inclusive, Southwest 18th Street, Subdivision of Block 16 West 17th Street, Douglas County, Wisconsin.

The Northeast Quarter (NE 1/4) and the East Half of the East Half of the Northwest Quarter (E 1/2 E 1/2 NW 1/4), Block Seventeen (17), West Fifteenth Street, in Townsite of Superior, City of Superior, Douglas County, Wisconsin.

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The West Half of the East Half of the Northwest Quarter (W 1/2 of E 1/2 of NW 1/4) of Block Seventeen (17), West Fifteenth Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin.

The West Half of the Northwest Quarter (W 1/2 NW 1/4) of Block Seventeen (17), West Fifteenth Street, Townsite of Superior, in the City of Superior, Douglas County, Wisconsin.

The East 1/4 of SE 1/4, Block 17, Townsite of Superior West 15th Street, Douglas County, Wisconsin.

The West 3/4 of SE 1/4, Block 17, Townsite of Superior West 15th Street, Douglas County, Wisconsin.

The North Half (N 1/2) of Block Seventeen (17), West Thirteenth Street, Townsite of Superior, (Superior Division), in City of Superior, Douglas County, Wisconsin.

The South Half (S 1/2) of Block Seventeen (17), West Thirteenth Street, Townsite of Superior, (Superior Division), in City of Superior, Douglas County, Wisconsin.

Fractional Lots Two Hundred Fifty-seven (257), Two Hundred Fifty-nine (259), Two Hundred Sixty-one (261), Two Hundred Sixty-three (263) and Two Hundred Sixty-five (265), West Twelfth Street, Subdivision of Block Eighteen (18), West Eleventh Street, in Townsite of Superior, City of Superior, Douglas County, Wisconsin, together with that part of the West Half (W 1/2) of vacated Villard Street abutting said lots.

All of Block Sixteen (16), on West Twenty-First Street, in the City of Superior, Douglas County, Wisconsin.

All of Block Thirteen (13), excluding right of way, West 21st Street, Townsite of Superior, Douglas County, Wisconsin.

The Northwest Quarter (NW 1/4) and the Southwest Quarter (SW 1/4) of Block Twenty (20), Townsite of Superior West 16th Street, Douglas County, Wisconsin.

The West Half of the West Half of the Northwest Quarter (W 1/2 W 1/2 NW 1/4) of Block Nineteen (19), West Thirteenth Street, Townsite of Superior, in the City of Superior, Douglas County, Wisconsin.

The Southeast Quarter (SE 1/4) of Block Nineteen (19), West Thirteenth Street, Townsite of Superior, (Southwestern Division), in the City of Superior, Douglas County, Wisconsin.

The East One Hundred Twenty feet (E 120') of the Northeast Quarter (NE 1/4) of Block Nineteen (19), West Thirteenth Street, Townsite of Superior, (Southwestern Division), in the City of Superior, Douglas County, Wisconsin.

The Southwest Quarter (SW 1/4) of Block Nineteen (19), West 13th Street, Townsite of Superior, City of Superior, County of Douglas, Wisconsin.

The East Three-Fourths of the Northwest Quarter (E 3/4 NW 1/4), except the East Half of the East Half (E 1/2 E 1/2), Block Nineteen (19), West 13th Street, Townsite of Superior, City of Superior, County of Douglas, Wisconsin.

The East Half of the East Half of the Northwest Quarter (E 1/2 E 1/2 NW 1/4) and the West Eighty feet (W 80') of the Northeast Quarter (NE 1/4) of Block Nineteen (19), West Thirteenth Street, Townsite of superior, City of Superior, Douglas County, Wisconsin.

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The East One-half (E 1/2) of the Northeast Quarter (NE 1/4) and the East One-half (E 1/2) of the Southeast Quarter (SE 1/4) of Block Nineteen (19), West Fifteenth Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin.

The NW 1/4 & W 1/2 of NE 1/4 and W 1/4 of SE 1/4 & E 3/4 of SW 1/4, Block 19, Townsite of Superior of Superior West 15th Street, Douglas County, Wisconsin.

The W 1/2 of the W 1/4 of the SW 1/4 of Block 19, Townsite of Superior West 15th Street, Douglas County, Wisconsin.

Lots 290 through 320, Even Numbers inclusive, West 17th Street, Subdivision of Block 20 West 17th Street, Douglas County, Wisconsin.

~ Lots 289 through 319, Odd Numbers inclusive, West 18th Street, Subdivision of Block 20 West 17th Street, Douglas County, Wisconsin.

Lots 258 through 288, Even Numbers inclusive, West 20th Street, AND Lots 257 through 287, Odd Numbers inclusive, West 21st Street, all in the Subdivision of Block 17, on West 21st Street, Townsite of Superior, Douglas County, Wisconsin.

Lots 273 through 287, Odd Numbers inclusive, West Fifteenth Street, in Plat of McBean Blocks, being a Subdivision of the Southwest Quarter (SW 1/4) of Block Seventeen (17), West Fifteenth Street, Townsite of Superior, (Southwestern Division), in the City of Superior, Douglas County, Wisconsin.

Lots 258 and 260, Block 18, 15th Street, McBean Blocks, Douglas County, Wisconsin.

Lots 299, 301 & 303, Block 20, 14th Street & alley vacated, McBean Blocks, West 13th Street, Douglas County, Wisconsin.

Lots 393 through 399, Odd Numbers inclusive, Block 25, McBean Blocks, West Thirteenth Street, City of Superior, Douglas County, Wisconsin.

Lots 281 through 287, Odd Numbers inclusive, on West Twelfth Street, in Subdivision of Block Eighteen, West Eleventh Street, Townsite of Superior (Southwestern Division), City of Superior, Douglas County, Wisconsin.

Lots 267 through 279, Odd Numbers inclusive, on West Twelfth Street, in Subdivision of Block Eighteen (18), West Eleventh Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin.

Block Thirteen (13), West Twenty-third Street, except right-of-way, in Townsite of Superior, City of Superior, Douglas County, Wisconsin, together with that part of the West 23rd Street which accrued thereto by reason of vacation thereof.

E 3/4 of Block 12 on West 37th Street, Townsite of Superior, Douglas County, Wisconsin, except right of way.

E 3/4 of Block 11 on West 39th Street, Townsite of Superior, Douglas County, Wisconsin, except right of way.

E 3/4 of Block 12 on West 39th Street, Townsite of Superior, Douglas County, Wisconsin, except right of way.

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NE 1/4 of Block 12 on West 43rd Street, Townsite of Superior, Douglas County, Wisconsin.

That part of Block 10, West 41st Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin, lying north of the following described line: Beginning at the most northerly corner of Fractional Block 8, West 41st Street, Townsite of Superior, thence westerly and parallel with the south line of the Southeast Quarter of Section 35, Township Forty-Nine North, Range 14 West to the northeasterly line of Fractional Block 9, West 43rd Street, Townsite of Superior, and said line there terminating.

That part of Block 11, West 41st Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin lying East of the East right of way line of the former Soo Line Railroad.

Lots 225 through 255, Odd Numbers inclusive, Lots on 16th Street, in the Subdivision of Block 16 on West 15th Street, in the City of Superior, Douglas County, Wisconsin.

Lots 226 through 256, Even Numbers inclusive, Lots on West 15th Street, in the Subdivision of Block 16 on West 15th Street, in the City of Superior, Douglas County, Wisconsin.

(Doc. Nos. 624023, 633082, 725853, 766342, 794160, 795896, 799526, 801654, 802205, 803377, 803498, 803978, 803979, 803733, 803734, 804451, 804524, 804525, 804706, 806050, 806592, 806593, 806973, 809578, 808862, 809996, 810193, 813026, 828601, 829415 & 829526).

Parcel Nos. 02-802-00947-00, 01-801-02976-01, 01-801-02976-03, 01-801-02976-05, 02-802-06614-00, 02-802-01293-00, 01-801-03987-00, 01-801-03125-00, 01-801-03131-00, 01-801-03129-00, 01-801-03128-00, 01-801-03123-00, 01-801-03042-00, 01-801-03046-00, 01-801-03805-00, 01-801-03302-00, 01-801-03294-00, 01-801-03055-00, 01-801-03047-00, 01-801-03047-01, 01-801-03047-02, 01-801-03047-03, 01-801-03047-04, 01-801-03048-00, 01-801-03136-00, 01-801-03145-00, 01-801-04051-00, 01-801-04083-00, 01-801-04706-00, 01-801-04713-00, 01-801-04679-00, 02-802-03804-00, 01-801-03807-00, 01-801-03806-00; 01-801-03326-00, 08-808-09780-00, 08-808-09821-00, 08-808-09823-00, 08-808-09892-00, 08-808-09854-00, 08-808-09856-00, 01-801-03971-00 & 01-801-03955-00.

TRACT K:

That part of the West Half (W 1/2) of Section Thirty-six (36), Township forty-nine (49) North, Range Fourteen (14) West, Douglas County, Wisconsin, more fully described as follows: Commencing at the North quarter corner of said Section 36, Township 49 North, Range 14 West, thence due south along the north-south quarter line, said quarter line being the center line of Bardon Avenue, a distance of 1,456.64 feet to the south property line of 26th Avenue extended, thence south 48 degrees and 36 minutes west along the south property line of 26th Avenue, a distance of 481 feet to the point of beginning, thence continuing in the same straight line a distance of 1,323.53 feet to a point, thence south 89 degrees and 46 minutes west a distance of 151.91 feet to a point, thence South 48 degrees 36 minutes West a distance of 162.43 feet to a point, thence South 41 degrees 24 minutes east a distance of 751 feet to a point, thence north 48 degrees and 36 minutes East a distance of 1,463.36 feet to a point on the west line of Bardon Avenue a distance of 207.10 feet to a point, thence north 41 degrees and 24 minutes west a distance of 495.66 feet to the point of beginning.

(Doc. No. 459590 V 271 P 358)
Parcel No. 01-801-05132-00.

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Lots 290 through 320, even numbers inclusive, Bay Front Division, West 21st Street.
 Lots 322 through 352, even numbers inclusive, Bay Front Division, West 21st Street.
 Lots 305 through 351, odd numbers inclusive, Bay Front Division, West 22nd Street.
 Lots 314 through 352, even numbers inclusive, Bay Front Division, West 22nd Street.
 Lots 321 through 341, odd numbers inclusive, Bay Front Division, West 23rd Street.
 Lots 344 through 352, even numbers inclusive, Bay Front Division, West 23rd Street.
 Lots 347, 349 and 351, Bay Front Division, West 23rd Street.
 Lots 289 through 303, odd numbers inclusive, Nobles Subdivision of Block 20, West 21st Street.
 Block 18, Townsite of Superior, West 21st Street.
 Southwest Quarter of Block Seventeen, Townsite of Superior, West 23rd Street.
 Lots 343 through 351, odd numbers inclusive, Bay Front Division, West 24th Street.

NO



(Doc. Nos. 505366, 513195, 514949, 520340 and 528677).
 Parcel No. 01-801-03339-00.

TRACT C:

Blocks 24, 26, 28 and 30, Townsite of Superior, West 23rd Street;
 Blocks 22, 23, 24, 25, 26, 27, 28, 29 and 30, Townsite of Superior, West 25th Street;
 Block 32, Townsite of Superior, West 26th Street;
 Blocks 23, 24, 25, 26, 27, 28, 29, 30, 31 and 32, Townsite of Superior, West 27th Street, together with that part of West 27th Street which accrued thereto by reason of the vacation thereof.
 Blocks 23, 24, 25, 26, 27, 28, 29, 30 and 31, Townsite of Superior, West 29th Street, together with that part of West 29th Street which accrued thereto by reason of the vacation thereof, except those parts of Blocks 30 and 31 lying East of the East line of the Wisconsin Central Railway Company Right-of-Way.

(Doc. Nos. 453215, 405966 and 458930).
 Parcel No. 02-802-00872-00.

Blocks 15, 16, 18, and 20, Townsite of Superior, West 23rd Street.
 The North Half and the Southeast Quarter of Block 17, Townsite of Superior, West 23rd Street.
 Blocks 19 and 22, Townsite of Superior, West 23rd Street, except Lots 314, 316, 318 and 320, Bay Front Division, West 22nd Street, and Lots 343 through 352, inclusive, Bay Front Division.
 Blocks 13, 14, 15, 16, 17, 18, 19, 20, 21 and 22, Townsite of Superior, West 25th Street.
 Blocks 13, 14, 15, 16, 17, 18, 19, 20, 21 and 22, Townsite of Superior, West 27th Street.
 Blocks 13, 15, 17, 19 and 21, Townsite of Superior, West 29th Street.
 Together with that part of the streets and avenues which accrued thereto by reason of the vacation thereof.



(Doc. Nos. 405966 and 453215).
 Parcel No. 01-801-03339-00.

TRACT D:

Lots 354 through 384, even numbers inclusive, Bay Front Division, West 23rd Street. (Doc. No. 453215).
 Parcel No. 02-802-00872-00.

Lots 330 through 342, even numbers inclusive, Bay Front Division, West 23rd Street.
 Lots 337, 339 and 341, Bay Front Division, West 24th Street.

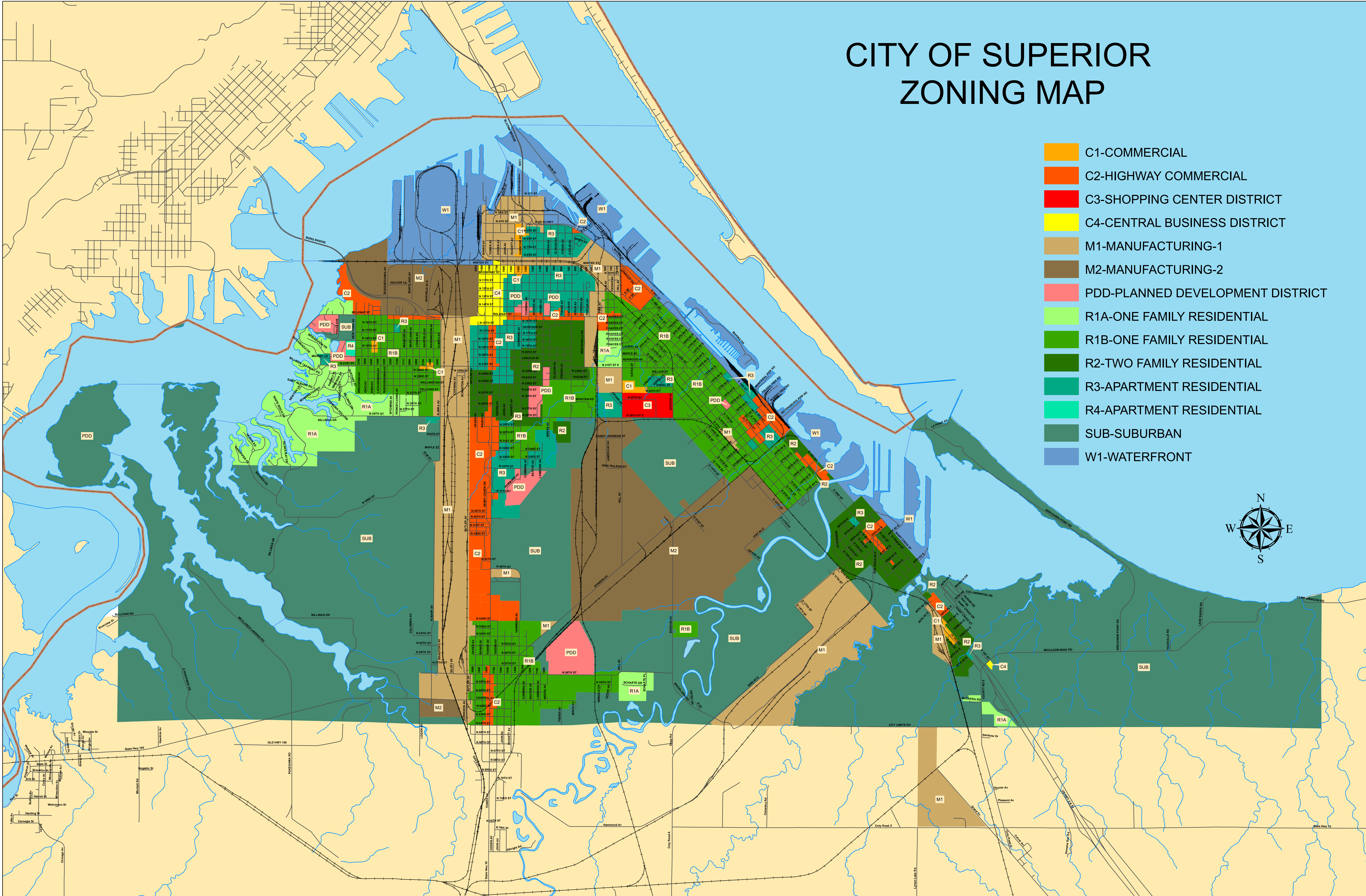
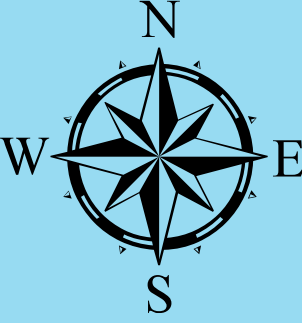
NO

Attachment F.2 – Certified Survey Map

Not Applicable - A certified survey map is not referenced in the deed.

CITY OF SUPERIOR ZONING MAP

- C1-COMMERCIAL
- C2-HIGHWAY COMMERCIAL
- C3-SHOPPING CENTER DISTRICT
- C4-CENTRAL BUSINESS DISTRICT
- M1-MANUFACTURING-1
- M2-MANUFACTURING-2
- PDD-PLANNED DEVELOPMENT DISTRICT
- R1A-ONE FAMILY RESIDENTIAL
- R1B-ONE FAMILY RESIDENTIAL
- R2-TWO FAMILY RESIDENTIAL
- R3-APARTMENT RESIDENTIAL
- R4-APARTMENT RESIDENTIAL
- SUB-SUBURBAN
- W1-WATERFRONT





March 26, 2020

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

RE: Signed Statement for Property Legal Description
Case Closure Request – BRRTS No. 02-16-585474

Dear Mr. Sager,

Pertaining to the above referenced Superior Refining Company release site located at 2407 Stinson Avenue, Superior, WI 54880 (WTM Coordinates X361726, Y692621), the following legal description and attached surveyor's figure accurately describe the property:

That part of Block 13, Townsite of Superior, West 27th Street, together with that part of the streets and avenues which accrued thereto by reason of the vacation thereof; that part of Block 14, Townsite of Superior, West 27th Street, together with that part of the streets and avenues which accrued thereto by reason of the vacation thereof; and that part of Block 13, Townsite of Superior, West 29th Street, together with that part of the streets and avenues which accrued thereto by reason of the vacation thereof; as described and shown in detail on the attached surveyor's map titled "PARCEL A – SUPERIOR WI EXHIBIT 1" generated by TKDA Engineering of Duluth, MN.

Sincerely,

A handwritten signature in blue ink, appearing to read "Mark Darby", with a long horizontal flourish extending to the right.

Mark Darby
Environmental Manager
Husky Energy
Superior, Wisconsin Refinery

Stinson Avenue (24th Avenue East)

Block 13

Block 14

Block 13

COMMON AREA

Proposed Parcel A

169326 sf

N48° 49' 39"E
467'

N11° 51' 38"E
120'

N48° 49' 37"E
105'

E1° 42' 42"E
121'

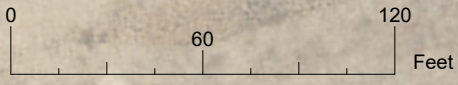
S21° 05' 36"W
160'

S48° 49' 39"W
376'

N41° 10' 19"W
278'

S59° 35' 13"W
134'

SWL&P Easement



Newton Avenue (25th Avenue East)
BNSF Railway Co.

326'

43'

25'

Apr 17, 2018 - 12:06pm K:\gml\HuskyEnergy\1659400004_Production\01_CAD\02_Sheets\Superior_WI\Husky_SWLP_Exhibit_UPDATED WD.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED
DRAWN
CHECKED



11 E. Superior Street, Suite 420
Duluth, MN 55802
218.724.8578
tkda.com

PARCEL A - SUPERIOR WI
EXHIBIT 1

ALL CONTRACTORS AND SUBCONTRACTORS SHALL VERIFY ALL DIMENSIONS BY MEASUREMENT AT THE BUILDING AND/OR SITE

0 60 120 Feet
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS DRAWING ADJUST SCALES ACCORDINGLY.

PROJ. NO.
DRAWING NO.

Attachment G – Source Legal Documents

G.1 Deeds – Source Property (Not Applicable)*

G.2 Certified Survey Map (Not Applicable)*

G.3 Verification of Zoning (Not Applicable)*

G.4 Signed Statement (Not Applicable)*

*** There are no affected property owners to notify**

SUBMIT AS UNBOUND PACKAGE IN THE ORDER SHOWN

Notice: Pursuant to ch. 292, Wis. Stats., and chs. NR 726 and 746, Wis. Adm. Code, this form is required to be completed for case closure requests. The closure of a case means that the Department of Natural Resources (DNR) has determined that no further response is required at that time based on the information that has been submitted to the DNR. All sections of this form must be completed unless otherwise directed by the Department. DNR will consider your request administratively complete when the form and all sections are completed, all attachments are included, and the applicable fees required under ch. NR 749, Wis. Adm. Code, are included, and sent to the proper destinations. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31 - 19.39, Wis. Stats.). Incomplete forms will be considered "administratively incomplete" and processing of the request will stop until required information is provided.

Site Information			
BRRTS No.	VPLE No.		
02-16-585474			
Parcel ID No.			
018010333900			
FID No.	WTM Coordinates		
816009590	X 361726	Y 692621	
BRRTS Activity (Site) Name	WTM Coordinates Represent:		
Reported Contamination at Superior Refining	<input checked="" type="checkbox"/> Source Area <input type="checkbox"/> Parcel Center		
Site Address	City	State	ZIP Code
2407 Stinson Avenue	Superior	WI	54880
Acres Ready For Use	5		

Responsible Party (RP) Name			
Superior Refining Company LLC			
Company Name			
Attn: Mark Darby, Environmental Manager			
Mailing Address	City	State	ZIP Code
2407 Stinson Avenue	Superior	WI	54880
Phone Number	Email		
(715) 398-8453	mark.darby@huskyenergy.com		
<input checked="" type="checkbox"/> Check here if the RP is the owner of the source property.			

Environmental Consultant Name			
Lynette Carney			
Consulting Firm			
Barr Engineering Company			
Mailing Address	City	State	ZIP Code
325 South Lake Avenue	Duluth	MN	55802
Phone Number	Email		
(218) 529-7141	lcarney@barr.com		

Fees and Mailing of Closure Request

- Send a copy of page one** of this form and the applicable ch. NR 749, Wis. Adm. Code, fee(s) to the DNR Regional EPA (Environmental Program Associate) at <http://dnr.wi.gov/topic/Brownfields/Contact.html#tabx3>. Check all fees that apply:

<input checked="" type="checkbox"/> \$1,050 Closure Fee	<input checked="" type="checkbox"/> \$300 Database Fee for Soil
<input type="checkbox"/> \$350 Database Fee for Groundwater or Monitoring Wells (Not Abandoned)	Total Amount of Payment \$ <u>\$1,350.00</u>
	<input type="checkbox"/> Resubmittal, Fees Previously Paid
- Send one paper copy and one e-copy on compact disk of the entire closure package** to the Regional Project Manager assigned to your site. Submit as *unbound, separate documents* in the order and with the titles prescribed by this form. For electronic document submittal requirements, see <http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf>.

Site Summary

If any portion of the Site Summary Section is not relevant to the case closure request, you must fully explain the reasons why in the relevant section of the form. All information submitted shall be legible. Providing illegible information will result in a submittal being considered incomplete until corrected.

1. General Site Information and Site History

- A. Site Location: Describe the physical location of the site, both generally and specific to its immediate surroundings.
The site consists of approximately 5 acres located in an area between the operating Husky Refinery and the Enbridge pipeline terminal facility in the NW 1/4 of Section 36 of T49 North, Range 14 West at 2407 Stinson Avenue, Superior, Wisconsin.
- B. Prior and current site usage: Specifically describe the current and historic occupancy and types of use.
Currently the site is under lease by Superior Refining Company LLC (SRC) to Superior Water Light & Power (SWL&P) for construction of an electrical substation (Nemadji Substation). Historically the site has been used as a storage/laydown area associated with the adjacent refinery.
- C. Current zoning (e.g., industrial, commercial, residential) for the site and for neighboring properties, and how verified (Provide documentation in Attachment G).
The City of Superior Planning and Development Department indicated that the Property is zoned M2 (Manufacturing District - Heavy).
- D. Describe how and when site contamination was discovered.
During substation construction earthwork activities in November 2019, SWL&P contractors encountered shallow contaminated soil (described as oily soil with debris) in two separate locations at the site. These areas are shown on Figure B.2.a.
- E. Describe the type(s) and source(s) or suspected source(s) of contamination.
Petroleum hydrocarbons and metals were detected at low levels. The source is likely related to historic site use as a laydown area for refinery activities or related to historical fill materials.
- F. Other relevant site description information (or enter Not Applicable).
Prior to leasing the property to SWL&P, SRC performed a Phase I Environmental Site Assessment and a Phase II Site Investigation to document the pre-lease site conditions. No actionable levels of contamination were found at that time (2018). SWL&P encountered stained soil with a petroleum odor during excavation work related to preparation of the site for substation construction. Contaminated soil was excavated to construction limits, characterized, and transported off-site for landfill disposal by SWL&P. No field screening or analytical confirmation samples were collected from the excavation extents. Approximately 1,000 tons of soil was removed by SWL&P from the two separate areas and transported to Shamrock Landfill. A subsequent Phase II Investigation was performed by SRC in 2020 to evaluate soil conditions near the limits of the SWL&P excavations and to supplement site characterization data. Results from the 2020 investigation indicate that soils remaining at the site do not pose a risk to human health or the environment.
- G. List BRRTS activity/site name and number for BRRTS activities at this source property, including closed cases.
None.
- H. List BRRTS activity/site name(s) and number(s) for all properties immediately adjacent to (abutting) this source property.
216220009 LAKEHEAD PIPELINE - CRUDE OIL TANK 22
216222650 MURPHY OIL - FUEL LOADING AREA
216176579 LAKEHEAD PIPELINE CO L P
216222670 MURPHY OIL - TANK S-1, S-2
216178165 LAKEHEAD PIPELINE - TANK 21 CRUDE OIL
216275100 LAKEHEAD PIPELINE - TANK 24
216242301 MURPHY OIL - VAPOR RECOVERY UNIT 216222638 MURPHY OIL - CRUDE UNIT PROCESS AREA
216558992 ENBRIDGE ENERGY - TANK 20 VALVE
216222628 MURPHY OIL - PROPANE/BUTANE LOADING AREA
216558988 ENBRIDGE ENERGY - OFFICE EXCAVATION
216560841 ENBRIDGE ENERGY TERMINAL - LINE 5 PIG TRAP
216558987 ENBRIDGE ENERGY - TANK 9
216279246 LAKEHEAD PIPELINE CO L P
216183249 LAKEHEAD PIPELINE - MANIFOLD 3
216000522 MURPHY OIL - TANK #34
216000161 MURPHY OIL - LAKEHEAD TANK FAC
216221525 MURPHY OIL - TANK #59
216000507 MURPHY OIL - 24TH
216000523 MURPHY OIL - TANK #67
216000563 MURPHY OIL - TANK #102
216112803 HUSKY OIL LTD TANK 28
216221534 MURPHY OIL - TANK #29 & 30
316000168 LAKEHEAD PIPE LINE CO
216222617 MURPHY OIL - TANK #65 & 66

216246715 MURPHY OIL - SLOP OIL MANIFOLD AREA
 216000508 MURPHY OIL - BARDON AVE (TANK 25)
 216190549 MURPHY OIL - TANK #1 & 2 (FORMER)
 216221920 MURPHY OIL - TANK #47
 216221941 MURPHY OIL - TANK #39
 316000736 MURPHY OIL - WAREHOUSE
 216222701 MURPHY OIL - TANK BASIN #51 & 52
 216558989 ENBRIDGE ENERGY - TANK 23
 216275090 ENBRIDGE SUPERIOR TERMINAL
 216550859 MURPHY OIL - S OF GREEN GAS UNIT
 216226861 MURPHY OIL - CONTAMINATED SOIL UNDER ROADWAY
 216222721 MURPHY OIL - TANK #32 & 33
 216000506 MURPHY OIL - STINSON #3
 216000512 LAKEHEAD PIPELINE - PUMP ST
 216221947 MURPHY OIL - TANK #8
 216221988 MURPHY OIL - TANK #81
 216221908 MURPHY OIL - TANK #79
 216513788 ENBRIDGE ENERGY - NEMADJI RIVER
 216552700 ENBRIDGE ENERGY - TANK 9 PRESSURE LINE
 216221933 MURPHY OIL - TANK #31
 216000027 LAKEHEAD PIPELINE - PLM TOOL SHOP
 216556786 ENBRIDGE ENERGY - TANK 22
 216275130 LAKEHEAD PIPELINE - TANK 23
 216221811 MURPHY OIL - UNDERGROUND PIPELINE
 216000571 MURPHY OIL - TANK #34 & 35
 216118396 MURPHY OIL USA
 216558990 ENBRIDGE ENERGY - TANK 19
 216577548 ENBRIDGE SUPERIOR TERMINAL- LINE 5 VALVE 553
 216579604 ENBRIDGE SUPERIOR - FIELD BOOSTER 23
 216526812 MURPHY OIL - TANK BASIN #68
 216223154 MURPHY OIL - TANK #70
 216222712 MURPHY OIL - TANK #40
 216515749 MURPHY OIL - LOADING DOCK AREA
 216581317 SUPERIOR REFINING COMPANY LLC

2. General Site Conditions

A. Soil/Geology

- i. Describe soil type(s) and relevant physical properties, thickness of soil column across the site, vertical and lateral variations in soil types.
 Surficial geology in the region consists of glacial-lacustrine clay deposits estimated to be over 100 feet thick. This clay unit overlies sandy glacial till interbedded with sand and gravel. Soil boring data collected at the site indicates this homogenous layer of red-brown lean to fat clay till is present across the site overlain by approximately 0 to 4 feet of fill material.
- ii. Describe the composition, location and lateral extent, and depth of fill or waste deposits on the site.
 Fill at the site ranges from 0 to 4 feet deep and consists of silty gravel and/or poorly graded sand. The SWL&P substation development area was excavated to a depth of 3-4 feet in the fall of 2019 and backfilled with engineered fill. Outside of this area, fill soils appear to be reworked with native material.
- iii. Describe the depth to bedrock, bedrock type, competency and whether or not it was encountered during the investigation.
 The regional bedrock geology consists of sandstone of the Precambrian-age Bayfield Formation. Depth to bedrock in the area is greater than 150 feet. Bedrock was not encountered in any boreholes during the investigation.
- iv. Describe the nature and locations of current surface cover(s) across the site (e.g., natural vegetation, landscaped areas, gravel, hard surfaces, and buildings).
 The site is currently being developed for an electrical substation. The new surface cover at the site consists of 2-4 feet of engineered backfill overlain by gravel.

B. Groundwater

- i. Discuss depth to groundwater and piezometric elevations. Describe and explain depth variations, including high and low water table elevation and whether free product affects measurement of water table elevation. Describe the stratigraphic unit(s) where water table was found or which were measured for piezometric levels.
 Based on the Facility-Wide Groundwater Monitoring Reports provided by SRC for the refinery facility, the recent depth to groundwater in nearby monitoring wells (one located in the southeast corner of the Property and one located approximately 50 feet northeast) is between 0.5 and 2.9 feet bgs.

- ii. Discuss groundwater flow direction(s), shallow and deep. Describe and explain flow variations, including fracture flow if present.
Based on groundwater monitoring at the refinery, which includes groundwater monitoring wells located on and near the Property, shallow groundwater flow direction at the Property is expected to the northeast towards Newton Creek, ultimately discharging into Lake Superior approximately 1.7 miles northeast of the Site.
- iii. Discuss groundwater flow characteristics: hydraulic conductivity, flow rate and permeability, or state why this information was not obtained.
Based on facility-wide groundwater monitoring program data provided by SRC for the adjacent refinery, the hydraulic conductivity of the native clay is on the order of 10E-7 centimeters per second. Assuming a horizontal hydraulic gradient of 0.003 and effective porosity of 0.06, the estimated horizontal groundwater flow velocity is approximately 0.4 cm/yr or 0.013 feet per year (ft/yr).
- iv. Identify and describe locations/distance of potable and/or municipal wells within 1200 feet of the site. Include general summary of well construction (geology, depth of casing, depth of screened or open interval).
No potable and/or municipal wells were identified within 1,200 feet of the site.

3. Site Investigation Summary

A. General

- i. Provide a brief summary of the site investigation history. Reference previous submittals by name and date. Describe site investigation activities undertaken since the last submittal for this project and attach the appropriate documentation in Attachment C, if not previously provided.

Phase II Investigation Results - Future ALLETE Substation Site (August 2018) - A soil boring investigation was conducted in June 2018 where five borings (SB-1 through SB-5) were advanced to characterize soil at the site. Soil and groundwater samples were collected. Soil was analyzed for 8 RCRA metals, polycyclic aromatic hydrocarbons (PAHs), and volatile organic compounds (VOCs). Groundwater was analyzed for PAHs and VOCs. Based on comparisons to the WDNR residual contaminant levels (RCLs) and groundwater quality standards the isolated low concentrations or parameters detected in the samples did not pose a risk to human health or the environment.

SWL&P Nemadji Substation Phase III Investigation Results (March 2020) - Following the discovery, excavation, and off-site disposal of impacted soils by SWL&P in 2019, SRC initiated another site investigation. In January 2020, twenty-four soil borings were advanced across the site. Fifteen "remedial action delineation" borings were advanced to evaluate the effectiveness of the remedial excavation efforts performed by SWL&P. Nine additional "site characterization" borings were advanced across the site to further assess baseline conditions at the site.

Site investigation reports that summarize the 2018 and 2020 investigations are included in Attachment C.1.

- ii. Identify whether contamination extends beyond the source property boundary, and if so describe the media affected (e.g., soil, groundwater, vapors and/or sediment, etc.), and the vertical and horizontal extent of impacts.
The 2018 and 2020 investigation results indicate that the impacted soil areas were isolated, contained within the limits of the site and/or have been removed.
- iii. Identify any structural impediments to the completion of site investigation and/or remediation and whether these impediments are on the source property or off the source property. Identify the type and location of any structural impediment (e.g., structure) that also serves as the performance standard barrier for protection of the direct contact or the groundwater pathway.
No structural impediments were present that prevented completion of investigation activities.

B. Soil

- i. Describe degree and extent of soil contamination. Relate this to known or suspected sources and known or potential receptors/migration pathways.
Contaminated soil was removed during response action activities by SWL&P in November 2019. Two areas were excavated to a depth of two to three feet; an area in the northern corner of the Property measuring approximately 50 feet by 150 feet and an area in the western corner of the Property measuring approximately 25 feet by 50 feet. A sample of from the removed soil was collected by SWL&P for disposal characterization and waste profile approval at the Shamrock Landfill.

Other areas of site were also excavated to depths of 3-4 feet during construction for the placement of engineered fill. Soil conditions below and outside of the excavation limits were not documented by SWL&P in 2019. Soil samples collected from borings in 2020 indicate that remaining soils do not pose a risk to human health or the environment.

An ongoing source of contamination has not been identified. Soils were likely impacted by historical fill and/or storage activities.
- ii. Describe the concentration(s) and types of soil contaminants found in the upper four feet of the soil column.
The remedial excavation performed by SWL&P removed the impacted soil from the source area. Soil samples collected in 2020 (post-excavation action) from the site were analyzed for PVOCs+Naphthalene and DRO. Benzene was detected

in one sample of native soil directly beneath fill (observed staining and sample interval from 1.5-2 feet bgs) at a concentration of 0.0399 mg/kg, exceeding the groundwater RCL but less than the RCLs for direct contact. Naphthalene and toluene were detected in the same sample at concentrations less than groundwater RCLs. DRO was detected in eight samples with concentrations ranging from 8.2 to 121 mg/kg. During the initial investigation in 2018 benzo(a)pyrene was detected in one sample at a concentration of 128 ug/kg, exceeding then non-industrial direct contact RCL but did not exceed the industrial RCL or groundwater RC, however, the soil from this area was removed during construction activities. Arsenic was detected in ten samples with concentrations ranging from 2.8 to 5.1 mg/kg. Although the arsenic detections exceed both the groundwater and direct contract RCLs, there are thought to be naturally occurring as they are below the WDNR background threshold values. Several additional metals were detected in samples from 2018 including: barium, lead, selenium and silver. With the exception of a lead detection in one surficial sample, these metal detections were below established WDNR background threshold values (background values have not been established for selenium and silver). The selenium and silver detections were flagged by the laboratory as estimated values. In addition soil from 3-4' was removed by SWL&P through the majority of the substation construction site.

- iii. Identify the ch. NR 720, Wis. Adm. Code, method used to establish the soil cleanup standards for this site. This includes a soil performance standard established in accordance with s. NR 720.08, a Residual Contaminant Level (RCL) established in accordance with s. NR 720.10 that is protective of groundwater quality, or an RCL established in accordance with s. NR 720.12 that is protective of human health from direct contact with contaminated soil. Identify the land use classification that was used to establish cleanup standards. Provide a copy of the supporting calculations/ information in Attachment C.

Soil sample analytical results were compared to the groundwater and direct contact (both industrial and non-industrial) RCLs. With the exception of naturally occurring metals, metals flagged as estimated values, and detections from soil samples collected in 2018 which was removed during construction, only one benzene concentration exceeded the groundwater RCL.

C. Groundwater

- i. Describe degree and extent of groundwater contamination. Relate this to known or suspected sources and known or potential receptors/migration pathways. Specifically address any potential or existing impacts to water supply wells or interception with building foundation drain systems.

Not applicable. A refinery-wide groundwater monitoring program is in place and groundwater contamination has not been identified at this site.

- ii. Describe the presence of free product at the site, including the thickness, depth, and locations. Identify the depth and location of the smear zone.

Not applicable. No evidence of the presence of free product was encountered at the site.

D. Vapor

- i. Describe how the vapor migration pathway was assessed, including locations where vapor, soil gas, or indoor air samples were collected. If the vapor pathway was not assessed, explain reasons why.

Not applicable. A source of potential vapor issues has not been identified.

- ii. Identify the applicable DNR action levels and the land use classification used to establish them. Describe where the DNR action levels were reached or exceeded (e.g., sub slab, indoor air or both).

The site is in an industrial area and has been undeveloped until now. An electrical substation is under construction.

E. Surface Water and Sediment

- i. Identify whether surface water and/or sediment was assessed and describe the impacts found. If this pathway was not assessed, explain why.

Not applicable. Surface water/sediment features are not present at the site.

- ii. Identify any surface water and/or sediment action levels used to assess the impacts for this pathway and how these were derived. Describe where the DNR action levels were reached or exceeded.

Not applicable.

4. Remedial Actions **Implemented** and Residual Levels at Closure

- A. General; Provide a brief summary of the remedial action history. List previous remedial action report submittals by name and date. Identify remedial actions undertaken since the last submittal for this project and provide the appropriate documentation in Attachment C.

During site development in November 2019 impacted soils were excavated and transported off-site for disposal. Documentation of soil characterization and disposal are provided in Attachment C.2.

- B. Describe any immediate or interim actions taken at the site under ch NR 708, Wis. Adm. Code.
The actions described above were taken as part of an interim action to address the impacted soils encountered during construction. The investigation results provided in this closure request are being used to document the effectiveness of the interim action completed by SWL&P.
- C. Describe the *active* remedial actions taken at the source property, including: type of remedial system(s) used for each media affected; the size and location of any excavation or in-situ treatment; the effectiveness of the systems to address the contaminated media and substances; operational history of the systems; and summarize the performance of the active remedial actions. Provide any system performance documentation in Attachment A.7.
Not applicable.
- D. Describe the alternatives considered during the Green and Sustainable Remediation evaluation in accordance with NR 722.09 and any practices implemented as a result of the evaluation.
Not applicable.
- E. Describe the nature, degree and extent of residual contamination that will remain at the source property or on other affected properties after case closure.
Benzene was detected in one sample exceeding the groundwater RCL at a concentration of 0.0399 mg/kg. Naphthalene (0.166 mg/kg) and toluene (0.0512 mg/kg) were detected in this same sample at concentrations less than the groundwater and direct contact RCLs. DRO was detected in eight samples with concentrations ranging from 8.2 to 121 mg/kg. Other naturally occurring metals (arsenic, barium, lead, selenium, silver) were also detected in the 2018 samples with concentrations either below the WDNR background threshold values or flagged by the laboratory as estimated values.
- F. Describe the residual soil contamination within four feet of ground surface (direct contact zone) that attains or exceeds RCLs established under s. NR 720.12, Wis. Adm. Code, for protection of human health from direct contact.
Naturally occurring arsenic was detected in ten samples with concentrations ranging from 2.8 to 5.1 mg/kg.
- G. Describe the residual soil contamination that is above the observed low water table that attains or exceeds the soil standard(s) for the groundwater pathway.
Benzene was detected in one sample (SB-6, 1.5-2 feet) exceeding the groundwater RCL at a concentration of 0.0399 mg/kg. Additional naturally occurring metals were also detected above the groundwater RCL including: arsenic, barium, lead, selenium and silver but were either below the WDNR background threshold value or were flagged by the laboratory as estimated values.
- H. Describe how the residual contamination will be addressed, including but not limited to details concerning: covers, engineering controls or other barrier features; use of natural attenuation of groundwater; and vapor mitigation systems or measures.
The site is being developed as an electrical substation. The majority of the site has been excavated and covered with new compacted fill material and substation facilities. As a result, residual contamination levels do not require remediation or controls to limit exposure. The clay soil which has been documented across the site along with the compacted and relatively impervious gravel surface designed to divert surface water flow away from the site will limit infiltration and potential of migration of residual soil contamination to groundwater. Additionally, it has been demonstrated through the documented groundwater flow velocities and annual groundwater monitoring completed as part of the SRC facility-wide groundwater monitoring program that petroleum compounds have not been detected in groundwater in the vicinity of this historical release.
- I. If using natural attenuation as a groundwater remedy, describe how the data collected supports the conclusion that natural attenuation is effective in reducing contaminant mass and concentration (e.g., stable or receding groundwater plume).
Not applicable.
- J. Identify how all exposure pathways (soil, groundwater, vapor) were removed and/or adequately addressed by immediate, interim and/or remedial action(s).
Contaminated soils were removed and transported to an off-site disposal facility. The source has been removed and groundwater impacts have not been identified.
- K. Identify any system hardware anticipated to be left in place after site closure, and explain the reasons why it will remain.
Not applicable.
- L. Identify the need for a ch. NR 140, Wis. Adm. Code, groundwater Preventive Action Limit (PAL) or Enforcement Standard (ES) exemption, and identify the affected monitoring points and applicable substances.
Not applicable.
- M. If a DNR action level for vapor intrusion was exceeded (for indoor air, sub slab, or both) describe where it was exceeded and how the pathway was addressed.
Not applicable.

- N. Describe the surface water and/or sediment contaminant concentrations and areas after remediation. If a DNR action level was exceeded, describe where it was exceeded and how the pathway was addressed.

Not applicable.

5. Continuing Obligations: Includes all affected properties and rights-of-way (ROWs). In certain situations, maintenance plans are also required, and must be included in Attachment D.

Directions: For each of the 3 property types below, check all situations that apply to this closure request.

(NOTE: Monitoring wells to be transferred to another site are addressed in Attachment E.)

This situation applies to the following property or Right of Way (ROW):			Case Closure Situation - Continuing Obligation (database fees will apply, ii. - xiv.)	Maintenance Plan Required	
Property Type:					
Source Property	Affected Property (Off-Source)	ROW			
i.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	None of the following situations apply to this case closure request.	NA
ii.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Residual groundwater contamination exceeds ch. NR 140 ESs.	NA
iii.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Residual soil contamination exceeds ch. NR 720 RCLs.	NA
iv.				Monitoring Wells Remain:	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	• Not Abandoned (filled and sealed)	NA
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	• Continued Monitoring (requested or required)	Yes
v.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cover/Barrier/Engineered Cover or Control for (soil) direct contact pathways (includes vapor barriers)	Yes
vi.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cover/Barrier/Engineered Cover or Control for (soil) groundwater infiltration pathway	Yes
vii.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Structural Impediment: impedes completion of investigation or remedial action (not as a performance standard cover)	NA
viii.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Residual soil contamination meets NR 720 industrial soil RCLs, land use is classified as industrial	NA
ix.	<input type="checkbox"/>	<input type="checkbox"/>	NA	Vapor Mitigation System (VMS) required due to exceedances of vapor risk screening levels or other health based concern	Yes
x.	<input type="checkbox"/>	<input type="checkbox"/>	NA	Vapor: Dewatering System needed for VMS to work effectively	Yes
xi.	<input type="checkbox"/>	<input type="checkbox"/>	NA	Vapor: Compounds of Concern in use: full vapor assessment could not be completed	NA
xii.	<input type="checkbox"/>	<input type="checkbox"/>	NA	Vapor: Commercial/industrial exposure assumptions used.	NA
xiii.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vapor: Residual volatile contamination poses future risk of vapor intrusion	NA
xiv.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Site-specific situation: (e. g., fencing, methane monitoring, other) (<i>discuss with project manager before submitting the closure request</i>)	Site specific

6. Underground Storage Tanks

- A. Were any tanks, piping or other associated tank system components removed as part of the investigation or remedial action? Yes No
- B. Do any upgraded tanks meeting the requirements of ch. ATCP 93, Wis. Adm. Code, exist on the property? Yes No
- C. If the answer to question 6.B. is yes, is the leak detection system currently being monitored? Yes No

General Instructions

All information shall be legible. Providing illegible information will result in a submittal being considered incomplete until corrected. For each attachment (A-G), provide a Table of Contents page, listing all 'applicable' and 'not applicable' items by Closure Form titles (e.g., A.1. Groundwater Analytical Table, A.2. Soil Analytical Results Table, etc.). If any item is 'not applicable' to the case closure request, you must fully explain the reasons why.

Data Tables (Attachment A)

Directions for Data Tables:

- Use **bold** and italics font for information of importance on tables and figures. Use **bold** font for ch. NR 140, Wis. Adm. Code ES attainments or exceedances, and *italicized font* for ch. NR 140, Wis. Adm. Code, PAL attainments or exceedances.
- Use **bold** font to identify individual ch. NR 720 Wis. Adm. Code RCL exceedances. Tables should also include the corresponding groundwater pathway and direct contact pathway RCLs for comparison purposes. Cumulative hazard index and cumulative cancer risk exceedances should also be tabulated and identified on Tables A.2 and A.3.
- Do not use shading or highlighting on the analytical tables.
- Include on Data Tables the level of detection for results which are below the detection level (i.e., do not just list as no detect (ND)).
- Include the units on data tables.
- Summaries of all data must include information collected by previous consultants.
- Do not submit lab data sheets unless these have not been submitted in a previous report. Tabulate all data required in s. NR 716.15(3)(c), Wis. Adm. Code, in the format required in s. NR 716.15(4)(e), Wis. Adm. Code.
- Include in Attachment A all of the following tables, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: A.1. Groundwater Analytical Table; A.2. Soil Analytical Results Table, etc.).
- For required documents, each table (e.g., A.1., A.2., etc.) should be a separate Portable Document Format (PDF).

A. Data Tables

- A.1. **Groundwater Analytical Table(s):** Table(s) showing the analytical results and collection dates for all groundwater sampling points (e.g., monitoring wells, temporary wells, sumps, extraction wells, potable wells) for which samples have been collected.
- A.2. **Soil Analytical Results Table(s):** Table(s) showing **all** soil analytical results and collection dates. Indicate if sample was collected above or below the observed low water table (unsaturated versus saturated).
- A.3. **Residual Soil Contamination Table(s):** Table(s) showing the analytical results of only the residual soil contamination at the time of closure. This table shall be a subset of table A.2 and should include only the soil sample locations that exceed an RCL. Indicate if sample was collected above or below the observed low water table (unsaturated versus saturated). Table A.3 is optional only if a total of fewer than 15 soil samples have been collected at the site.
- A.4. **Vapor Analytical Table(s):** Table(s) showing type(s) of samples, sample collection methods, analytical method, sample results, date of sample collection, time period for sample collection, method and results of leak detection, and date, method and results of communication testing.
- A.5. **Other Media of Concern (e.g., sediment or surface water):** Table(s) showing type(s) of sample, sample collection method, analytical method, sample results, date of sample collection, and time period for sample collection.
- A.6. **Water Level Elevations:** Table(s) showing all water level elevation measurements and dates from all monitoring wells. If present, free product should be noted on the table.
- A.7. **Other:** This attachment should include: 1) any available tabulated natural attenuation data; 2) data tables pertaining to engineered remedial systems that document operational history, demonstrate system performance and effectiveness, and display emissions data; and (3) any other data tables relevant to case closure not otherwise noted above. If this section is not applicable, please explain the reasons why.

Maps, Figures and Photos (Attachment B)

Directions for Maps, Figures and Photos:

- Provide on paper no larger than 11 x 17 inches, unless otherwise directed by the Department. Maps and figures may be submitted in a larger electronic size than 11 x 17 inches, in a PDF readable by the Adobe Acrobat Reader. However, those larger-size documents must be legible when printed.
- Prepare visual aids, including maps, plans, drawings, fence diagrams, tables and photographs according to the applicable portions of ss. NR 716.15(4), 726.09(2) and 726.11(3), (5) and (6), Wis. Adm. Code.
- Include all sample locations.
- Contour lines should be clearly labeled and defined.
- Include in Attachment B all of the following maps and figures, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: B.1. Location Map; B.2. Detailed Site Map, etc.).
- For the electronic copies that are required, each map (e.g., B.1.a., B.2.a, etc.) should be a separate PDF.
- Maps, figures and photos should be dated to reflect the most recent revision.

B.1. Location Maps

- B.1.a. **Location Map:** A map outlining all properties within the contaminated site boundaries on a United States Geological Survey (U.S.G.S.) topographic map or plat map in sufficient detail to permit easy location of all affected and/or adjacent parcels. If groundwater standards are exceeded, include the location of all potable wells, including municipal wells, within 1200 feet of the area of contamination.
- B.1.b. **Detailed Site Map:** A map that shows all relevant features (buildings, roads, current ground surface cover, individual property boundaries for all affected properties, contaminant sources, utility lines, monitoring wells and potable wells) within the contaminated area. This map is to show the location of all contaminated public streets, and highway and railroad rights-of-way in relation to the source property and in relation to the boundaries of groundwater contamination attaining or exceeding a ch. NR 140 ES, and/or in relation to the boundaries of soil contamination attaining or exceeding a RCL. Provide parcel identification numbers for all affected properties.
- B.1.c. **RR Sites Map:** From RR Sites Map (http://dnrmaps.wi.gov/sl/?Viewer=RR_Sites) attach a map depicting the source property, and all open and closed BRRTS sites within a half-mile radius or less of the property.

B.2. Soil Figures

- B.2.a. **Soil Contamination:** Figure(s) showing the location of **all** identified unsaturated soil contamination. Use a single contour to show the horizontal extent of each area of contiguous soil contamination that exceeds a soil to groundwater pathway RCL as determined under ch. NR 720.Wis. Adm. Code. A separate contour line should be used to indicate the horizontal extent of each area of contiguous soil contamination that exceeds a direct contact RCL exceedances (0-4 foot depth).
- B.2.b. **Residual Soil Contamination:** Figure(s) showing only the locations of soil samples where unsaturated soil contamination remains at the time of closure (locations represented in Table A.3). Use a single contour to show the horizontal extent of each area of contiguous soil contamination that exceeds a soil to groundwater pathway RCL as determined under ch. NR 720 Wis. Adm. Code. A separate contour line should be used to indicate the horizontal extent of each area of contiguous soil contamination that exceeds a direct contact RCL exceedance (0-4 foot depth).

B.3. Groundwater Figures

- B.3.a. **Geologic Cross-Section Figure(s):** One or more cross-section diagrams showing soil types and correlations across the site, water table and piezometric elevations, and locations and elevations of geologic rock units, if encountered. Display on one or more figures all of the following:
- Source location(s) and vertical extent of residual soil contamination exceeding an RCL. Distinguish between direct contact and the groundwater pathway RCLs.
 - Source location(s) and lateral and vertical extent if groundwater contamination exceeds ch. NR 140 ES.
 - Surface features, including buildings and basements, and show surface elevation changes.
 - Any areas of active remediation within the cross section path, such as excavations or treatment zones.
 - Include a map displaying the cross-section location(s), if they are not displayed on the Detailed Site Map (Map B.1.b.)
- B.3.b. **Groundwater Isoconcentration:** Figure(s) showing the horizontal extent of the post-remedial groundwater contamination exceeding a ch. NR 140, Wis. Adm. Code, PAL and/or an ES. Indicate the date and direction of groundwater flow based on the most recent sampling data.
- B.3.c. **Groundwater Flow Direction:** Figure(s) representing groundwater movement at the site. If the flow direction varies by more than 20° over the history of the site, submit two groundwater flow maps showing the maximum variation in flow direction.
- B.3.d. **Monitoring Wells:** Figure(s) showing all monitoring wells, with well identification number. Clearly designate any wells that: (1) are proposed to be abandoned; (2) cannot be located; (3) are being transferred; (4) will be retained for further sampling, or (5) have been abandoned.

B.4. Vapor Maps and Other Media

- B.4.a. **Vapor Intrusion Map:** Map(s) showing all locations and results for samples taken to investigate the vapor intrusion pathway in relation to residual soil and groundwater contamination, including sub-slab, indoor air, soil vapor, soil gas, ambient air, and communication testing. Show locations and footprints of affected structures and utility corridors, and/or where residual contamination poses a future risk of vapor intrusion.
- B.4.b. **Other media of concern (e.g., sediment or surface water):** Map(s) showing all sampling locations and results for other media investigation. Include the date of sample collection and identify where any standards are exceeded.
- B.4.c. **Other:** Include any other relevant maps and figures not otherwise noted above. (This section may remain blank).

- B.5. **Structural Impediment Photos:** One or more photographs documenting the structural impediment feature(s) which precluded a complete site investigation or remediation at the time of the closure request. The photographs should document the area that could not be investigated or remediated due to a structural impediment. The structural impediment should be indicated on Figures B.2.a and B.2.b.

Documentation of Remedial Action (Attachment C)**Directions for Documentation of Remedial Action:**

- Include in Attachment C all of the following documentation, in the order prescribed below, with the specific Closure Form titles noted on the separate attachments (e.g., Title: C.1. Site Investigation Documentation; C.2. Investigative Waste, etc.).
- If the documentation requested below has already been submitted to the DNR, please note the title and date of the report for that particular document requested.
 - C.1. **Site investigation documentation**, that has not otherwise been submitted with the Site Investigation Report.
 - C.2. **Investigative waste disposal documentation**.
 - C.3. Provide a **description of the methodology** used along with all supporting documentation if the RCLs are different than those contained in the Department's RCL Spreadsheet available at: <http://dnr.wi.gov/topic/Brownfields/Professionals.html>.
 - C.4. **Construction documentation** or as-built report for any constructed remedial action or portion of, or interim action specified in s. NR 724.02(1), Wis. Adm. Code.
 - C.5. **Decommissioning of Remedial Systems.** Include plans to properly abandon any systems or equipment.
 - C.6. **Other.** Include any other relevant documentation not otherwise noted above (This section may remain blank).

Maintenance Plan(s) and Photographs (Attachment D)**Directions for Maintenance Plans and Photographs:**

Attach a maintenance plan for each affected property (source property, each off-source affected property) with continuing obligations requiring future maintenance (e.g., direct contact, groundwater protection, vapor intrusion). See Site Summary section 5 for all affected property(s) requiring a maintenance plan. Maintenance plan guidance and/or templates for: 1) Cover/barrier systems; 2) Vapor intrusion; and 3) Monitoring wells, can be found at: <http://dnr.wi.gov/topic/Brownfields/Professionals.html#tabx3>

- D.1. **Descriptions of maintenance action(s) required for maximizing effectiveness of the engineered control, vapor mitigation system, feature or other action for which maintenance is required:**
- Provide brief descriptions of the type, depth and location of residual contamination.

- Provide a description of the system/cover/barrier/monitoring well(s) to be maintained.
 - Provide a description of the maintenance actions required for maximizing effectiveness of the engineered control, vapor mitigation system, feature or other action for which maintenance is required.
 - Provide contact information, including the name, address and phone number of the individual or facility who will be conducting the maintenance.
- D.2. **Location map(s) which show(s):** (1) the feature that requires maintenance; (2) the location of the feature(s) that require(s) maintenance - on and off the source property; (3) the extent of the structure or feature(s) to be maintained, in relation to other structures or features on the site; (4) the extent and type of residual contamination; and (5) all property boundaries.
- D.3. **Photographs** for site or facilities with a cover or other performance standard, a structural impediment or a vapor mitigation system, include one or more photographs documenting the condition and extent of the feature at the time of the closure request. Pertinent features shall be visible and discernible. Photographs shall be submitted with a title related to the site name and location, and the date on which it was taken.
- D.4. **Inspection log**, to be maintained on site, or at a location specified in the maintenance plan or approval letter. The inspection and maintenance log is found at: <http://dnr.wi.gov/files/PDF/forms/4400/4400-305.pdf>.

Monitoring Well Information (Attachment E)

Directions for Monitoring Well Information:

For all wells that will remain in use, be transferred to another party, or that could not be located; attach monitoring well construction and development forms (DNR Form 4400-113 A and B: http://dnr.wi.gov/topic/groundwater/documents/forms/4400_113_1_2.pdf)

Select One:

- No monitoring wells were installed as part of this response action.
- All monitoring wells have been located and will be properly abandoned upon the DNR granting conditional closure to the site
- Select One or More:**
 - Not all monitoring wells can be located, despite good faith efforts. Attachment E must include a description of efforts made to locate the wells.
 - One or more wells will remain in use at the site after this closure. Attachment E must include documentation as to the reason (s) the well(s) will remain in use. When one or more monitoring wells will remain in use this is considered a continuing obligation and a maintenance plan will be required and must be included in Attachment D.
 - One or more monitoring wells will be transferred to another owner upon case closure being granted. Attachment E should include documentation identifying the name, address and email for the new owner(s). Provide documentation from the party accepting future responsibility for monitoring well(s).

Source Legal Documents (Attachment F)

Directions for Source Legal Documents:

Label documents with the specific closure form titles (e.g., F.1. Deed, F.2. Certified Survey Map, etc.). Include all of the following documents, in the order listed:

- F.1. **Deed:** The most recent deed with legal description clearly listed.
Note: If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.
- F.2. **Certified Survey Map:** A copy of the certified survey map or the relevant section of the recorded plat map for those properties where the legal description in the most recent deed refers to a certified survey map or a recorded plat map. In cases where the certified survey map or recorded plat map are not legible or are unavailable, a copy of a parcel map from a county land information office may be substituted. A copy of a parcel map from a county land information office shall be legible, and the parcels identified in the legal description shall be clearly identified and labeled with the applicable parcel identification number.
- F.3. **Verification of Zoning:** Documentation (e.g., official zoning map or letter from municipality) of the property's or properties' current zoning status.
- F.4. **Signed Statement:** A statement signed by the Responsible Party (RP), which states that he or she believes that the attached legal description(s) accurately describe(s) the correct contaminated property or properties. This section applies to the source property only. Signed statements for Other Affected Properties should be included in Attachment G.

Notifications to Owners of Affected Properties (Attachment G)

Directions for Notifications to Owners of Affected Properties:

Complete the table on the following page for sites which require notification to owners of affected properties pursuant to ch. 292, Wis. Stats. and ch. NR 725 and 726, Wis. Adm. Code. Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records law [ss. 19.31- 19.39, Wis. Stats.]. The DNR's "Guidance on Case Closure and the Requirements for Managing Continuing Obligations" (PUB-RR-606) lists specific notification requirements <http://dnr.wi.gov/files/PDF/pubs/rr/RR606.pdf>.

State law requires that the responsible party provide a 30-day, written advance notification to certain persons prior to applying for case closure. This requirement applies if: (1) the person conducting the response action does not own the source property; (2) the contamination has migrated onto another property; and/or (3) one or more monitoring wells will not be abandoned. Use form 4400-286, Notification of Continuing Obligations and Residual Contamination, at <http://dnr.wi.gov/files/PDF/forms/4400/4400-286.pdf>

Include a copy of each notification sent and accompanying proof of delivery, i.e., return receipt or signature confirmation.

Include the following documents for each property, keeping each property's documents grouped together and labeled with the letter G and the corresponding ID number from the table on the following page. (Source Property documents should only be included in Attachment F):

- **Deed:** The most recent deed with legal descriptions clearly listed for all affected properties.
Note: If a property has been purchased with a land contract and the purchaser has not yet received a deed, a copy of the land contract which includes the legal description shall be submitted instead of the most recent deed. If the property has been inherited, written documentation of the property transfer should be submitted along with the most recent deed.
- **Certified Survey Map:** A copy of the certified survey map or the relevant section of the recorded plat map for those properties where the legal description in the most recent deed refers to a certified survey map or a recorded plat map. In cases where the certified survey map or recorded plat map are not legible or are unavailable, a copy of a parcel map from a county land information office may be substituted. A copy of a parcel map from a county land information office shall be legible, and the parcels identified in the legal description shall be clearly identified and labeled with the applicable parcel identification number.
- **Verification of Zoning:** Documentation (e.g., official zoning map or letter from municipality) of the property's or properties' current zoning status.
- **Signed Statement:** A statement signed by the Responsible Party (RP), which states that he or she believes the attached legal description(s) accurately describe(s) the correct contaminated property or properties.

Signatures and Findings for Closure Determination

This page has been updated as of February 2019 to comply with the requirements of Wis. Admin. Code ch. NR 712.

Check the correct box for this case closure request and complete the corresponding certification statement(s) listed below to demonstrate that the requirements of Wis. Admin. Code ch. NR 712 have been met. The responsibility for signing the certification may not be delegated per Wis. Admin. Code § NR 712.09 (1). Per Wis. Admin. Code § 712.05 (1), the work must be conducted or supervised by the person certifying.

- The investigation and/or response action(s) for this site evaluated and/or addressed groundwater (including natural attenuation remedies). Both a professional engineer and a hydrogeologist must sign this document per Wis. Admin. Code ch. NR 712.
- The investigation and the response action(s) for this site did not evaluate or address groundwater. A professional engineer must sign this document per Wis. Admin. Code ch. NR 712.

Engineering Certification

I, Steve Marshik, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Signature 

P. E. #

34139

Title Sr. Civil Engineer

P.E. Stamp



Hydrogeologist Certification

I, Lynette 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 chs. NR 700 to 726, Wis. Adm. Code.

Signature 

Title Sr. Geologist

Date

03/26/2020

Attachment A – Data Tables

A.1 Groundwater Analytical Table

A.2 Soil Analytical Results Tables

A.3 Residual Soil Contamination Table

A.4 Vapor Analytical Table (Not Applicable)

A.5 Other Media of Concern (Not Applicable)

A.6 Water Level Elevations (Not Applicable)

A.7 Other (Not Applicable)

Table A.1
Groundwater Analytical Table (2018)
Nemadji Substation Phase II
Investigation Superior, WI

			Location	SB-3
			Date	6/22/2018
			Depth	14.5 - 19.5 ft
Parameter	Units	Wisconsin Groundwater Public Health Enforcement Standards	Wisconsin Groundwater Preventive Action Limits	
Effective Date		07/01/2015	07/01/2015	
Exceedance Key		No Exceedances	No Exceedances	
Semivolatile Organic Compounds				
Acenaphthene	ug/l			< 0.0043 U
Acenaphthylene	ug/l			< 0.0063 U
Anthracene	ug/l	3000	600	< 0.0083 U
Benz(a)anthracene	ug/l			< 0.0053 U
Benzo(a)pyrene	ug/l	0.2	0.02	< 0.0054 U
Benzo(b)fluoranthene	ug/l	0.2	0.02	< 0.017 U
Benzo(g,h,i)perylene	ug/l			< 0.013 U
Benzo(k)fluoranthene	ug/l			< 0.014 U
Chrysene	ug/l	0.2	0.02	< 0.012 U
Dibenz(a,h)anthracene	ug/l			< 0.012 U
Fluoranthene	ug/l	400	80	< 0.025 U
Fluorene	ug/l	400	80	< 0.0080 U
Indeno(1,2,3-cd)pyrene	ug/l			< 0.018 U
Naphthalene	ug/l	100	10	< 0.0092 U
Phenanthrene	ug/l			< 0.014 U
Pyrene	ug/l	250	50	< 0.020 U
Volatile Organic Compounds				
1,1,1,2-Tetrachloroethane	ug/l	70	7	< 0.20 U
1,1,1-Trichloroethane	ug/l	200	40	< 0.14 U
1,1,2,2-Tetrachloroethane	ug/l	0.2	0.02	< 0.17 U
1,1,2-Trichloroethane	ug/l	5	0.5	< 0.18 U
1,1-Dichloroethane	ug/l	850	85	< 0.17 U
1,1-Dichloroethylene	ug/l	7	0.7	< 0.16 U
1,1-Dichloropropene	ug/l			< 0.20 U
1,2,3-Trichlorobenzene	ug/l			< 0.21 U
1,2,3-Trichloropropane	ug/l	60	12	< 0.26 U
1,2,4-Trichlorobenzene	ug/l	70	14	< 0.20 U
1,2,4-Trimethylbenzene	ug/l	480 c	96 c	< 0.20 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/l	0.2	0.02	< 1.7 U
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005	< 0.24 U
1,2-Dichlorobenzene	ug/l	600	60	< 0.14 U
1,2-Dichloroethane	ug/l	5	0.5	< 0.22 U
1,2-Dichloroethylene, cis	ug/l	70	7	< 0.15 U
1,2-Dichloroethylene, trans	ug/l	100	20	< 0.12 U
1,2-Dichloropropane	ug/l	5	0.5	< 0.16 U
1,3,5-Trimethylbenzene	ug/l	480 c	96 c	< 0.12 U
1,3-Dichlorobenzene	ug/l	600	120	< 0.16 U
1,3-Dichloropropane	ug/l			< 0.070 U
1,3-Dichloropropene, cis	ug/l	0.4	0.04	< 0.20 U
1,3-Dichloropropene, trans	ug/l	0.4	0.04	< 0.18 U
1,4-Dichlorobenzene	ug/l	75	15	< 0.17 U
2,2-Dichloropropane	ug/l			< 0.17 U
Acetone	ug/l	9000	1800	< 9.2 U
Allyl chloride	ug/l			< 0.29 U
Benzene	ug/l	5	0.5	< 0.10 U
Bromobenzene	ug/l			< 0.21 U
Bromochloromethane	ug/l			< 0.27 U
Bromodichloromethane	ug/l	0.6	0.06	< 0.22 U
Bromoform	ug/l	4.4	0.44	< 0.80 U
Bromomethane	ug/l	10	1	< 1.8 U
Butylbenzene	ug/l			< 0.24 U
Butylbenzene, sec	ug/l			< 0.15 U
Butylbenzene, tert	ug/l			< 0.15 U

Table A.1
Groundwater Analytical Table (2018)
Nemadji Substation Phase II Investigation
Superior, WI

		Location		SB-3
		Date		6/22/2018
		Depth		14.5 - 19.5 ft
Parameter	Units	Wisconsin Groundwater Public Health Enforcement Standards	Wisconsin Groundwater Preventive Action Limits	
Effective Date		07/01/2015	07/01/2015	
Exceedance Key		No Exceedances	No Exceedances	
Carbon tetrachloride	ug/l	5	0.5	< 0.19 U
Chlorobenzene	ug/l	100	20	< 0.17 U
Chlorodibromomethane	ug/l	60	6	< 0.12 U
Chloroethane	ug/l	400	80	< 0.49 U
Chloroform	ug/l	6	0.6	< 0.45 U
Chloromethane	ug/l	30	3	< 0.16 U
Chlorotoluene, o	ug/l			< 0.16 U
Chlorotoluene, p	ug/l			< 0.13 U
Cumene (isopropyl benzene)	ug/l			< 0.18 U
Cymene p- (toluene isopropyl p-)	ug/l			< 0.15 U
Dibromomethane (methylene bromide)	ug/l			< 0.16 U
Dichlorodifluoromethane (Freon-12)	ug/l	1000	200	< 0.23 U
Dichlorofluoromethane (Freon-21)	ug/l	7000		< 0.14 U
Ethyl benzene	ug/l	700	140	< 0.14 U
Ethyl ether	ug/l	1000	100	< 0.095 U
Hexachlorobutadiene	ug/l			< 0.31 U
Methyl ethyl ketone (2-butanone)	ug/l	4000	800	< 0.99 U
Methyl isobutyl ketone (MIBK)	ug/l	500	50	< 0.42 U
Methyl tertiary butyl ether (MTBE)	ug/l	60	12	< 0.16 U
Methylene chloride	ug/l	5	0.5	< 0.98 U
Naphthalene	ug/l	100	10	< 0.48 U
Propylbenzene	ug/l			< 0.10 U
Styrene	ug/l	100	10	< 0.19 U
Tetrachloroethylene	ug/l	5	0.5	< 0.17 U
Tetrahydrofuran	ug/l	50	10	< 2.2 U
Toluene	ug/l	800	160	2.1
Trichloroethylene (TCE)	ug/l	5	0.5	< 0.15 U
Trichlorofluoromethane (Freon-11)	ug/l	3490	698	< 0.23 U
Trichlorotrifluoroethane (Freon 113)	ug/l			< 0.22 U
Vinyl chloride	ug/l	0.2	0.02	< 0.092 U
Xylene, total	ug/l	2000 (4)	400 (4)	< 0.31 U

(4) Xylene includes meta-, ortho-, and para-xylene combined.
c Value represents the criteria for Trimethylbenzenes (1,2,4- and 1,3,5- combined).
U The analyte was analyzed for, but was not detected.

Table A.2.a
Soil Analytical Results Table (2020)
Nemadji Substation Phase II Investigation
Superior, WI

Parameter	Units	Location																					
		SB-6	SB-6	SB-7	SB-7	SB-8	SB-8	SB-9	SB-10	SB-10	SB-10	SB-11	SB-11	SB-12	SB-13	SB-14	SB-15	SB-16	SB-17	SB-18			
		Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date		
Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth			
		12/01/2018	12/01/2018	12/01/2018																			
Effective Date		12/01/2018	12/01/2018	12/01/2018																			
Exceedance Key		Bold	No Exceedances	No Exceedances																			
General Parameters																							
Moisture	%				24.1	26.4	23.0	27.2	26.6	27.3	27.3	26.4	27.7	23.1	36.3	27.7	23.9	24.7	33.9	35.5	25.4	26.2	24.8
Volatile Organic Compounds																							
1,2,4-Trimethylbenzene	mg/kg	1.3787 (1)	219	219	< 0.0133 U	< 0.0141 U	< 0.0131 U	< 0.0143 U	< 0.0142 U	< 0.0137 U	< 0.0143 U	< 0.0140 U	< 0.0142 U	< 0.0132 U	< 0.0189 U	< 0.0138 U	< 0.0137 U	< 0.0137 U	< 0.0174 U	< 0.0155 U	< 0.0139 U	< 0.0136 U	< 0.0134 U
1,3,5-Trimethylbenzene	mg/kg	1.3787 (1)	182	182	< 0.0106 U	< 0.0112 U	< 0.0104 U	< 0.0114 U	< 0.0113 U	< 0.0109 U	< 0.0114 U	< 0.0112 U	< 0.0113 U	< 0.0105 U	< 0.0150 U	< 0.0110 U	< 0.0109 U	< 0.0109 U	< 0.0138 U	< 0.0124 U	< 0.0111 U	< 0.0109 U	< 0.0107 U
Benzene	mg/kg	0.0051	7.07	1.6	0.0399	< 0.0040 U	< 0.0037 U	< 0.0040 U	< 0.0040 U	< 0.0039 U	< 0.0040 U	< 0.0039 U	< 0.0039 U	< 0.0037 U	< 0.0053 U	< 0.0039 U	< 0.0039 U	< 0.0039 U	< 0.0049 U	< 0.0044 U	< 0.0039 U	< 0.0038 U	< 0.0038 U
Ethyl benzene	mg/kg	1.57	35.4	8.02	< 0.0036 U	< 0.0038 U	< 0.0036 U	< 0.0039 U	< 0.0039 U	< 0.0037 U	< 0.0039 U	< 0.0038 U	< 0.0039 U	< 0.0036 U	< 0.0051 U	< 0.0038 U	< 0.0037 U	< 0.0037 U	< 0.0047 U	< 0.0042 U	< 0.0038 U	< 0.0037 U	< 0.0036 U
Methyl tertiary butyl ether (MTBE)	mg/kg	0.027	282	63.8	< 0.0079 U	< 0.0084 U	< 0.0078 U	< 0.0085 U	< 0.0084 U	< 0.0081 U	< 0.0085 U	< 0.0083 U	< 0.0085 U	< 0.0078 U	< 0.0112 U	< 0.0082 U	< 0.0081 U	< 0.0081 U	< 0.0103 U	< 0.0092 U	< 0.0083 U	< 0.0081 U	< 0.0080 U
Naphthalene	mg/kg	0.6582	24.1	5.52	0.166 J	< 0.0658 U	< 0.0613 U	< 0.0670 U	< 0.0663 U	< 0.0639 U	< 0.0668 U	< 0.0655 U	< 0.0665 U	< 0.0615 U	< 0.0884 U	< 0.0646 U	< 0.0639 U	< 0.0640 U	< 0.0812 U	< 0.0726 U	< 0.0652 U	< 0.0639 U	< 0.0628 U
Toluene	mg/kg	1.1072	818	818	0.0512 J	< 0.0172 U	< 0.0160 U	< 0.0175 U	< 0.0173 U	< 0.0167 U	< 0.0174 U	< 0.0171 U	< 0.0173 U	< 0.0160 U	< 0.0230 U	< 0.0168 U	< 0.0167 U	< 0.0167 U	< 0.0212 U	< 0.0189 U	< 0.0170 U	< 0.0167 U	< 0.0164 U
Xylene, total	mg/kg	3.96	260	260	< 0.0155 U	< 0.0163 U	< 0.0152 U	< 0.0166 U	< 0.0164 U	< 0.0158 U	< 0.0166 U	< 0.0162 U	< 0.0165 U	< 0.0153 U	< 0.0219 U	< 0.0160 U	< 0.0158 U	< 0.0159 U	< 0.0201 U	< 0.0180 U	< 0.0162 U	< 0.0158 U	< 0.0156 U
Total Petroleum Hydrocarbons																							
Diesel Range Organics, C10-C28	mg/kg		23.6	< 4.9 U	< 4.8 U	< 5.1 U	8.2 J	< 4.8 U	< 5.1 U	< 5.3 U	< 5.4 U	121 J	19.5 J	< 5.3 U	< 5.0 U	< 4.8 U	6.0 J	< 5.0 U	26.5	< 5.1 U	< 5.1 U		
Barr Calculated Comparison - Industrial																							
Exceedance Count	no unit		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hazard Index	no unit		≤ 1.0		0.00028	0.00010	0.000095	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.000096	0.00014	0.00010	0.00010	0.00010	0.00013	0.00011	0.00010	0.000099	0.000098
Cumulative Cancer Risk	no unit		≤ 1E-05		1.30E-08	3.40E-09	3.20E-09	3.50E-09	3.50E-09	3.30E-09	3.50E-09	3.40E-09	3.50E-09	3.20E-09	4.60E-09	3.40E-09	3.30E-09	3.30E-09	4.20E-09	3.80E-09	3.40E-09	3.30E-09	3.30E-09
Barr Calculated Comparison -Non-Industrial																							
Exceedance Count	no unit			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hazard Index	no unit			≤ 1.0	0.0014	0.00050	0.00047	0.00051	0.00051	0.00049	0.00051	0.00050	0.00051	0.00047	0.00067	0.00049	0.00049	0.00049	0.00062	0.00055	0.00050	0.00049	0.00048
Cumulative Cancer Risk	no unit			≤ 1E-05	5.60E-08	1.50E-08	1.40E-08	1.50E-08	1.50E-08	1.50E-08	1.50E-08	1.50E-08	1.50E-08	1.40E-08	2.00E-08	1.50E-08	1.50E-08	1.50E-08	1.90E-08	1.70E-08	1.50E-08	1.50E-08	1.40E-08

(1) Representing the criteria for combined Trimethylbenzenes.
J Estimated detected value. Either certain QC criteria were not met or the concentration is between the laboratory's detection and quantitation limits.
U The analyte was analyzed for, but was not detected.

Table A.2.a
Soil Analytical Results Table (2020)
Nemadji Substation Phase II Investigation
Superior, WI

Parameter	Units	Location			SB-18	SB-19	SB-20	SB-21	SB-21	SB-22	SB-22	SB-23	SB-24	SB-25	SB-26	SB-26	SB-27	SB-27	SB-28	SB-29	SB-29	
		Wisconsin Groundwater RCLs, DF=2	Wisconsin Not to Exceed Direct Contact Industrial RCLs	Wisconsin Not to Exceed Direct Contact Non-Industrial RCLs	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date
		12/01/2018	12/01/2018	12/01/2018	1/07/2020	1/07/2020	1/07/2020	1/06/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020	1/07/2020
Depth	6 - 8 ft	6 - 8 ft	6 - 8 ft	2 - 4 ft	6 - 8 ft	2 - 4 ft	6 - 8 ft	6 - 8 ft	2 - 4 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	2 - 4 ft	6 - 8 ft	2 - 4 ft	6 - 8 ft	6 - 8 ft	2 - 4 ft	6 - 8 ft		
Effective Date		12/01/2018	12/01/2018	12/01/2018																		
Exceedance Key		Bold	No Exceedances	No Exceedances																		
General Parameters																						
Moisture	%				27.2	24.5	25.7	24.8	25.2	24.3	25.2	23.4	23.6	34.5	25.5	29.5	25.8	26.4	27.1	24.0	29.3	
Volatile Organic Compounds																						
1,2,4-Trimethylbenzene	mg/kg	1.3787 (1)	219	219	< 0.0138 U	< 0.0138 U	< 0.0132 U	< 0.0129 U	< 0.0136 U	< 0.0130 U	< 0.0132 U	< 0.0133 U	< 0.0132 U	< 0.0162 U	< 0.0139 U	< 0.0138 U	< 0.0131 U	< 0.0133 U	< 0.0131 U	< 0.0128 U	< 0.0137 U	
1,3,5-Trimethylbenzene	mg/kg	1.3787 (1)	182	182	< 0.0110 U	< 0.0110 U	< 0.0105 U	< 0.0103 U	< 0.0108 U	< 0.0104 U	< 0.0105 U	< 0.0106 U	< 0.0106 U	< 0.0129 U	< 0.0111 U	< 0.0110 U	< 0.0104 U	< 0.0106 U	< 0.0104 U	< 0.0102 U	< 0.0109 U	
Benzene	mg/kg	0.0051	7.07	1.6	< 0.0039 U	< 0.0039 U	< 0.0037 U	< 0.0036 U	< 0.0038 U	< 0.0037 U	< 0.0037 U	< 0.0037 U	< 0.0037 U	< 0.0046 U	< 0.0039 U	< 0.0039 U	< 0.0037 U	< 0.0038 U	< 0.0037 U	< 0.0036 U	< 0.0039 U	
Ethyl benzene	mg/kg	1.57	35.4	8.02	< 0.0037 U	< 0.0037 U	< 0.0036 U	< 0.0035 U	< 0.0037 U	< 0.0035 U	< 0.0036 U	< 0.0036 U	< 0.0036 U	< 0.0044 U	< 0.0038 U	< 0.0038 U	< 0.0036 U	< 0.0036 U	< 0.0036 U	< 0.0035 U	< 0.0037 U	
Methyl tertiary butyl ether (MTBE)	mg/kg	0.027	282	63.8	< 0.0082 U	< 0.0082 U	< 0.0078 U	< 0.0077 U	< 0.0081 U	< 0.0077 U	< 0.0078 U	< 0.0079 U	< 0.0079 U	< 0.0097 U	< 0.0083 U	< 0.0082 U	< 0.0078 U	< 0.0079 U	< 0.0078 U	< 0.0076 U	< 0.0082 U	
Naphthalene	mg/kg	0.6582	24.1	5.52	< 0.0644 U	< 0.0644 U	< 0.0617 U	< 0.0605 U	< 0.0636 U	< 0.0609 U	< 0.0617 U	< 0.0621 U	< 0.0620 U	< 0.0759 U	< 0.0649 U	< 0.0647 U	< 0.0613 U	< 0.0624 U	< 0.0612 U	< 0.0600 U	< 0.0641 U	
Toluene	mg/kg	1.1072	818	818	< 0.0168 U	< 0.0168 U	< 0.0161 U	< 0.0158 U	< 0.0166 U	< 0.0159 U	< 0.0161 U	< 0.0162 U	< 0.0162 U	< 0.0198 U	< 0.0169 U	< 0.0169 U	< 0.0160 U	< 0.0163 U	< 0.0160 U	< 0.0156 U	< 0.0167 U	
Xylene, total	mg/kg	3.96	260	260	< 0.0160 U	< 0.0160 U	< 0.0153 U	< 0.0150 U	< 0.0158 U	< 0.0151 U	< 0.0153 U	< 0.0154 U	< 0.0154 U	< 0.0188 U	< 0.0161 U	< 0.0160 U	< 0.0152 U	< 0.0155 U	< 0.0152 U	< 0.0149 U	< 0.0159 U	
Total Petroleum Hydrocarbons																						
Diesel Range Organics, C10-C28	mg/kg				< 5.1 U	< 5.0 U	< 4.9 U	< 6.0 U	< 4.9 U	< 4.5 U	< 5.6 U	< 4.4 U	< 4.9 U	15.5 J	< 4.8 U	< 5.3 U	< 5.0 U	< 4.8 U	< 5.1 U	14.0 J	< 5.3 U	
Barr Calculated Comparison - Industrial																						
Exceedance Count	no unit		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hazard Index	no unit		≤ 1.0		0.00010	0.00010	0.000096	0.000094	0.000099	0.000095	0.000096	0.000097	0.000096	0.00012	0.00010	0.00010	0.000095	0.000097	0.000095	0.000093	0.00010	
Cumulative Cancer Risk	no unit		≤ 1E-0.5		3.40E-09	3.40E-09	3.20E-09	3.10E-09	3.30E-09	3.20E-09	3.20E-09	3.20E-09	3.20E-09	4.00E-09	3.40E-09	3.40E-09	3.20E-09	3.30E-09	3.20E-09	3.10E-09	3.30E-09	
Barr Calculated Comparison -Non-Industrial																						
Exceedance Count	no unit			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hazard Index	no unit			≤ 1.0	0.00049	0.00049	0.00047	0.00046	0.00049	0.00047	0.00047	0.00047	0.00047	0.00058	0.00050	0.00049	0.00047	0.00048	0.00047	0.00046	0.00049	
Cumulative Cancer Risk	no unit			≤ 1E-05	1.50E-08	1.50E-08	1.40E-08	1.40E-08	1.40E-08	1.40E-08	1.40E-08	1.40E-08	1.40E-08	1.70E-08	1.50E-08	1.50E-08	1.40E-08	1.40E-08	1.40E-08	1.40E-08	1.50E-08	

(1) Representing the criteria for combined Trimethylbenzenes.
J Estimated detected value. Either certain QC criteria were not met or the concentration is between the laboratory's detection and quantitation limits.
U The analyte was analyzed for, but was not detected.

Table A.2.b
Soil Analytical Results Table (2018)
Nemadji Substation Phase II Investigation
Superior, WI

Parameter	Units	Location				SB-1	SB-1	SB-2	SB-2	SB-3	SB-3	SB-4	SB-4	SB-5	SB-5
		Wisconsin Groundwater RCLs, DF=2	Wisconsin Not to Exceed Direct Contact Industrial RCLs	Wisconsin Not to Exceed Direct Contact Non-Industrial RCLs	WDR Background Threshold Values	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/22/2018	6/22/2018	6/22/2018	6/22/2018
		Date	Date	Date	Date	2 - 3 ft	12 - 13 ft	0 - 1 ft	6 - 7 ft	0 - 2 ft	8 - 9 ft	0 - 2 ft	6 - 7 ft	0 - 1 ft	8 - 9 ft
Effective Date		12/01/2018	12/01/2018	12/01/2018	12/01/2018										
Exceedance Key		Bold	<u>Underline</u>	<i>Italics</i>	Reference Only										
Methyl isobutyl ketone (MIBK)	mg/kg	0.2252	3360	3360		< 0.0411 U	< 0.0411 U	< 0.0411 U	< 0.0411 U	< 0.0411 U	< 0.0411 U	< 0.0411 U	< 0.0411 U	< 0.0411 U	< 0.0411 U
Methyl tertiary butyl ether (MTBE)	mg/kg	0.027	282	63.8		< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U
Methylene chloride	mg/kg	0.0026	1150	61.8		< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U
Styrene	mg/kg	0.22	867	867		< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U
Tetrachloroethylene	mg/kg	0.0045	145	33		< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U
Toluene	mg/kg	1.1072	818	818		< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	0.0388 J	< 0.0250 U	
Trichloroethylene (TCE)	mg/kg	0.0036	8.41	1.3		< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	
Vinyl chloride	mg/kg	0.0001	2.08	0.067		< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	
Xylene, m & p	mg/kg	3.96 XYL	260 XYL	260 XYL		< 0.0500 U	< 0.0500 U	< 0.0500 U	< 0.0500 U	< 0.0500 U	< 0.0500 U	< 0.0500 U	< 0.0500 U	< 0.0500 U	
Xylene, o	mg/kg	3.96 XYL	434	434		< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	< 0.0250 U	
Xylene, total (Barr Calculation)	mg/kg	3.96	260	260		ND	ND	ND	ND	ND	ND	ND	ND	ND	
Barr Calculated Comparison - Industrial ¹															
Exceedance Count	no unit		0			0	0	0	0	0	0	0	0	0	
Hazard Index	no unit		≤ 1.0			0.0065	0.0066	0.0065	0.0065	0.0066	0.0065	0.0065	0.0065	0.12	
Cumulative Cancer Risk	no unit		≤ 1E-0.5			8.70E-08	8.70E-08	8.70E-08	8.70E-08	8.70E-08	8.80E-08	8.70E-08	8.70E-08	1.80E-07	
Barr Calculated Comparison - Non-Industrial ¹															
Exceedance Count	no unit			0		0	0	0	0	0	0	0	0	1	
Hazard Index	no unit			≤ 1.0		0.031	0.031	0.03	0.03	0.031	0.031	0.031	0.03	0.29	
Cumulative Cancer Risk	no unit			≤ 1E-05		7.20E-07	7.20E-07	7.20E-07	7.20E-07	7.20E-07	7.40E-07	7.20E-07	7.20E-07	2.40E-06	

¹ Comparison calculated using the reported value for Xylene, m & p in replace for "Xylenes" and the reported value for Chromium in replace of "Chromium(III), Insoluble Salts" in the RCL calculator

* Estimated value, QA/QC criteria not met.

CR3 Value represents the criteria for Chromium(III).

J Estimated detected value. Either certain QC criteria were not met or the concentration is between the laboratory's detection and quantitation limits.

ND Not detected.

U The analyte was analyzed for, but was not detected.

XYL Value represents the criteria for Xylene, total (m-,o-,p- combined).

Table A.3
Residual Soil Contamination Table (2020)
Nemadji Substation Phase II Investigation
Superior, WI

					Location	SB-6	SB-8	SB-10	SB-11	SB-14	SB-16	SB-25	SB-29
					Date	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/07/2020	1/07/2020
					Depth	1.5 - 2 ft	2 - 4 ft	1 - 2 ft	2 - 4 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	2 - 4 ft
Parameter	Units	Wisconsin Groundwater RCLs, DF=2	Wisconsin Not to Exceed Direct Contact Industrial RCLs	Wisconsin Not to Exceed Direct Contact Non-Industrial RCLs									
Effective Date		06/01/2018	06/01/2018	06/01/2018									
Exceedance Key		Bold	No Exceedances	No Exceedances									
Volatile Organic Compounds													
Benzene	mg/kg	0.0051	7.07	1.6	0.0399	< 0.0040 U	< 0.0037 U	< 0.0053 U	< 0.0049 U	< 0.0039 U	< 0.0046 U	< 0.0036 U	
Naphthalene	mg/kg	0.6582	24.1	5.52	0.166 J	< 0.0663 U	< 0.0615 U	< 0.0884 U	< 0.0812 U	< 0.0652 U	< 0.0759 U	< 0.0600 U	
Toluene	mg/kg	1.1072	818	818	0.0512 J	< 0.0173 U	< 0.0160 U	< 0.0230 U	< 0.0212 U	< 0.0170 U	< 0.0198 U	< 0.0156 U	
Total Petroleum Hydrocarbons													
Diesel Range Organics, C10-C28	mg/kg				23.6	8.2 J	121 J	19.5 J	6.0 J	26.5	15.5 J	14.0 J	
Barr Calculated Comparison - Industrial													
Exceedance Count	no unit		0		0	0	0	0	0	0	0	0	0
Hazard Index	no unit		≤ 1.0		0.00028	0.00010	0.000096	0.00014	0.00013	0.00010	0.00012	0.000093	
Cumulative Cancer Risk	no unit		≤ 1E-0.5		1.30E-08	3.50E-09	3.20E-09	4.60E-09	4.20E-09	3.40E-09	4.00E-09	3.10E-09	
Barr Calculated Comparison -Non-Industrial													
Exceedance Count	no unit			0	0	0	0	0	0	0	0	0	0
Hazard Index	no unit			≤ 1.0	0.0014	0.00051	0.00047	0.00067	0.00062	0.00050	0.00058	0.00046	
Cumulative Cancer Risk	no unit			≤ 1E-05	5.60E-08	1.50E-08	1.40E-08	2.00E-08	1.90E-08	1.50E-08	1.70E-08	1.40E-08	

J Estimated detected value. Either certain QC criteria were not met or the concentration is between the laboratory's detection and quantitation limits.

U The analyte was analyzed for, but was not detected.

DF Dilution Factor.

RCLs Residual Contaminant Levels.

Table A.3.b
Residual Soil Contamination Table (2018)
nemadji Substation Phase II Investigation
Superior, WI

Parameter	Units	Location				SB-1	SB-1	SB-2	SB-2	SB-3	SB-3	SB-4	SB-4	SB-5	SB-5
		Wisconsin Not to Exceed Industrial RCLs	Wisconsin Not to Exceed Non-Industrial RCLs	WDNR Background Threshold Values	Date	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/22/2018	6/22/2018	6/22/2018	6/22/2018
Effective Date		06/01/2018	06/01/2018	06/01/2018	Depth	2 - 3 ft	12 - 13 ft	0 - 1 ft	6 - 7 ft	0 - 2 ft	8 - 9 ft	0 - 2 ft	6 - 7 ft	0 - 1 ft	8 - 9 ft
Exceedance Key		<u>Underlined</u>	<i>Italics</i>	Reference Only											
General Parameters															
Moisture	%					27.6	35.3	20.3	24.5	24.5	31.6	26.7	29.4	23.3	28.1
Metals															
Mercury	mg/kg	3.13	3.13			0.023 j	0.026 j	0.022 j	0.020 j	0.026 j	0.021 j	0.023 j	0.021 j	0.10	0.017 j
Arsenic	mg/kg	<u>3</u>	<i>0.677</i>	8		<u>3.1</u>	<u>3.8</u>	<u>3.0</u>	<u>3.3</u>	<u>3.5</u>	<u>2.8</u>	<u>3.0</u>	<u>3.0</u>	<i>5.1 j</i>	<i>3.4</i>
Barium	mg/kg	100000	15300	364		245	193	145	150	174	176	191	160	287	173
Cadmium	mg/kg	985	71.1	1		--	--	--	--	--	0.11 j	--	0.097 j	0.56 j	--
Chromium	mg/kg	100000 CR3	100000 CR3	44		49.6	42.9	37.0	39.5	41.7	42.6	48.6	39.4	1850	42.0
Lead	mg/kg	800	400	52		10.5	9.5	7.6	8.1	9.0	7.8	9.1	7.7	88.2	8.4
Selenium	mg/kg	5840	391			0.56 j	--	--	--	--	--	--	--	--	--
Silver	mg/kg	5840	391			--	--	--	--	--	--	--	--	1.1 j	--
Semivolatile Organic Compounds															
Acenaphthene	ug/kg	45200000	3590000			--	--	--	--	--	--	--	--	6.9	--
Acenaphthylene	ug/kg					--	--	--	--	--	--	--	--	3.4	--
Anthracene	ug/kg	100000000	17900000			--	--	--	--	--	--	--	--	11.0	--
Benz(a)anthracene	ug/kg	20800	1140			--	--	--	--	--	--	--	--	77.8	--
Benzo(a)pyrene	ug/kg	2110	115			--	--	--	--	--	1.2 j	--	--	128	--
Benzo(b)fluoranthene	ug/kg	21100	1150			1.1 j	--	--	--	--	2.2	--	--	162	--
Benzo(g,h,i)perylene	ug/kg					--	--	--	--	--	2.3 j	--	--	116	--
Benzo(k)fluoranthene	ug/kg	211000	11500			--	--	--	--	--	2.2 j	--	--	55.7	--
Chrysene	ug/kg	2110000	115000			--	--	--	--	--	--	--	--	98.1	--
Dibenz(a,h)anthracene	ug/kg	2110	115			--	--	--	--	--	2.2 j	--	--	32.5	--
Fluoranthene	ug/kg	30100000	2390000			1.8 j	--	--	--	--	1.9 j	--	--	90.4	--
Fluorene	ug/kg	30100000	2390000			--	--	--	--	--	--	--	--	2.5	--
Indeno(1,2,3-cd)pyrene	ug/kg	21100	1150			--	--	--	--	--	2.2 j	--	--	94.4	--
Naphthalene	ug/kg	24100	5520			--	--	--	--	--	--	--	--	4.3	--
Phenanthrene	ug/kg					--	--	--	--	--	--	--	--	39.1	--
Pyrene	ug/kg	22600000	1790000			--	--	--	--	--	--	--	--	75.2	--
Volatile Organic Compounds **															
Toluene	ug/kg	818000	818000			--	--	--	--	--	--	--	--	38.8 j	--
Barr Calculated Comparison - Non-Industrial															
Exceedance Count	no unit	0	0			0	0	0	0	0	0	0	0	1	0

Note
** Non-detect VOC compounds reported on a wet weight basis per WIDNR

Attachment B – Maps, Figures, and Photos

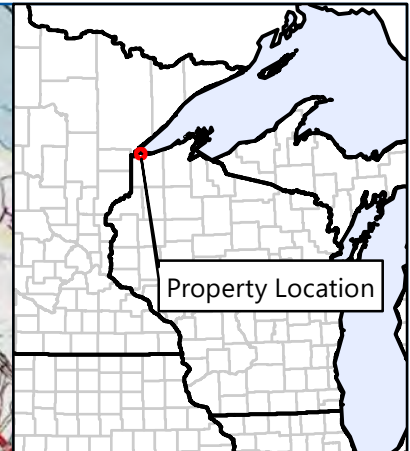
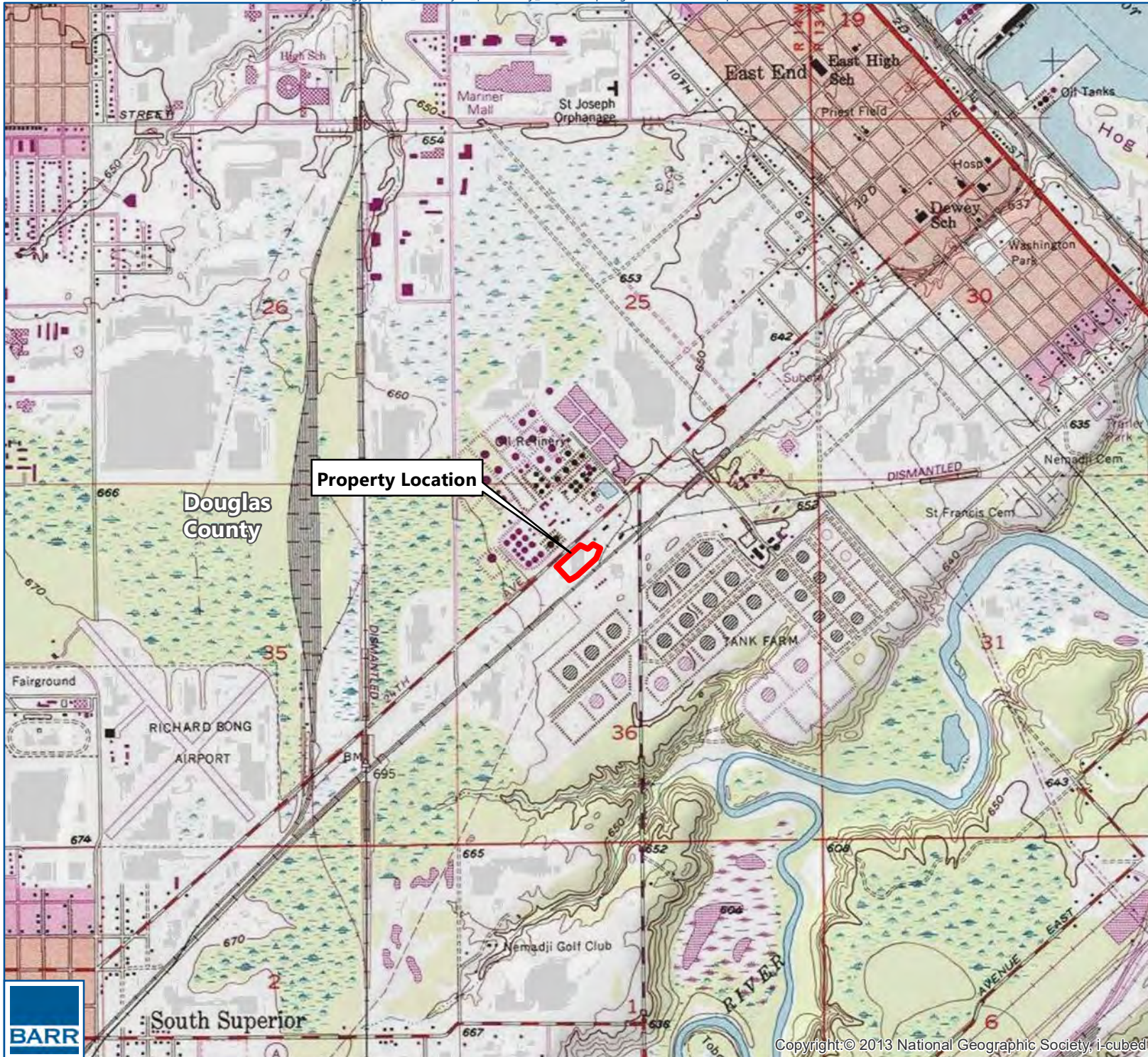
B.1 Location Maps

B.2 Soil Figures

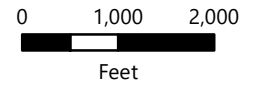
B.3 Groundwater Figures

B.4 Vapor Maps and Other Media (Not Applicable)

B.5 Structural Impediment Photos (Not Applicable)

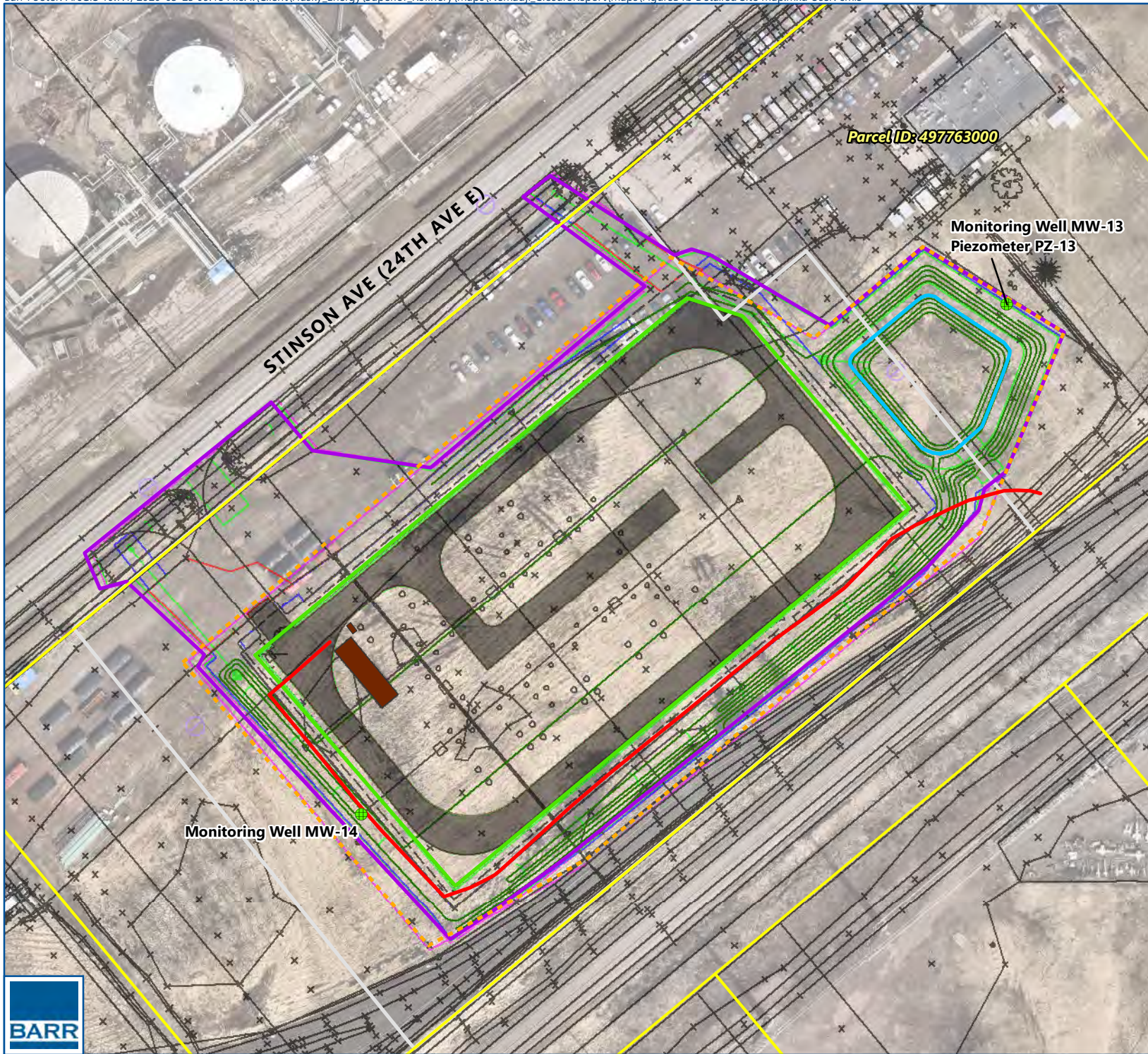









 Property Boundary

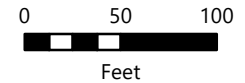


LOCATION MAP
SWL&P Nemadji Substation
Superior, WI





-  Monitoring Well
-  Property Line
-  Underground Electrical
-  Construction Limits
-  Proposed Substation Fenceline
-  Gravel Surfacing
-  Foundations
-  Proposed Pond
-  2018 Phase II Property Boundary
-  Parcel Boundary
-  Topographic Contour (1 ft)



1 inch = 100 feet

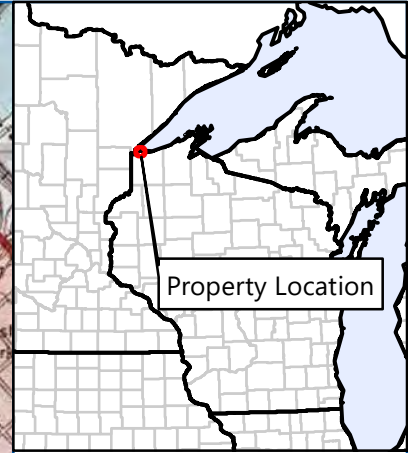
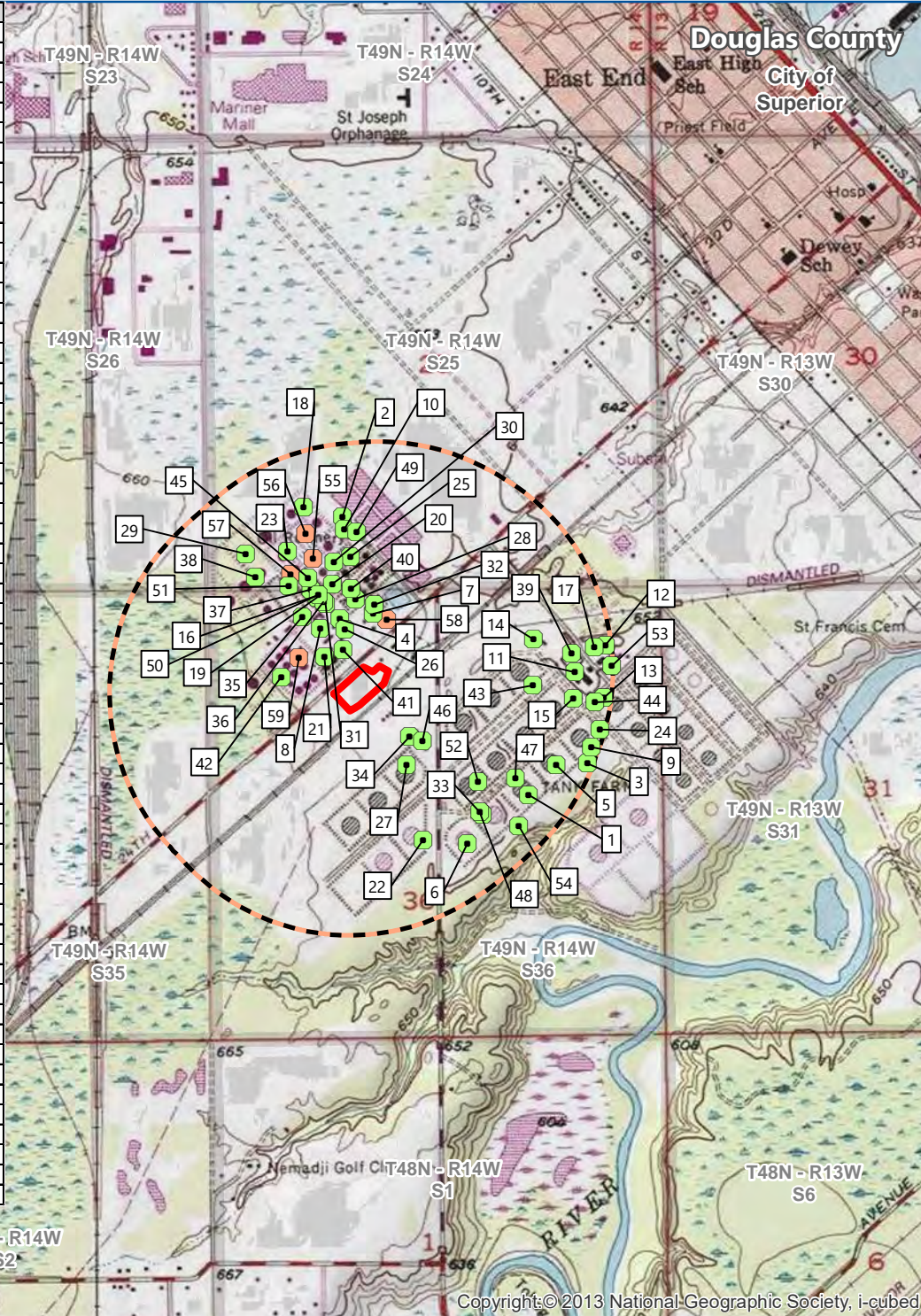
Imagery: Nearmap, 4/25/2019



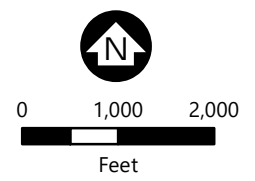
DETAILED SITE MAP
SWL&P Nemadji Substation
Superior, WI

FIGURE B.1.b

Map ID	Activity #	Activity
1	216220009	LAKEHEAD PIPELINE - CRUDE OIL TANK 22
2	216222650	MURPHY OIL - FUEL LOADING AREA
3	216176579	LAKEHEAD PIPELINE CO L P
4	216222670	MURPHY OIL - TANK S-1, S-2
5	216178165	LAKEHEAD PIPELINE - TANK 21 CRUDE OIL
6	216275100	LAKEHEAD PIPELINE - TANK 24
7	216242301	MURPHY OIL - VAPOR RECOVERY UNIT
8	216222638	MURPHY OIL - CRUDE UNIT PROCESS AREA
9	216558992	ENBRIDGE ENERGY - TANK 20 VALVE
10	216222628	MURPHY OIL - PROPANE/BUTANE LOADING AREA
11	216558988	ENBRIDGE ENERGY - OFFICE EXCAVATION
12	216560841	ENBRIDGE ENERGY TERMINAL - LINE 5 PIG TRAP
13	216558987	ENBRIDGE ENERGY - TANK 9
14	216279246	LAKEHEAD PIPELINE CO L P
15	216183249	LAKEHEAD PIPELINE - MANIFOLD 3
16	216000522	MURPHY OIL - TANK #34
17	216000161	MURPHY OIL - LAKEHEAD TANK FAC
18	216221525	MURPHY OIL - TANK #59
19	216000507	MURPHY OIL - 24TH
20	216000523	MURPHY OIL - TANK #67
21	216000563	MURPHY OIL - TANK #102
22	216112803	HUSKY OIL LTD TANK 28
23	216221534	MURPHY OIL - TANK #29 & 30
24	316000168	LAKEHEAD PIPE LINE CO
25	216222617	MURPHY OIL - TANK #65 & 66
26	216246715	MURPHY OIL - SLOP OIL MANIFOLD AREA
27	216000508	MURPHY OIL - BARDON AVE (TANK 25)
28	216190549	MURPHY OIL - TANK #1 & 2 (FORMER)
29	216221920	MURPHY OIL - TANK #47
30	216221941	MURPHY OIL - TANK #39
31	316000736	MURPHY OIL - WAREHOUSE
32	216222701	MURPHY OIL - TANK BASIN #51 & 52
33	216558989	ENBRIDGE ENERGY - TANK 23
34	216275090	ENBRIDGE SUPERIOR TERMINAL
35	216550859	MURPHY OIL - S OF GREEN GAS UNIT
36	216226861	MURPHY OIL - CONTAMINATED SOIL UNDER ROADWAY
37	216222721	MURPHY OIL - TANK #32 & 33
38	216000506	MURPHY OIL - STINSON #3
39	216000512	LAKEHEAD PIPELINE - PUMP ST
40	216221947	MURPHY OIL - TANK #8
41	216221988	MURPHY OIL - TANK #81
42	216221908	MURPHY OIL - TANK #79
43	216513788	ENBRIDGE ENERGY - NEMADJI RIVER
44	216552700	ENBRIDGE ENERGY - TANK 9 PRESSURE LINE
45	216221933	MURPHY OIL - TANK #31
46	216000027	LAKEHEAD PIPELINE - PLM TOOL SHOP
47	216556786	ENBRIDGE ENERGY - TANK 22
48	216275130	LAKEHEAD PIPELINE - TANK 23
49	216221811	MURPHY OIL - UNDERGROUND PIPELINE
50	216000571	MURPHY OIL - TANK #34 & 35
51	216118396	MURPHY OIL USA
52	216558990	ENBRIDGE ENERGY - TANK 19
53	216577548	ENBRIDGE SUPERIOR TERMINAL - LINE 5 VALVE 553
54	216579604	ENBRIDGE SUPERIOR - FIELD BOOSTER 23
55	216526812	MURPHY OIL - TANK BASIN #68
56	216223154	MURPHY OIL - TANK #70
57	216222712	MURPHY OIL - TANK #40
58	216515749	MURPHY OIL - LOADING DOCK AREA
59	216581317	SUPERIOR REFINING COMPANY LLC



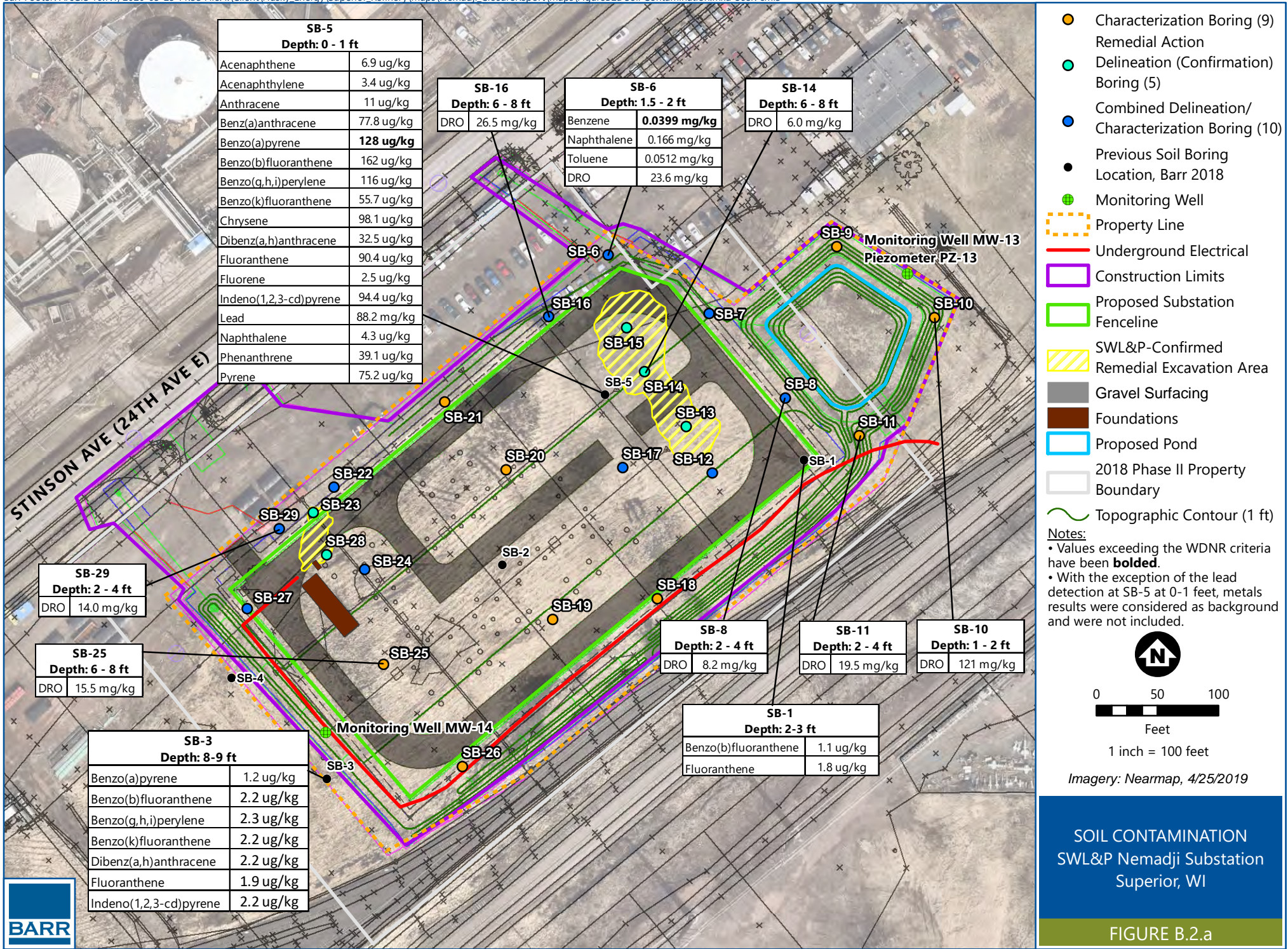
- Property Boundary
- 1/2 Mile Radius
- Remediation & Redevelopment (RR) Sites With 1/2 Mile Radius
- Open/Ongoing
- Closed/Completed



RR SITES MAP
SWL&P Nemadji Substation
Superior, WI

FIGURE B.1.c





SB-5 Depth: 0 - 1 ft	
Acenaphthene	6.9 ug/kg
Acenaphthylene	3.4 ug/kg
Anthracene	11 ug/kg
Benz(a)anthracene	77.8 ug/kg
Benzo(a)pyrene	128 ug/kg
Benzo(b)fluoranthene	162 ug/kg
Benzo(g,h,i)perylene	116 ug/kg
Benzo(k)fluoranthene	55.7 ug/kg
Chrysene	98.1 ug/kg
Dibenz(a,h)anthracene	32.5 ug/kg
Fluoranthene	90.4 ug/kg
Fluorene	2.5 ug/kg
Indeno(1,2,3-cd)pyrene	94.4 ug/kg
Lead	88.2 mg/kg
Naphthalene	4.3 ug/kg
Phenanthrene	39.1 ug/kg
Pyrene	75.2 ug/kg

SB-16 Depth: 6 - 8 ft	
DRO	26.5 mg/kg

SB-6 Depth: 1.5 - 2 ft	
Benzene	0.0399 mg/kg
Naphthalene	0.166 mg/kg
Toluene	0.0512 mg/kg
DRO	23.6 mg/kg

SB-14 Depth: 6 - 8 ft	
DRO	6.0 mg/kg

SB-29 Depth: 2 - 4 ft	
DRO	14.0 mg/kg

SB-25 Depth: 6 - 8 ft	
DRO	15.5 mg/kg

SB-3 Depth: 8-9 ft	
Benzo(a)pyrene	1.2 ug/kg
Benzo(b)fluoranthene	2.2 ug/kg
Benzo(g,h,i)perylene	2.3 ug/kg
Benzo(k)fluoranthene	2.2 ug/kg
Dibenz(a,h)anthracene	2.2 ug/kg
Fluoranthene	1.9 ug/kg
Indeno(1,2,3-cd)pyrene	2.2 ug/kg

SB-8 Depth: 2 - 4 ft	
DRO	8.2 mg/kg

SB-11 Depth: 2 - 4 ft	
DRO	19.5 mg/kg

SB-10 Depth: 1 - 2 ft	
DRO	121 mg/kg

SB-1 Depth: 2-3 ft	
Benzo(b)fluoranthene	1.1 ug/kg
Fluoranthene	1.8 ug/kg

- Characterization Boring (9)
- Remedial Action
- Delineation (Confirmation) Boring (5)
- Combined Delineation/ Characterization Boring (10)
- Previous Soil Boring Location, Barr 2018
- Monitoring Well
- Property Line
- Underground Electrical
- Construction Limits
- Proposed Substation Fenceline
- SWL&P-Confirmed Remedial Excavation Area
- Gravel Surfacing
- Foundations
- Proposed Pond
- 2018 Phase II Property Boundary
- ~ Topographic Contour (1 ft)

Notes:

- Values exceeding the WDNR criteria have been **bolded**.
- With the exception of the lead detection at SB-5 at 0-1 feet, metals results were considered as background and were not included.



0 50 100

Feet

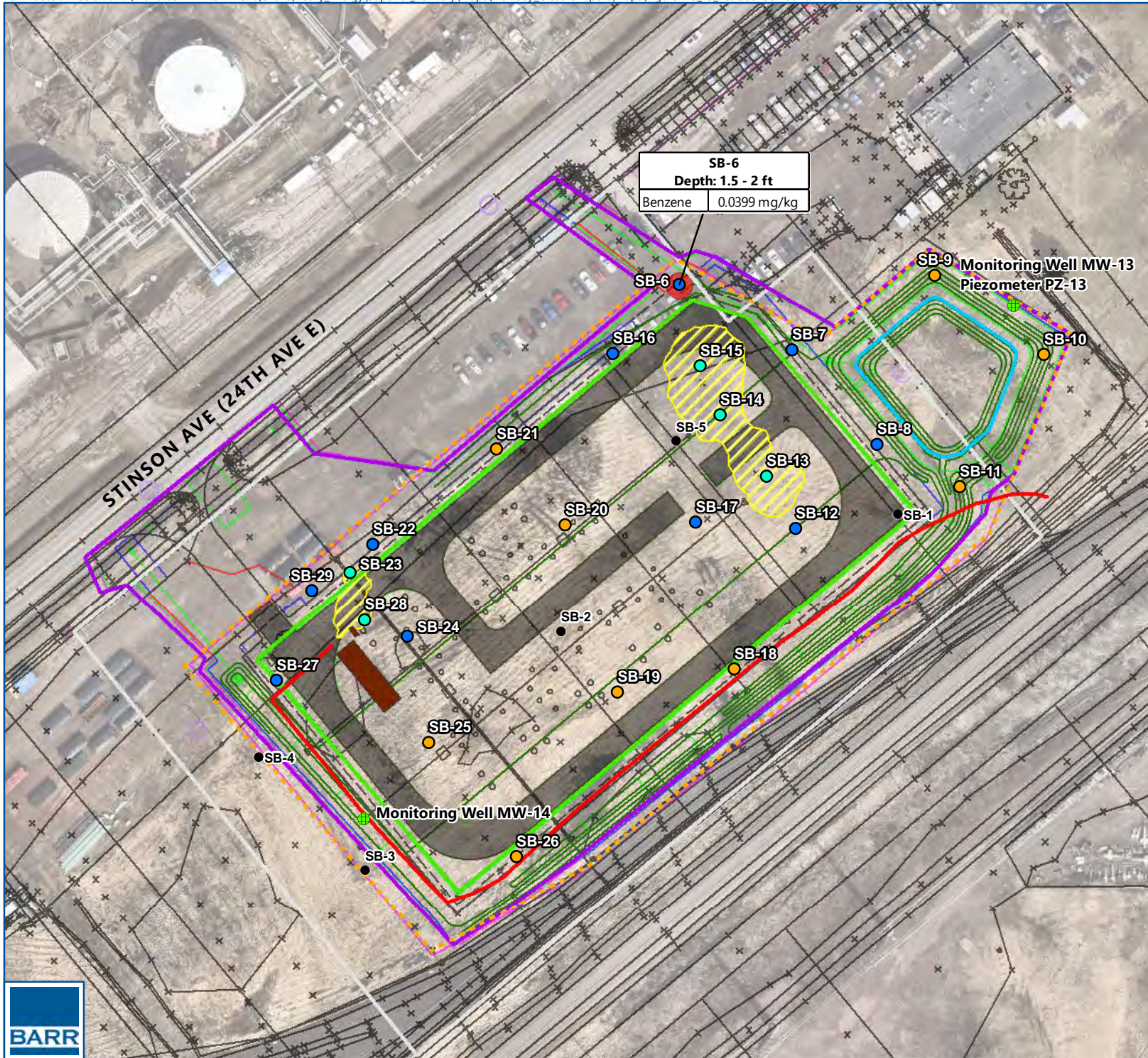
1 inch = 100 feet

Imagery: Nearmap, 4/25/2019



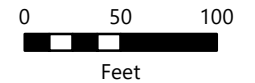
SOIL CONTAMINATION
SWL&P Nemadji Substation
Superior, WI

FIGURE B.2.a



SB-6
 Depth: 1.5 - 2 ft
 Benzene 0.0399 mg/kg

- Characterization Boring (9) Remedial Action
- Delineation (Confirmation) Boring (5)
- Combined Delineation/ Characterization Boring (10)
- Previous Soil Boring Location, Barr 2018
- Monitoring Well
- Property Line
- Underground Electrical
- Construction Limits
- Proposed Substation Fenceline
- SWL&P-Confirmed Remedial Excavation Area
- Gravel Surfacing
- Foundations
- Proposed Pond
- 2018 Phase II Property Boundary
- ~ Topographic Contour (1 ft)
- Estimated Extent of Residual Soil Contamination



1 inch = 100 feet

Imagery: Nearmap, 4/25/2019

RESIDUAL SOIL
 CONTAMINATION
 SWL&P Nemadji Substation
 Superior, WI

FIGURE B.2.b



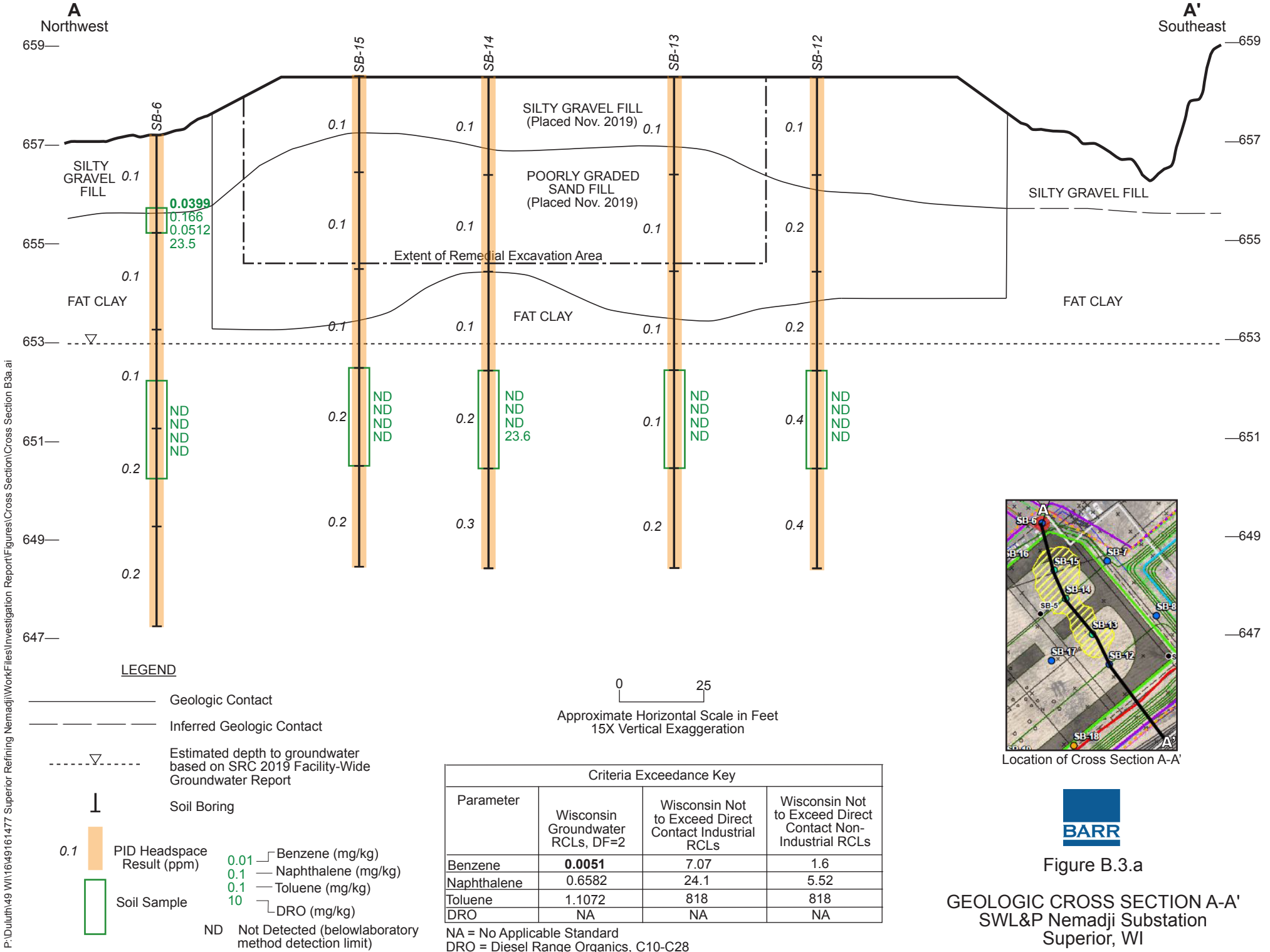
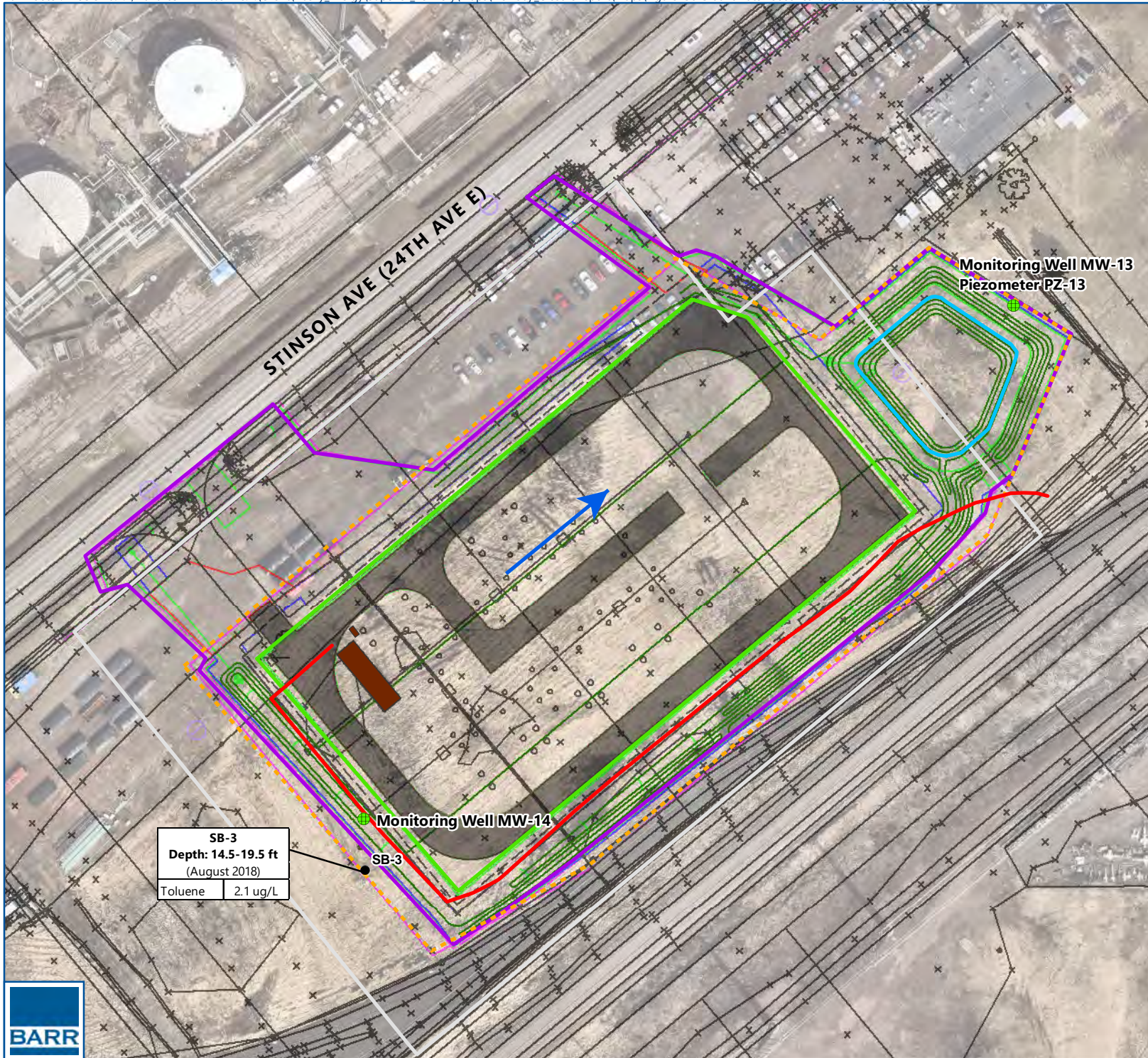


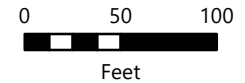
Figure B.3.a

GEOLOGIC CROSS SECTION A-A'
SWL&P Nemadji Substation
Superior, WI

P:\Duluth\49 W\1649161477 Superior Refining Nemadji\WorkFiles\Investigation Report\Figures\Cross Section\Cross Section B3a.ai



- Monitoring Well
- Previous Soil Boring Location, Barr 2018
- Property Line
- Underground Electrical
- Construction Limits
- Proposed Substation Fenceline
- Gravel Surfacing
- Foundations
- Proposed Pond
- 2018 Phase II Property Boundary
- ~ Topographic Contour (1 ft)
- ➔ Flow Direction Based On SRC Annual Groundwater Monitoring Data



1 inch = 100 feet

Imagery: Nearmap, 4/25/2019

GROUNDWATER ISOCONCENTRATION
SWL&P Nemadji Substation
Superior, WI

FIGURE B.3.b



Attachment C – Documentation of Remedial Action

C.1 Site Investigation Documentation

C.2 Investigative Waste

C.3 Description of the Methodology (Not Applicable)*

C.4 Construction Documentation (Not Applicable)*

C.5 Decommissioning of Remedial System (Not Applicable)*

C.6 Other (Not Applicable)

***Remedial action was not implemented at the site**

C.1 – Site Investigation Documentation

SWL&P Nemadji Substation Limited Phase III Investigation Results

Technical Memorandum

To: John Sager, Wisconsin Department of Natural Resources
From: Lynette Carney and Christina Sehr, Barr Engineering Co.
Subject: SWL&P Nemadji Substation Phase III Investigation Results
Date: March 26, 2020
Project: 49161477.00
BRRTS No. 02-16-585474
c: Mark Darby, Superior Refining Company LLC

Barr Engineering Co. (Barr) was retained by Superior Refining Company LLC (SRC) to complete a Phase III Investigation of a property owned by SRC and leased to Superior Water, Light & Power (SWL&P) for the construction and operation of a new electrical substation (Nemadji Substation). The property is located at 2407 Stinson Ave, Superior, Wisconsin in the NW $\frac{1}{4}$ of Section 36, T49N, R14W (Property). The Property location is shown on Figure 1.

A Phase I Environmental Site Assessment and a Phase II Investigation were completed by Barr in 2018 to characterize soil and groundwater and to assess baseline conditions at the Property prior to leasing. Field screening and laboratory analytical results from five soil borings completed in 2018 did not identify soil or groundwater conditions that required further action prior to development of the site. The 2018 Phase II Investigation Report is included as Attachment A.

In November 2019, as part of the Nemadji Substation site development, SWL&P excavated the majority of the site to a depth of 3-4 feet for the placement of engineered fill. During earthwork activities, SWL&P encountered hydrocarbon contaminated soil in two separate locations (Figure 2). According to SWL&P, approximately 1,000 tons of hydrocarbon contaminated soil encountered within the extent of their construction footprint was segregated, characterized and transported off-site for disposal at Shamrock Landfill. Field screening was not performed and analytical confirmation samples were not collected from the excavation extent to document remaining site conditions.

Phase III Project Objectives

The objectives of this Phase III investigation are to evaluate the condition of remaining soils beneath and surrounding SWL&P's hydrocarbon contaminated soil excavations, to supplement the site characterization data collected during the 2018 investigation, and to document final site conditions at the Property under the requirements of NR 716.15.

This report summarizes the results, opinions, and conclusions of the Phase III Investigation. Descriptions of the Property background, investigation activities, sample locations and analytical results are summarized below. Additional background information is included in the 2018 Phase II Investigation Results Report (Attachment A).

General Information

Figure 1 provides a location map showing the SWL&P Nemadji Substation and the surrounding area using the USGS 7.5-minute topographic map.

Site Information: BRRTs Number: 02-16-585474
Facility Identification Numbers: 816009590
Superior Refining Company LLC
2407 Stinson Avenue
Superior, Wisconsin
Douglas County, Wisconsin
NW ¼ of Section 36, T49N, R14W
Latitude / Longitude: 46.68842 / -92.06988 (Site Center)
WTM91 Coordinates: X: 361726, Y: 692621 (Site Center)

Responsible Party: Superior Refining Company LLC
Attn: Mark Darby, Environmental Manager
2407 Stinson Avenue
Superior, WI 54880
Phone: (715) 398-8453
Email: mark.darby@huskyenergy.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

Physical Setting

The Property consists of approximately 5.18 acres located in an area between the operating Superior Refinery and a large pipeline terminal facility as shown on Figure 1. The Property is currently leased to SWL&P for construction of an electrical substation.

Topography of the Property is relatively flat, with a gentle slope down to the east. The property is underlain by clayey till and glaciolacustrine sediment planed by waves of proglacial Lake Duluth (Clayton, 1985). Based on facility-wide groundwater monitoring at the refinery, which includes groundwater monitoring wells located on and near the Property, shallow groundwater flow direction at the Property is to the northeast towards Newton Creek, ultimately discharging into Lake Superior approximately 1.7 miles northeast of the Property. Groundwater is typically encountered at less than 10 feet below ground surface (bgs) with estimated groundwater flow velocity of 0.4 cm/year (or 0.013 feet per year) (Gannett Fleming, 2014).

The Property is accessible via Stinson Avenue (24th Avenue East) and an approximately 80-foot-wide gravel parking lot/equipment laydown area is located along the northwest Property boundary. Historically the Property has been used as a storage/laydown area associated with the adjacent refinery. A warehouse was previously located on the Property and has since been demolished.

The current use of adjoining properties includes Superior Refinery to the north/northwest, unoccupied grassy/forested land and rail lines to the southwest, Superior Refinery laboratory building and grassy area to the east/northeast, and rail lines and a petroleum pipeline terminal facility to the south/southeast.

Investigation Activities

On December 19, 2019, Barr submitted a *Site Investigation Work Plan* (Work Plan) to the Wisconsin Department of Natural Resources (WDNR), which included rationale for boring placement, sampling and analysis, and additional investigation details. The Work Plan is provided in Attachment B.

The investigation approach was developed to define the extent of remaining contamination, if any, associated with the November 2019 excavation activities and to further characterize site conditions to obtain baseline information of the Property. A total of fifteen "remedial action delineation" borings were advanced to evaluate the effectiveness of the remedial excavation efforts performed by SWL&P. Nine additional "site characterization" borings were advanced across the site to further assess baseline conditions at the Property following completion of the remedial activities.

On January 6 and 7, 2020, Barr and its subcontractor, Twin Ports Testing (TPT), advanced a total of 24 direct-push borings (SB-6 through SB-29) to depths of 10 feet bgs at the locations shown on Figure 2. The boring locations were selected based on site features and previous 2018 Phase II boring locations, as summarized in the Work Plan. Photographs capturing site conditions during the Phase III Investigation are included in Attachment C.

One or two representative soil samples collected from each soil boring were submitted for laboratory analyses. Where possible, one sample was collected from 2-4 feet bgs to intersect remaining native soils below the Nemadji Substation construction fill and one from 6-8 feet bgs. Soil samples were field-screened for organic vapors using headspace sample screening procedures as per the Work Plan. Additional evidence of contamination such as staining, odor, discoloration, and sheen was documented in the field at each location. Soils were described according to ASTM D-2488, *Standard Practice for Description and Identification of Soils (Visual/Manual Method)*. Boring locations were surveyed using global positioning system (GPS) equipment. Soil boring logs are provided in Attachment D.

Soil borings SB-18 and SB-26 were offset 16 and 15 feet, respectively, from the original locations identified in the Work Plan to avoid drilling through unfrozen standing water contained by the berm at the Property's edge. The borings were offset perpendicular to the Property fence where the ground was confirmed to be solid.

Barr submitted soil samples to Pace Analytical Laboratories (PACE) in Minneapolis, Minnesota for analysis of the following:

- petroleum volatile organic compounds (PVOCs) and naphthalene by method EPA 8260B
- diesel range organic compounds (DRO) by method WI MOD DRO 8015D (C10-C28)

Soil analytical results were compared to WDNR generic residual contaminant level (RCL) criteria for the direct contact and groundwater pathways.

Phase III Investigation Results

Soil boring stratigraphy generally consisted of one to two feet of silty gravel and/or poorly graded sand fill material overlying fat clay. The fill materials encountered were placed during the site development for the Nemadji Substation. The native fat clay was typically of high plasticity, stiff consistency, moist, and red-brown in color. Headspace sample organic vapor screening in the field, including background, produced total headspace readings less than 2.5 parts per million (ppm) across the Property. Headspace readings for all samples can be found in Table 1. There was no staining, odor, discoloration, sheen or other indications of contamination observed in the field, except in soil borings SB-6 and SB-10.

Soil boring SB-6 is located north of the main remedial excavation area and had discoloration and a faint odor in the 1.5-2 foot interval. Soil boring SB-10 is located at the northeast edge of the Property and had slag-like material in the 0.6-2 foot interval. Borings were advanced eight feet past the deepest observed impact and soil samples were collected from the interval where potential impacts were observed or anticipated and from a lower interval beneath the potential impact zone.

Tables 2 and 3 summarize the soil samples collected, analyses performed, and analytical results. Table 2 presents the analytical results for samples with detections of compounds at concentrations equal to or greater than laboratory method detection limits (MDLs). Included for comparison are the generic RCLs developed by the WDNR according to the procedures in NR 720.10 and NR 720.12, Wis. Adm. Code for the groundwater pathway and direct contact pathway.

Table 3 presents all analytical results, including those results below the MDLs. Copies of the laboratory analytical reports are included in Attachment E. The following provides a summary of the soil analytical laboratory results.

PVOCs + Naphthalene

Benzene was detected in one soil sample from soil boring SB-6 (1.5-2 feet) at a concentration of 0.4 milligrams per kilogram (mg/kg) and is the only compound and the only sample that exceeded a WDNR groundwater RCL. Naphthalene and toluene were also detected in soil boring SB-6 (1.5-2 feet), but concentrations were below the laboratory practical quantitation limit (PQL). The direct contact RCL was not exceeded by any compounds.

DRO

DRO was detected in the following soil samples: SB-6 (1.5-2 feet), SB-8 (2-4 feet), SB-10 (1-2 feet), SB-11 (2-4 feet), SB-14 (6-8 feet), SB-16 (6-8 feet), SB-25 (6-8 feet), and SB-29 (2-4 feet). The only detections reported above the laboratory PQL were SB-6 (1.5-2 feet) with a concentration of 23.6 parts per million (ppm) and SB-16 (6-8 feet) with a concentration of 26.5 ppm. A DRO concentration of 121 ppm was reported (but below the PQL) in sample SB-10 (1-2 feet). Although the WDNR does not have RCL criteria for DRO, these samples were collected as an additional screening tool and to support landfill soil characterization sampling requirements should additional soil remediation be required.

Cumulative

The combined PVOC + Naphthalene detections for each sample interval were also compared to the WDNR cumulative direct contact hazard index. No samples exceeded the Hazard Index or Cumulative Cancer Risk Sample standards.

Quality Assurance and Quality Control

The sample results were reviewed in accordance with Barr's standard operating procedures for organic data review. Sample results greater than the MDL and below the PQL are flagged with a "J" indicating estimated concentrations. The non-detect concentrations are presented as "<MDL" in the data tables. Sample SB-10 (1-2 feet) was analyzed at a 10 times dilution which yielded a J-flagged result at 121 mg/kg for DRO because the result was detected above the MDL and below the PQL. The remaining DRO and PVOC + Naphthalene samples analyzed during this soil investigation were not diluted. Samples SB-11 (2-4 feet), SB-10 (1-2 feet) and SB-6 (1.5-2 feet) had high boiling point hydrocarbons present in the sample.

The method, trip and field blank samples had no detections of target analytes above the laboratory reporting limits. The quality control samples (e.g. laboratory control sample, laboratory control sample duplicate, matrix spike, matrix spike duplicate, surrogate spike, and laboratory duplicate samples) were within the laboratory established limits for accuracy and precision with the following notable exceptions. One laboratory control sample/laboratory control sample duplicate relative percent difference exceeded the laboratory acceptance limit for DRO; however, no results were qualified because the associated spike recoveries displayed acceptable accuracy.

The laboratory analytical data were evaluated for quality assurance/quality control purposes and were determined to be acceptable for the evaluation conducted for this Phase III Investigation. Qualifiers, as appropriate, were added to the data as indicated in the comprehensive data tables.

Phase III Investigation Conclusions

Based on the proposed land use, native soil types, groundwater flow rate, and result comparisons to the WDNR risk-based Industrial, Non-Industrial and Groundwater RCLs, the isolated low concentrations of compounds detected in site soil samples do not appear to present a risk to human health or the environment.

Recommendation

Additional investigation or remedial actions are not necessary to further delineate or remediate the soil impacts encountered by SWL&P. It is recommended that SRC submit a Case Closure Request for this Property for consideration by the WDNR Closure Committee.

Limitations

The scope of this Phase III Investigation was intended to evaluate the areas of contaminated soil identified during construction activities in 2019 and to further assess the Property for the presence of petroleum-related contaminants. Laboratory analysis were performed for those parameters which were identified as potential contaminants prior to conducting this investigation.

Attachments

Table 1	Headspace Screening Summary
Table 2	Soil Analytical Summary – Detected Values Only
Table 3	Soil Analytical Summary - All Results
Figure 1	Property Location Map
Figure 2	Soil Boring Locations
Attachment A	2018 Phase II Investigation Report (with sub-Attachments)
Attachment B	2019 Site Investigation Work Plan
Attachment C	2020 Phase III Investigation Representative Photographs
Attachment D	2020 Phase III Investigation Soil Boring Logs
Attachment E	2020 Phase III Investigation Soil Laboratory Analytical Reports

To: John Sager, Wisconsin Department of Natural Resources
From: Lynette Carney and Christina Sehart, Barr Engineering Co.
Subject: SWL&P Nemadji Substation Phase III Investigation Results
Date: March 26, 2020
Page: 7

References

ASTM, 2009. *D-2488-09a, Standard Practice for Description and Identification of Soils (Visual/Manual Method)* ASTM International, West Conshohocken, PA; 2009.

Clayton, Lee, 1985. *Pleistocene Geology of the Superior Region, Wisconsin*, Wisconsin Geological and Natural History Survey Information Circular 46, Plate 1; 1985.

Gannett Fleming, 2014. *Final Site Investigation and Remedial Action Plan, Calumet Superior LLC Refinery, Superior, Wisconsin, prepared for Calumet Superior LLC; April 30, 2014.*

Tables

Table 1
Headspace Screening Summary
(PID Headspace Readings)
Nemadji Substation Phase III
Investigation Superior, WI

Location Depth (feet)	SB-6	SB-7	SB-8	SB-9	SB-10	SB-11	SB-12	SB-13	SB-14	SB-15	SB-16	SB-17	SB-18	SB-19	SB-20	SB-21	SB-22	SB-23	SB-24	SB-25	SB-26	SB-27	SB-28	SB-29
0-2	0.1 ¹	0.4	0.1	0.3	0.6 ²	0.1	0.1	0.1	0.1	0.1	0.4	0.2	0.7	0.6	0.3	0.4	0.4	0.1	0.6	0.9	1.0	1.2	0.6	0.9
2-4	0.1	0.4	0.4	0.3	0.7	0.3	0.2	0.1	0.1	0.1	0.5	0.3	1.0	0.7	0.4	0.3	0.4	0.1	0.7	1.1	1.0	1.2	0.9	0.8
4-6	0.1	0.4	0.6	0.3	0.6	0.3	0.2	0.1	0.1	0.1	1.2	0.2	1.1	0.7	0.6	0.4	0.6	0.2	0.9	1.2	1.1	2.5	1.1	0.8
6-8	0.2	0.5	0.8	0.4	0.5	0.4	0.4	0.1	0.2	0.2	1.7	0.4	1.1	0.5	0.6	0.4	0.5	0.2	0.9	1.1	1.0	2.5	1.2	1.0
8-10	0.2	0.5	1.1	0.4	0.3	0.6	0.4	0.2	0.3	0.2	1.8	0.3	1.1	0.7	0.6	0.4	0.4	0.3	1.0	1.2	1.1	1.4	1.0	0.9
Completion Depth (feet)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

Soil borings were completed January 6-7, 2020.

Intervals are presented in depth of feet below ground surface. Relative differences in ground surface elevations are not represented. Ground surface elevations are included on individual boring logs in appendices.

Headspace readings are presented in parts per million (ppm) and include background values that range from 0.0 to 0.4 ppm.

Field observations:

¹ Black discoloration, faint odor, trace wood chips and fibers.

² Gray, metallic, vesicular slag like material.

For additional detail regarding discoloration, odor, and sheen, see boring logs.

Table 2
Soil Analytical Data Results - Detections Only
Nemadji Substation Phase III Investigation
Superior, WI

Parameter	Units	Location			SB-6	SB-8	SB-10	SB-11	SB-14	SB-16	SB-25	SB-29
		Wisconsin Groundwater RCLs, DF=2	Wisconsin Not to Exceed Direct Contact Industrial RCLs	Wisconsin Not to Exceed Direct Contact Non-Industrial RCLs	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/07/2020	1/07/2020
		Depth	1.5 - 2 ft	2 - 4 ft	1 - 2 ft	2 - 4 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	2 - 4 ft	
Effective Date		06/01/2018	06/01/2018	06/01/2018								
Exceedance Key		Shade	No Exceedances	No Exceedances								
Volatile Organic Compounds												
Benzene	mg/kg	0.0051	7.07	1.6	0.0399	< 0.0040 U	< 0.0037 U	< 0.0053 U	< 0.0049 U	< 0.0039 U	< 0.0046 U	< 0.0036 U
Naphthalene	mg/kg	0.6582	24.1	5.52	0.166 J	< 0.0663 U	< 0.0615 U	< 0.0884 U	< 0.0812 U	< 0.0652 U	< 0.0759 U	< 0.0600 U
Toluene	mg/kg	1.1072	818	818	0.0512 J	< 0.0173 U	< 0.0160 U	< 0.0230 U	< 0.0212 U	< 0.0170 U	< 0.0198 U	< 0.0156 U
Total Petroleum Hydrocarbons												
Diesel Range Organics, C10-C28	mg/kg				23.6	8.2 J	121 J	19.5 J	6.0 J	26.5	15.5 J	14.0 J
Barr Calculated Comparison - Industrial												
Exceedance Count	no unit		0		0	0	0	0	0	0	0	0
Hazard Index	no unit		≤ 1.0		0.00028	0.00010	0.000096	0.00014	0.00013	0.00010	0.00012	0.000093
Cumulative Cancer Risk	no unit		≤ 1E-0.5		1.30E-08	3.50E-09	3.20E-09	4.60E-09	4.20E-09	3.40E-09	4.00E-09	3.10E-09
Barr Calculated Comparison -Non-Industrial												
Exceedance Count	no unit			0	0	0	0	0	0	0	0	0
Hazard Index	no unit			≤ 1.0	0.0014	0.00051	0.00047	0.00067	0.00062	0.00050	0.00058	0.00046
Cumulative Cancer Risk	no unit			≤ 1E-05	5.60E-08	1.50E-08	1.40E-08	2.00E-08	1.90E-08	1.50E-08	1.70E-08	1.40E-08

J Estimated detected value. Either certain QC criteria were not met or the concentration is between the laboratory's detection and quantitation limits.

U The analyte was analyzed for, but was not detected.

DF Dilution Factor.

RCLs Residual Contaminant Levels.

Table 3
Soil Analytical Data Results - All Results
Nemadji Substation Phase III Investigation
Superior, WI

Parameter	Units	Location			SB-6	SB-6	SB-7	SB-7	SB-8	SB-8	SB-9	SB-10	SB-10	SB-10	SB-11	SB-11	SB-12	SB-13	SB-14	SB-15	SB-16	SB-17	SB-18		
		Date	Date	Date	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/06/2020	1/07/2020	1/07/2020		
		Depth	1.5 - 2 ft	5 - 6 ft	2 - 4 ft	6 - 8 ft	2 - 4 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	5 - 6 ft	1 - 2 ft	2 - 4 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	6 - 8 ft	2 - 4 ft		
			Wisconsin Groundwater RCLs, DF=2	Wisconsin Not to Exceed Direct Contact Industrial RCLs	Wisconsin Not to Exceed Direct Contact Non-Industrial RCLs																				
Effective Date			12/01/2018	12/01/2018	12/01/2018																				
Exceedance Key			Shade	No Exceedances	No Exceedances																				
General Parameters																									
Moisture	%					24.1	26.4	23.0	27.2	26.6	27.3	27.3	26.4	27.7	23.1	36.3	27.7	23.9	24.7	33.9	35.5	25.4	26.2	24.8	
Volatile Organic Compounds																									
1,2,4-Trimethylbenzene	mg/kg		1.3787 (1)	219	219	< 0.0133 U	< 0.0141 U	< 0.0131 U	< 0.0143 U	< 0.0142 U	< 0.0137 U	< 0.0143 U	< 0.0140 U	< 0.0142 U	< 0.0132 U	< 0.0189 U	< 0.0138 U	< 0.0137 U	< 0.0137 U	< 0.0174 U	< 0.0155 U	< 0.0139 U	< 0.0136 U	< 0.0134 U	
1,3,5-Trimethylbenzene	mg/kg		1.3787 (1)	182	182	< 0.0106 U	< 0.0112 U	< 0.0104 U	< 0.0114 U	< 0.0113 U	< 0.0109 U	< 0.0114 U	< 0.0112 U	< 0.0113 U	< 0.0105 U	< 0.0150 U	< 0.0110 U	< 0.0109 U	< 0.0109 U	< 0.0138 U	< 0.0124 U	< 0.0111 U	< 0.0109 U	< 0.0107 U	
Benzene	mg/kg		0.0051	7.07	1.6	0.0399	< 0.0040 U	< 0.0037 U	< 0.0040 U	< 0.0040 U	< 0.0039 U	< 0.0040 U	< 0.0039 U	< 0.0040 U	< 0.0037 U	< 0.0053 U	< 0.0039 U	< 0.0039 U	< 0.0039 U	< 0.0049 U	< 0.0044 U	< 0.0039 U	< 0.0038 U	< 0.0038 U	
Ethyl benzene	mg/kg		1.57	35.4	8.02	< 0.0036 U	< 0.0038 U	< 0.0036 U	< 0.0039 U	< 0.0039 U	< 0.0037 U	< 0.0039 U	< 0.0038 U	< 0.0039 U	< 0.0036 U	< 0.0051 U	< 0.0038 U	< 0.0037 U	< 0.0037 U	< 0.0047 U	< 0.0042 U	< 0.0038 U	< 0.0037 U	< 0.0036 U	
Methyl tertiary butyl ether (MTBE)	mg/kg		0.027	282	63.8	< 0.0079 U	< 0.0084 U	< 0.0078 U	< 0.0085 U	< 0.0084 U	< 0.0081 U	< 0.0085 U	< 0.0083 U	< 0.0085 U	< 0.0078 U	< 0.0112 U	< 0.0082 U	< 0.0081 U	< 0.0081 U	< 0.0103 U	< 0.0092 U	< 0.0083 U	< 0.0081 U	< 0.0080 U	
Naphthalene	mg/kg		0.6582	24.1	5.52	0.166 J	< 0.0658 U	< 0.0613 U	< 0.0670 U	< 0.0663 U	< 0.0639 U	< 0.0668 U	< 0.0655 U	< 0.0665 U	< 0.0615 U	< 0.0884 U	< 0.0646 U	< 0.0639 U	< 0.0640 U	< 0.0812 U	< 0.0726 U	< 0.0652 U	< 0.0639 U	< 0.0628 U	
Toluene	mg/kg		1.1072	818	818	0.0512 J	< 0.0172 U	< 0.0160 U	< 0.0175 U	< 0.0173 U	< 0.0167 U	< 0.0174 U	< 0.0171 U	< 0.0173 U	< 0.0160 U	< 0.0230 U	< 0.0168 U	< 0.0167 U	< 0.0167 U	< 0.0212 U	< 0.0189 U	< 0.0170 U	< 0.0167 U	< 0.0164 U	
Xylene, total	mg/kg		3.96	260	260	< 0.0155 U	< 0.0163 U	< 0.0152 U	< 0.0166 U	< 0.0164 U	< 0.0158 U	< 0.0166 U	< 0.0162 U	< 0.0165 U	< 0.0153 U	< 0.0219 U	< 0.0160 U	< 0.0158 U	< 0.0159 U	< 0.0201 U	< 0.0180 U	< 0.0162 U	< 0.0158 U	< 0.0156 U	
Total Petroleum Hydrocarbons																									
Diesel Range Organics, C10-C28	mg/kg					23.6	< 4.9 U	< 4.8 U	< 5.1 U	8.2 J	< 4.8 U	< 5.1 U	< 5.3 U	< 5.4 U	121 J	19.5 J	< 5.3 U	< 5.0 U	< 4.8 U	6.0 J	< 5.0 U	26.5	< 5.1 U	< 5.1 U	
Barr Calculated Comparison - Industrial																									
Exceedance Count	no unit			0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hazard Index	no unit			≤ 1.0		0.00028	0.00010	0.000095	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.000096	0.00014	0.00010	0.00010	0.00010	0.00010	0.00013	0.00011	0.00010	0.000099	0.000098
Cumulative Cancer Risk	no unit			≤ 1E-05		1.30E-08	3.40E-09	3.20E-09	3.50E-09	3.50E-09	3.30E-09	3.50E-09	3.40E-09	3.50E-09	3.20E-09	4.60E-09	3.40E-09	3.30E-09	3.30E-09	4.20E-09	3.80E-09	3.40E-09	3.30E-09	3.30E-09	
Barr Calculated Comparison -Non-Industrial																									
Exceedance Count	no unit			0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hazard Index	no unit			≤ 1.0		0.0014	0.00050	0.00047	0.00051	0.00051	0.00049	0.00051	0.00050	0.00051	0.00047	0.00067	0.00049	0.00049	0.00049	0.00049	0.00062	0.00055	0.00050	0.00049	0.00048
Cumulative Cancer Risk	no unit			≤ 1E-05		5.60E-08	1.50E-08	1.40E-08	1.50E-08	1.50E-08	1.50E-08	1.50E-08	1.50E-08	1.50E-08	1.40E-08	2.00E-08	1.50E-08	1.50E-08	1.50E-08	1.50E-08	1.90E-08	1.70E-08	1.50E-08	1.50E-08	1.40E-08

(1) Representing the criteria for combined Trimethylbenzenes.

J Estimated detected value. Either certain QC criteria were not met or the concentration is between the laboratory's detection and quantitation limits.

U The analyte was analyzed for, but was not detected.

Table 3
Soil Analytical Data Results - All Results
Nemadji Substation Phase II Investigation
Superior, WI

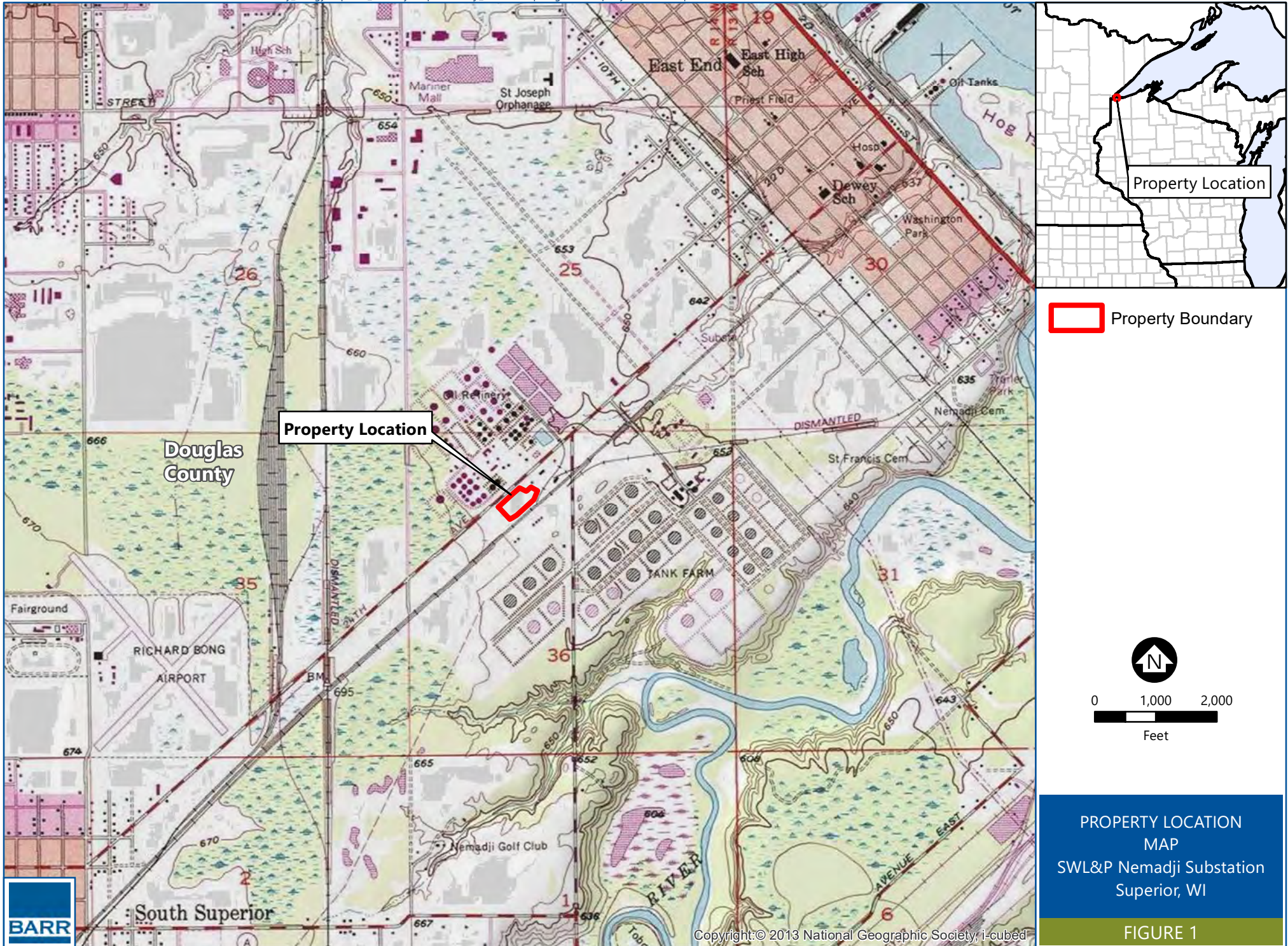
Parameter	Units	Location			SB-18	SB-19	SB-20	SB-21	SB-21	SB-22	SB-22	SB-23	SB-24	SB-25	SB-26	SB-26	SB-27	SB-27	SB-28	SB-29	SB-29
		Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date
		Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth
		Wisconsin Groundwater RCLs, DF=2	Wisconsin Not to Exceed Direct Contact Industrial RCLs	Wisconsin Not to Exceed Direct Contact Non-Industrial RCLs																	
Effective Date		12/01/2018	12/01/2018	12/01/2018																	
Exceedance Key		Shade	No Exceedances	No Exceedances																	
General Parameters																					
Moisture	%				27.2	24.5	25.7	24.8	25.2	24.3	25.2	23.4	23.6	34.5	25.5	29.5	25.8	26.4	27.1	24.0	29.3
Volatile Organic Compounds																					
1,2,4-Trimethylbenzene	mg/kg	1.3787 (1)	219	219	< 0.0138 U	< 0.0138 U	< 0.0132 U	< 0.0129 U	< 0.0136 U	< 0.0130 U	< 0.0132 U	< 0.0133 U	< 0.0132 U	< 0.0162 U	< 0.0139 U	< 0.0138 U	< 0.0131 U	< 0.0133 U	< 0.0131 U	< 0.0128 U	< 0.0137 U
1,3,5-Trimethylbenzene	mg/kg	1.3787 (1)	182	182	< 0.0110 U	< 0.0110 U	< 0.0105 U	< 0.0103 U	< 0.0108 U	< 0.0104 U	< 0.0105 U	< 0.0106 U	< 0.0106 U	< 0.0129 U	< 0.0111 U	< 0.0110 U	< 0.0104 U	< 0.0106 U	< 0.0104 U	< 0.0102 U	< 0.0109 U
Benzene	mg/kg	0.0051	7.07	1.6	< 0.0039 U	< 0.0039 U	< 0.0037 U	< 0.0036 U	< 0.0038 U	< 0.0037 U	< 0.0037 U	< 0.0037 U	< 0.0037 U	< 0.0046 U	< 0.0039 U	< 0.0039 U	< 0.0037 U	< 0.0038 U	< 0.0037 U	< 0.0036 U	< 0.0039 U
Ethyl benzene	mg/kg	1.57	35.4	8.02	< 0.0037 U	< 0.0037 U	< 0.0036 U	< 0.0035 U	< 0.0037 U	< 0.0035 U	< 0.0036 U	< 0.0036 U	< 0.0036 U	< 0.0044 U	< 0.0038 U	< 0.0038 U	< 0.0036 U	< 0.0036 U	< 0.0036 U	< 0.0035 U	< 0.0037 U
Methyl tertiary butyl ether (MTBE)	mg/kg	0.027	282	63.8	< 0.0082 U	< 0.0082 U	< 0.0078 U	< 0.0077 U	< 0.0081 U	< 0.0077 U	< 0.0078 U	< 0.0079 U	< 0.0079 U	< 0.0097 U	< 0.0083 U	< 0.0082 U	< 0.0078 U	< 0.0079 U	< 0.0078 U	< 0.0076 U	< 0.0082 U
Naphthalene	mg/kg	0.6582	24.1	5.52	< 0.0644 U	< 0.0644 U	< 0.0617 U	< 0.0605 U	< 0.0636 U	< 0.0609 U	< 0.0617 U	< 0.0621 U	< 0.0620 U	< 0.0759 U	< 0.0649 U	< 0.0647 U	< 0.0613 U	< 0.0624 U	< 0.0612 U	< 0.0600 U	< 0.0641 U
Toluene	mg/kg	1.1072	818	818	< 0.0168 U	< 0.0168 U	< 0.0161 U	< 0.0158 U	< 0.0166 U	< 0.0159 U	< 0.0161 U	< 0.0162 U	< 0.0162 U	< 0.0198 U	< 0.0169 U	< 0.0169 U	< 0.0160 U	< 0.0163 U	< 0.0160 U	< 0.0156 U	< 0.0167 U
Xylene, total	mg/kg	3.96	260	260	< 0.0160 U	< 0.0160 U	< 0.0153 U	< 0.0150 U	< 0.0158 U	< 0.0151 U	< 0.0153 U	< 0.0154 U	< 0.0154 U	< 0.0188 U	< 0.0161 U	< 0.0160 U	< 0.0152 U	< 0.0155 U	< 0.0152 U	< 0.0149 U	< 0.0159 U
Total Petroleum Hydrocarbons																					
Diesel Range Organics, C10-C28	mg/kg				< 5.1 U	< 5.0 U	< 4.9 U	< 6.0 U	< 4.9 U	< 4.5 U	< 5.6 U	< 4.4 U	< 4.9 U	15.5 J	< 4.8 U	< 5.3 U	< 5.0 U	< 4.8 U	< 5.1 U	14.0 J	< 5.3 U
Barr Calculated Comparison - Industrial																					
Exceedance Count	no unit		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hazard Index	no unit		≤ 1.0		0.00010	0.00010	0.000096	0.000094	0.000099	0.000095	0.000096	0.000097	0.000096	0.00012	0.00010	0.00010	0.000095	0.000097	0.000095	0.000093	0.00010
Cumulative Cancer Risk	no unit		≤ 1E-05		3.40E-09	3.40E-09	3.20E-09	3.10E-09	3.30E-09	3.20E-09	3.20E-09	3.20E-09	3.20E-09	4.00E-09	3.40E-09	3.40E-09	3.20E-09	3.30E-09	3.20E-09	3.10E-09	3.30E-09
Barr Calculated Comparison -Non-Industrial																					
Exceedance Count	no unit			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hazard Index	no unit			≤ 1.0	0.00049	0.00049	0.00047	0.00046	0.00049	0.00047	0.00047	0.00047	0.00047	0.00058	0.00050	0.00049	0.00047	0.00048	0.00047	0.00046	0.00049
Cumulative Cancer Risk	no unit			≤ 1E-05	1.50E-08	1.50E-08	1.40E-08	1.40E-08	1.40E-08	1.40E-08	1.40E-08	1.40E-08	1.40E-08	1.70E-08	1.50E-08	1.50E-08	1.40E-08	1.40E-08	1.40E-08	1.40E-08	1.50E-08

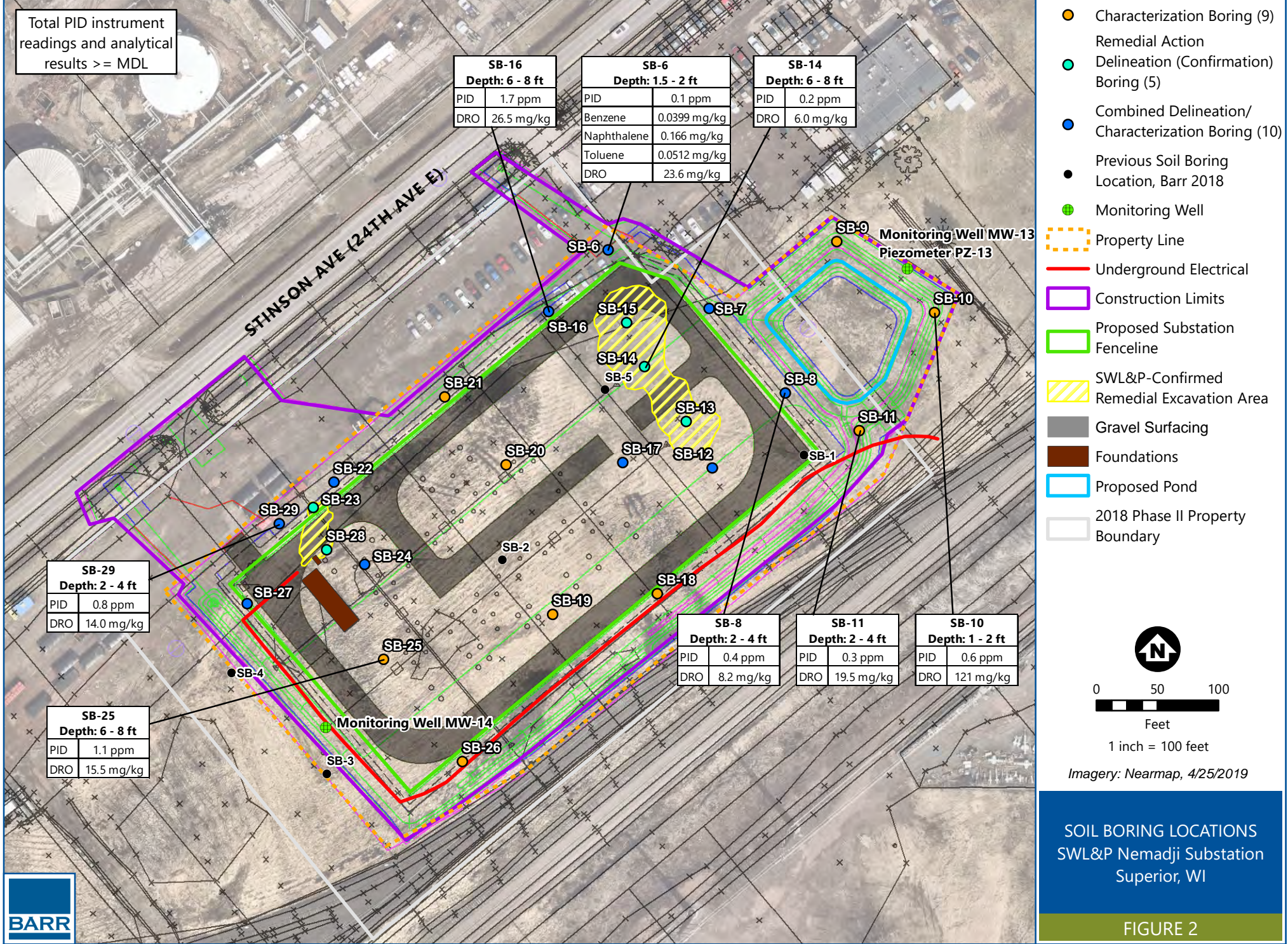
(1) Representing the criteria for combined Trimethylbenzenes.

J Estimated detected value. Either certain QC criteria were not met or the concentration is between the laboratory's detection and quantitation limits.

U The analyte was analyzed for, but was not detected.

Figures





**SOIL BORING LOCATIONS
SWL&P Nemadji Substation
Superior, WI**

FIGURE 2

Attachment A

Limited Phase II Investigation Results – Future ALLETE Substation Site

Technical Memorandum

To: Mark Darby, Superior Refining Company, LLC (Husky Energy)
From: Lynette Carney and Martin Bevis, Barr Engineering Co.
Subject: Phase II Investigation Results – Future ALLETE Substation Site
Date: August 24, 2018
Project: 49161423.00

Project Objectives

Barr Engineering Co. (Barr) was retained by Superior Refining Company, LLC (a subsidiary of Husky Energy Inc.) to complete a Phase II investigation of a property owned by Husky Energy Inc. There is historical indication that the property was formerly used as a parking lot and equipment laydown area. Husky intends to lease the Property to ALLETE/Minnesota Power/Superior Water, Light and Power for construction of an electrical substation. The property is located in Section 36 of Township 49 North, Range 14 West in Superior, Douglas County, Wisconsin (Property). The Property location is shown on Figure 1.

In May 2018, Barr performed a Phase I Environmental Site Assessment (ESA) Report (Barr, 2018). No recognized environmental conditions (RECs) were identified, though the report included findings of nine potential sources of hazardous substances or petroleum products near the Property:

1. Adjacent Husky Refinery (North);
2. Adjacent Husky Refinery fire on April 26, 2018;
3. Adjacent Enbridge Energy Terminal site (South);
4. Adjoining Husky Refinery laboratory (East);
5. Adjoining and upgradient railroads (West and South);
6. A small amount of miscellaneous historical debris on the Property;
7. Existing electrical power pole transformers;
8. Surrounding industrial property use and equipment storage on Property; and
9. Various petroleum pipelines located adjacent to the Property.

The objectives of the Phase II investigation were to: characterize soil and groundwater to identify potential impacts and assess baseline conditions at the property prior to leasing.

To: Mark Darby, Superior Refining Company, LLC (Husky Energy)
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This report summarizes the results, opinions, and conclusions of the Phase II investigation. Descriptions of the Property background, investigation approach, sample locations and analytical results are summarized below. Additional information is included in the Phase I ESA Report (Barr, 2018).

Background Information

The Property consists of approximately 5.18 acres located in an area between the operating Husky Refinery and a large Enbridge pipeline terminal facility as shown on Figure 1. The Property will be leased to ALLETE/Minnesota Power/Superior Water, Light and Power for construction of an electrical substation. Much of the following Property information was summarized from information presented in Barr's Phase I ESA Report (Barr, 2018):

Topography of the Property is relatively flat, with a gentle slope down to the east. The property is underlain by clayey till and glaciolacustrine sediment planed by waves of proglacial Lake Duluth (Clayton, 1985). Based on groundwater monitoring at the refinery, which includes groundwater monitoring wells located on and near the Property, shallow groundwater flow direction at the Property is to the northeast towards Newton Creek, ultimately discharging into Lake Superior approximately 1.7 miles northeast of the Property. The depth to shallow groundwater in MW-14, which is located on the Property, is typically less than two feet below the ground surface (Gannett Fleming, 2017). Husky's monitoring wells on and near the Property are shown on Figure 2.

No buildings are currently located on the Property. The Property is accessible via Stinson Avenue (24th Avenue East) and an approximately 80-foot-wide gravel parking lot/equipment laydown area is located along the northwest Property boundary. No drinking water or sanitary service is provided to the Property. Historically the Property has been used as a storage/laydown area associated with the adjacent refinery. A warehouse was previously located on the Property and has since been demolished.

The current use of adjoining properties includes Husky Refinery to the north/northwest, unoccupied grassy/forested land and rail lines to the southwest, Husky Refinery laboratory building and grassy area to the east/northeast, and rail lines and Enbridge petroleum pipeline terminal facility to the south/southeast.

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Investigation Approach and Summary of Activities

A Phase II Investigation was completed to assess for soil and groundwater impacts on the Property and to establish baseline environmental data. On June 22 and 23, 2018, Barr and its subcontractor, Twin Ports Testing, used a Geoprobe to advance five direct-push borings (SB-1 through SB-5) to depths of 20 feet below ground surface (bgs) at the locations shown on Figure 2. The borings locations were selected to provide representative coverage of the Property.

At each of the boring locations, one shallow soil sample was collected from depths between 0 and 3 feet bgs and one deeper sample was collected from intervals between 6 and 13 feet bgs. Soil samples were field-screened for organic vapors using headspace sample screening procedures described in our Standard Operating Procedures (included in Attachment A). Additional evidence of contamination such as staining, odor, discoloration, and sheen were evaluated and/or documented in the field. Soils were described according to ASTM D-2488, *Standard Practice for Description and Identification of Soils (Visual/Manual Method)*. Boring locations were surveyed using global positioning system (GPS) methods.

Temporary monitoring wells, with five-foot PVC well screens, were placed into three borings completed on June 21 (SB-1, SB-2, and SB-3). The wells were left in place over night to allow time for groundwater to equilibrate.

Barr submitted ten soil samples to Pace Analytical Laboratories in Minneapolis, MN. The soil samples were analyzed for the following compounds:

- Resource Conservation and Recovery Act (RCRA) list of 8 metals by methods 6010D and 7471B;
- polycyclic aromatic hydrocarbons (PAHs) by method 8270D; and
- volatile organic compounds (VOCs) by method 8260.

Due to poor recovery, only one groundwater sample (SB-3) was collected and submitted for analysis of VOCs by method 8260B and PAHs by method 8270D.

Results

Representative photographs of the boring locations and soil encountered at each location are included as Attachment B. Logs of each soil boring are included as Attachment C. Boring stratigraphy generally consisted of six inches or less of organic-rich topsoil overlying lean clay. The clay was typically of medium plasticity, stiff consistency, moist, red color, and glaciolacustrine origin. There was no staining, odor, discoloration, sheen or other indications of contamination observed in the field with the exception of SB-5, where the top six inches of soil

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was composed of 70% angular shiny black sand and gravel – apparent weathered bituminous pavement. Headspace sample organic vapor screening in the field produced headspace readings less than 0.6 parts per million (ppm) across the site, with the exception of the top six inches of SB-5 (described above), where headspace results were 1.2 ppm.

The day following temporary monitoring well installation, approximately 3.5 feet of water was found in SB-1; SB-2 was dry, and SB-3 contained approximately 11 feet of water. Because SB-1 and SB-3 were located in areas of the site with shallow perched water on the ground surface while SB-2 was located in a portion of the site with dry ground, it is possible that water encountered in soil borings SB-1 and SB-3 may have been influenced by perched surface water draining into the open boring holes overnight. Although a small amount of water was measured in the SB-1 borehole, an insufficient amount of water remain for sampling after purging only one well volume. Therefore, a groundwater sample was only collected from SB-3.

Tables 1 and 2 summarize the soil samples collected, analyses performed, and analytical results. Table 1 presents the analytical results for detections only or compounds detected at concentrations equal to or greater than laboratory method detection limits (MDLs). Included for comparison are the Wisconsin Department of Natural Resources (WDNR) Remediation & Redevelopment Program Residual Contaminant Levels (RCLs) developed by the WDNR according to the procedures in NR 720.10 and NR 720.12, Wis. Adm. Code. Non-industrial and industrial RCLs are included for comparison.

Table 2 presents all of the analytical results, including those results below the MDLs. Table 3 presents all of the groundwater analytical results compared to enforcement standard (ES) and Preventative Action Limit (PAL) criteria in NR 140.10 Wis. Adm. Code. Copies of the laboratory analytical reports are included in Attachment D.

Soil Analytical Results

Metals Results - Five of the eight RCRA metals were detected in each of the soil samples (Table 1). Arsenic was the only metal detected above the industrial RCLs; and arsenic concentrations exceeded industrial RCLs consistently in all soil samples, except SB-3_8-9 ft., where the concentration was below industrial criteria. Mercury, barium, chromium, and lead were found at concentrations below non-industrial RCLs in each sample. Cadmium, selenium and silver were not found above laboratory quantitation limits in any of the samples.

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PAHs - Each of the PAHs were detected in SB-5_0-1 ft., but only the concentration of benzo(a)pyrene was in exceedance of non-industrial RCLs (Table 1). The only other detection of PAHs above laboratory quantitation limits was Benzo(b)fluoranthene in SB-3_8-9 ft.

VOCs - There were no VOCs detected above laboratory quantitation limits. Toluene was detected in SB-5_0-1 ft., but the concentration was below the quantitation limit.

Cumulative - The combined detections for each sample interval were also compared to the WDNR cumulative hazard index. No samples exceeded the Hazard Index or Cumulative Cancer Risk Sample standards. Sample SB-5 from 0-1 ft. was the only interval with any exceedances and had an Exceedance Count of one.

Groundwater Analytical Results

The only analyte detected in groundwater from SB-3 was toluene. This detection was below the WDNR NR 140 ES and PAL. Previous annual groundwater monitoring at wells MW-14 (located on the Property near SB-3) and MW-13/PZ-13 (located just northeast of Property) did not identify detectable concentrations of petroleum VOCs/naphthalene over the past 3 years (Gannett Fleming, 2016, 2017, 2018). As previously identified, it is possible that perched surface water observed at the time of sample collection may have migrated into SB-3.

Conclusions

Field screening at the five direct-push boring locations did not identify petroleum impacts or other concerns in soil. Soils generally consisted of lean, red, glaciolacustrine clay overlain by a few inches of organic topsoil.

Perched surface water is believed to have mixed with the groundwater encountered in SB-3. Only one VOC was detected in the groundwater sample from SB-3 (toluene), but the concentration was below the WDNR ES and PAL. This is consistent with the favorable groundwater monitoring results over the past three years from existing groundwater monitoring wells located on and near the subject Property and Refinery.

With the exception of arsenic, soil concentrations for RCRA metals and PAHs were below WDNR non-industrial RCLs. Arsenic was found at concentrations above the industrial RCLs in nine of the ten soil samples collected. However, given the documented baseline for arsenic in the Superior, Wisconsin area, the arsenic concentrations are believed to be naturally occurring and were universally below WDNR background threshold values (BTVs) as published and defined in their

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RCL Spreadsheet and Publication PUB-RR-890. The three other metals detected above laboratory quantitation limits in each of the soil samples (i.e., barium, chromium, and lead) were found at concentrations below the non-industrial RCLs and below the WDNR background threshold values, with the exception of the result from SB-5 0-1 ft., where asphalt/fill soils were encountered at the surface. Metals detected in soil at the Property are therefore unlikely to be the result of past property uses.

In addition to chromium and lead concentrations above WDNR background threshold values, results from SB-5 0-1 ft. included multiple low-level concentration of PAHs, including a concentration of benzo(a)pyrene in exceedance of non-industrial RCLs; and a trace concentration of toluene. This sample contained pieces of apparent weathered asphalt. The chromium, lead, PAHs, and toluene detected at SB-5_0-1 ft. likely derive from the apparent weathered asphalt contained in the sample, not the underlying soil. No other samples at the property exhibited similar elevated analyte concentrations, including other surface samples and the deeper sample collected from the same boring (SB-5_8-9). Therefore, compounds associated with the apparent weathered asphalt do not appear to have leached into underlying soil or to have been distributed across the site.

Trace concentrations of PAHs were detected in SB-1 from 2-3 ft. and SB-3 from 8-9 ft. A trace concentration of toluene in groundwater was detected in soil boring SB-3, which was screened from 14.5-19.5 ft. bgs. The other PAH and VOC concentrations detected were below the RCLs for soil and the ES and PAL for groundwater. Based on WDNR risk-based industrial and non-industrial RCLs, the isolated low concentrations do not present a risk for human health and the environment.

Limitations

The scope of this Phase II investigation was intended to investigate the potential for the presence of specific contaminants at representative locations. Laboratory analysis was performed for those parameters which were identified as potential contaminants prior to conducting this investigation.

Attachments

Table 1	Soil Analytical Summary – Detected Values Only
Table 2	Soil Analytical Summary - All Results
Table 3	Groundwater Analytical Summary

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Figure 1 Property Location Map

Figure 2 Soil Boring Locations

Attachment A Standard Operating Procedures

Attachment B Representative Photographs

Attachment C Soil Boring Logs

Attachment D Soil and Groundwater Laboratory Analytical Reports

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Tables

Table 1
Soil Analytical Data Summary Detections Only
Husky Energy Property- Future Substation Site
Superior, WI

Parameter	Units	Location				SB-1	SB-1	SB-2	SB-2	SB-3	SB-3	SB-4	SB-4	SB-5	SB-5
		Wisconsin Not to Exceed Industrial RCLs	Wisconsin Not to Exceed Non-Industrial RCLs	WDNR Background Threshold Values	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date	Date
		06/01/2018	06/01/2018	06/01/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/22/2018	6/22/2018	6/22/2018	6/22/2018	6/22/2018
Depth	2 - 3 ft	12 - 13 ft	0 - 1 ft	6 - 7 ft	0 - 2 ft	8 - 9 ft	0 - 2 ft	6 - 7 ft	0 - 1 ft	8 - 9 ft	0 - 1 ft	8 - 9 ft	0 - 1 ft	8 - 9 ft	
Effective Date		06/01/2018	06/01/2018	06/01/2018											
Exceedance Key		Bold	<u>Underline</u>	Reference Only											
General Parameters															
Moisture	%				27.6	35.3	20.3	24.5	24.5	31.6	26.7	29.4	23.3	28.1	
Metals															
Mercury	mg/kg	3.13	3.13		0.023 j	0.026 j	0.022 j	0.020 j	0.026 j	0.021 j	0.023 j	0.021 j	0.10	0.017 j	
Arsenic	mg/kg	3	<u>0.677</u>	8	3.1	3.8	3.0	3.3	3.5	2.8	3.0	3.0	5.1 j	3.4	
Barium	mg/kg	100000	15300	364	245	193	145	150	174	176	191	160	287	173	
Cadmium	mg/kg	985	71.1	1	--	--	--	--	--	0.11 j	--	0.097 j	0.56 j	--	
Chromium	mg/kg	100000 CR3	100000 CR3	44	49.6	42.9	37.0	39.5	41.7	42.6	48.6	39.4	1850	42.0	
Lead	mg/kg	800	400	52	10.5	9.5	7.6	8.1	9.0	7.8	9.1	7.7	88.2	8.4	
Selenium	mg/kg	5840	391		0.56 j	--	--	--	--	--	--	--	--	--	
Silver	mg/kg	5840	391		--	--	--	--	--	--	--	--	1.1 j	--	
Semivolatile Organic Compounds															
Acenaphthene	ug/kg	45200000	3590000		--	--	--	--	--	--	--	--	6.9	--	
Acenaphthylene	ug/kg				--	--	--	--	--	--	--	--	3.4	--	
Anthracene	ug/kg	100000000	17900000		--	--	--	--	--	--	--	--	11.0	--	
Benz(a)anthracene	ug/kg	20800	1140		--	--	--	--	--	--	--	--	77.8	--	
Benzo(a)pyrene	ug/kg	2110	<u>115</u>		--	--	--	--	--	1.2 j	--	--	<u>128</u>	--	
Benzo(b)fluoranthene	ug/kg	21100	1150		1.1 j	--	--	--	--	2.2	--	--	162	--	
Benzo(g,h,i)perylene	ug/kg				--	--	--	--	--	2.3 j	--	--	116	--	
Benzo(k)fluoranthene	ug/kg	211000	11500		--	--	--	--	--	2.2 j	--	--	55.7	--	
Chrysene	ug/kg	2110000	115000		--	--	--	--	--	--	--	--	98.1	--	
Dibenz(a,h)anthracene	ug/kg	2110	115		--	--	--	--	--	2.2 j	--	--	32.5	--	
Fluoranthene	ug/kg	30100000	2390000		1.8 j	--	--	--	--	1.9 j	--	--	90.4	--	
Fluorene	ug/kg	30100000	2390000		--	--	--	--	--	--	--	--	2.5	--	
Indeno(1,2,3-cd)pyrene	ug/kg	21100	1150		--	--	--	--	--	2.2 j	--	--	94.4	--	
Naphthalene	ug/kg	24100	5520		--	--	--	--	--	--	--	--	4.3	--	
Phenanthrene	ug/kg				--	--	--	--	--	--	--	--	39.1	--	
Pyrene	ug/kg	22600000	1790000		--	--	--	--	--	--	--	--	75.2	--	
Volatile Organic Compounds **															
Toluene	ug/kg	818000	818000		--	--	--	--	--	--	--	--	38.8 j	--	
Barr Calculated Comparison - Non-Industrial															
Exceedance Count	no unit	0	<u>0</u>		0	0	0	0	0	0	0	0	1	0	

Note

** Non-detect VOC compounds reported on a wet weight basis per WIDNR requirements.

Table 2
Soil Analytical Data Summary
Husky Energy Property- Future Substation Site
Superior, WI

Parameter	Units	Location												
		Wisconsin Not to Exceed Industrial RCLs	Wisconsin Not to Exceed Non-Industrial RCLs	WDNR Background Threshold Values	SB-1	SB-1	SB-2	SB-2	SB-3	SB-3	SB-4	SB-4	SB-5	SB-5
					Date	Date	Date	Date	Date	Date	Date	Date	Date	Date
Depth	2 - 3 ft	12 - 13 ft	0 - 1 ft	6 - 7 ft	0 - 2 ft	8 - 9 ft	0 - 2 ft	6 - 7 ft	0 - 1 ft	8 - 9 ft				
Effective Date		06/01/2018	06/01/2018	06/01/2018										
Exceedance Key		Bold	<u>Underline</u>	Reference Only										
General Parameters														
Moisture	%				27.6	35.3	20.3	24.5	24.5	31.6	26.7	29.4	23.3	28.1
Metals														
Mercury	mg/kg	3.13	3.13		0.023 j	0.026 j	0.022 j	0.020 j	0.026 j	0.021 j	0.023 j	0.021 j	0.10	0.017 j
Arsenic	mg/kg	3	<u>0.677</u>	8	3.1	3.8	3.0	3.3	3.5	2.8	3.0	3.0	5.1 j	3.4
Barium	mg/kg	100000	15300	364	245	193	145	150	174	176	191	160	287	173
Cadmium	mg/kg	985	71.1	1	< 0.075	< 0.082	< 0.065	< 0.070	< 0.069	0.11 j	< 0.071	0.097 j	0.56 j	< 0.073
Chromium	mg/kg	100000 CR3	100000 CR3	44	49.6	42.9	37.0	39.5	41.7	42.6	48.6	39.4	1850	42.0
Lead	mg/kg	800	400	52	10.5	9.5	7.6	8.1	9.0	7.8	9.1	7.7	88.2	8.4
Selenium	mg/kg	5840	391		0.56 j*	< 0.61	< 0.49	< 0.52	< 0.51	< 0.58	< 0.53	< 0.56	< 5.2	< 0.54
Silver	mg/kg	5840	391		< 0.11	< 0.12	< 0.098	< 0.11	< 0.10	< 0.12	< 0.11	< 0.11	1.1 j	< 0.11
Semivolatile Organic Compounds														
Acenaphthene	ug/kg	45200000	3590000		< 0.56	< 0.63	< 0.51	< 0.54	< 0.54	< 0.60	< 0.56	< 0.58	6.9	< 0.57
Acenaphthylene	ug/kg				< 0.68	< 0.76	< 0.62	< 0.66	< 0.65	< 0.72	< 0.67	< 0.70	3.4	< 0.69
Anthracene	ug/kg	100000000	17900000		< 0.65	< 0.72	< 0.59	< 0.62	< 0.62	< 0.68	< 0.64	< 0.66	11.0	< 0.65
Benz(a)anthracene	ug/kg	20800	1140		< 1.5	< 1.7	< 1.4	< 1.4	< 1.4	< 1.6	< 1.5	< 1.5	77.8	< 1.5
Benzo(a)pyrene	ug/kg	2110	<u>115</u>		< 0.95	< 1.1	< 0.86	< 0.91	< 0.91	1.2 j	< 0.94	< 0.97	<u>128</u>	< 0.95
Benzo(b)fluoranthene	ug/kg	21100	1150		1.1 j	< 0.57	< 0.47	< 0.49	< 0.49	2.2	< 0.51	< 0.53	162	< 0.52
Benzo(g,h,i)perylene	ug/kg				< 0.87	< 0.97	< 0.79	< 0.84	< 0.83	2.3 j	< 0.86	< 0.90	116	< 0.88
Benzo(k)fluoranthene	ug/kg	211000	11500		< 1.2	< 1.3	< 1.1	< 1.1	< 1.1	2.2 j	< 1.2	< 1.2	55.7	< 1.2
Chrysene	ug/kg	2110000	115000		< 1.9	< 2.1	< 1.7	< 1.8	< 1.8	< 2.0	< 1.9	< 1.9	98.1	< 1.9
Dibenz(a,h)anthracene	ug/kg	2110	115		< 0.64	< 0.71	< 0.58	< 0.61	< 0.61	2.2 j	< 0.63	< 0.65	32.5	< 0.64
Fluoranthene	ug/kg	30100000	2390000		1.8 j	< 0.66	< 0.54	< 0.57	< 0.56	1.9 j	< 0.58	< 0.61	90.4	< 0.59
Fluorene	ug/kg	30100000	2390000		< 0.43	< 0.48	< 0.39	< 0.41	< 0.41	< 0.46	< 0.43	< 0.44	2.5	< 0.43
Indeno(1,2,3-cd)pyrene	ug/kg	21100	1150		< 0.93	< 1.0	< 0.84	< 0.89	< 0.88	2.2 j	< 0.91	< 0.95	94.4	< 0.93
Naphthalene	ug/kg	24100	5520		< 1.1	< 1.2	< 0.97	< 1.0	< 1.0	< 1.1	< 1.1	< 1.1	4.3	< 1.1
Phenanthrene	ug/kg				< 2.7	< 3.0	< 2.4	< 2.5	< 2.5	< 2.8	< 2.6	< 2.7	39.1	< 2.7
Pyrene	ug/kg	22600000	1790000		< 2.1	< 2.4	< 1.9	< 2.0	< 2.0	< 2.2	< 2.1	< 2.2	75.2	< 2.1

**Table 2
Soil Analytical Data Summary
Husky Energy Property- Future Substation Site
Superior, WI**

Parameter	Units	Location Date Depth	Wisconsin Not to Exceed Industrial RCLs		WDNR Background Threshold Values	SB-1	SB-1	SB-2	SB-2	SB-3	SB-3	SB-4	SB-4	SB-5	SB-5
			6/21/2018	6/21/2018		6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/21/2018	6/22/2018	6/22/2018	6/22/2018	6/22/2018
			2 - 3 ft	12 - 13 ft		0 - 1 ft	6 - 7 ft	0 - 2 ft	8 - 9 ft	0 - 2 ft	6 - 7 ft	0 - 1 ft	8 - 9 ft		
Effective Date		06/01/2018	06/01/2018		06/01/2018										
Exceedance Key		Bold	<u>Underline</u>		Reference Only										
Volatile Organic Compounds **															
1,1,1-Trichloroethane	ug/kg	640000	640000			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,1,2,2-Tetrachloroethane	ug/kg	3600	810			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,1,2-Trichloroethane	ug/kg	7010	1590			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,1-Dichloroethane	ug/kg	22200	5060			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,1-Dichloroethylene	ug/kg	1190000	320000			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,2-Dichloroethane	ug/kg	2870	652			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,2-Dichloroethylene, cis	ug/kg	2340000	156000			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,2-Dichloroethylene, trans	ug/kg	1850000	1560000			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,2-Dichloropropane	ug/kg	15000	3400			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,3-Dichloropropene, cis	ug/kg	1210000	1210000			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
1,3-Dichloropropene, trans	ug/kg	1510000	1510000			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
2-Hexanone	ug/kg	1760000	237000			< 52.0	< 52.0	< 52.0	< 52.0	< 52.0	< 52.0	< 52.0	< 52.0	< 52.0	< 52.0
Acetone	ug/kg	10000000	63400000			< 77.8	< 77.8	< 77.8	< 77.8	< 77.8	< 77.8	< 77.8	< 77.8	< 77.8	< 77.8
Benzene	ug/kg	7070	1600			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Bromodichloromethane	ug/kg	1830	418			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Bromoform	ug/kg	113000	25400			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Bromomethane	ug/kg	43000	9600			< 69.9	< 69.9	< 69.9	< 69.9	< 69.9	< 69.9	< 69.9	< 69.9	< 69.9	< 69.9
Carbon disulfide	ug/kg	738000	738000			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Carbon tetrachloride	ug/kg	4030	916			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Chlorobenzene	ug/kg	761000	370000			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Chlorodibromomethane	ug/kg	38900	8280			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Chloroethane	ug/kg	2120000	2120000			< 67.0	< 67.0	< 67.0	< 67.0	< 67.0	< 67.0	< 67.0	< 67.0	< 67.0	< 67.0
Chloroform	ug/kg	1980	454			< 46.4	< 46.4	< 46.4	< 46.4	< 46.4	< 46.4	< 46.4	< 46.4	< 46.4	< 46.4
Chloromethane	ug/kg	669000	159000			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Ethyl benzene	ug/kg	35400	8020			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Methyl ethyl ketone (2-butanone)	ug/kg	28400000	28400000			< 107	< 107	< 107	< 107	< 107	< 107	< 107	< 107	< 107	< 107
Methyl isobutyl ketone (MIBK)	ug/kg	3360000	3360000			< 41.1	< 41.1	< 41.1	< 41.1	< 41.1	< 41.1	< 41.1	< 41.1	< 41.1	< 41.1
Methyl tertiary butyl ether (MTBE)	ug/kg	282000	63800			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Methylene chloride	ug/kg	1150000	61800			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Styrene	ug/kg	867000	867000			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Tetrachloroethylene	ug/kg	145000	33000			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Toluene	ug/kg	818000	818000			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	38.8 j	< 25.0
Trichloroethylene (TCE)	ug/kg	8410	1300			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Vinyl chloride	ug/kg	2080	67			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Xylene, m & p	ug/kg	260000 XYL	260000 XYL			< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0
Xylene, o	ug/kg	434000	434000			< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Xylene, total (Barr Calculation)	ug/kg	260000	260000			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Barr Calculated Comparison - Industrial															
Exceedance Count	no unit	0	0			0	0	0	0	0	0	0	0	0	0
Hazard Index	no unit	≤ 1.0	≤ 1.0			0.0004	0.0004	0.0003	0.0003	0.0004	0.0003	0.0003	0.0003	0.1124	0.0011
Cumulative Cancer Risk	no unit	≤ 1E-05	≤ 1E-05			5.2E-11	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.8E-09	0.0E+00	0.0E+00	9.2E-08	0.0E+00
Barr Calculated Comparison - Non-Industrial															
Exceedance Count	no unit	<u>0</u>	<u>0</u>			0	0	0	0	0	0	0	0	<u>1</u>	0
Hazard Index	no unit	≤ 1.0	≤ 1.0			0.0029	0.0017	0.0014	0.0013	0.0017	0.0014	0.0015	0.0013	0.2342	0.0003
Cumulative Cancer Risk	no unit	≤ 1E-05	≤ 1E-05			9.6E-10	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.4E-08	0.0E+00	0.0E+00	1.7E-06	0.0E+00

Note

** Non-detect VOC compounds reported on a wet weight basis per WIDNR requirements.

**Table 3
Groundwater Analytical Data Summary
Husky Energy Property- Future Substation Site
Superior, WI**

		Location	SB-3
		Date	6/22/2018
		Depth	14.5 - 19.5 ft
		Sample Type	N
Parameter	Units	Wisconsin Groundwater Public Health Enforcement Standards	Wisconsin Groundwater Preventive Action Limits
Effective Date		07/01/2015	07/01/2015
Exceedance Key		No Exceed	No Exceed
Semivolatile Organic Compounds			
Acenaphthene	ug/l		< 0.0043
Acenaphthylene	ug/l		< 0.0063
Anthracene	ug/l	3000	< 0.0083
Benz(a)anthracene	ug/l		< 0.0053
Benzo(a)pyrene	ug/l	0.2	< 0.0054
Benzo(b)fluoranthene	ug/l	0.2	< 0.017
Benzo(g,h,i)perylene	ug/l		< 0.013
Benzo(k)fluoranthene	ug/l		< 0.014
Chrysene	ug/l	0.2	< 0.012
Dibenz(a,h)anthracene	ug/l		< 0.012
Fluoranthene	ug/l	400	< 0.025
Fluorene	ug/l	400	< 0.0080
Indeno(1,2,3-cd)pyrene	ug/l		< 0.018
Naphthalene	ug/l	100	< 0.0092
Phenanthrene	ug/l		< 0.014
Pyrene	ug/l	250	< 0.020
Volatile Organic Compounds			
1,1,1,2-Tetrachloroethane	ug/l	70	< 0.20
1,1,1-Trichloroethane	ug/l	200	< 0.14
1,1,2,2-Tetrachloroethane	ug/l	0.2	< 0.17
1,1,2-Trichloroethane	ug/l	5	< 0.18
1,1-Dichloroethane	ug/l	850	< 0.17
1,1-Dichloroethylene	ug/l	7	< 0.16
1,1-Dichloropropene	ug/l		< 0.20
1,2,3-Trichlorobenzene	ug/l		< 0.21
1,2,3-Trichloropropane	ug/l	60	< 0.26
1,2,4-Trichlorobenzene	ug/l	70	< 0.20
1,2,4-Trimethylbenzene	ug/l	480 c	< 0.20
1,2-Dibromo-3-chloropropane (DBCP)	ug/l	0.2	< 1.7
1,2-Dibromoethane (EDB)	ug/l	0.05	0.005
1,2-Dichlorobenzene	ug/l	600	< 0.14
1,2-Dichloroethane	ug/l	5	< 0.22
1,2-Dichloroethylene, cis	ug/l	70	< 0.15
1,2-Dichloroethylene, trans	ug/l	100	< 0.12
1,2-Dichloropropane	ug/l	5	< 0.16
1,3,5-Trimethylbenzene	ug/l	480 c	< 0.12
1,3-Dichlorobenzene	ug/l	600	< 0.16
1,3-Dichloropropane	ug/l		< 0.070
1,3-Dichloropropene, cis	ug/l	0.4	< 0.20
1,3-Dichloropropene, trans	ug/l	0.4	< 0.18
1,4-Dichlorobenzene	ug/l	75	< 0.17
2,2-Dichloropropane	ug/l		< 0.17
Acetone	ug/l	9000	< 9.2
Allyl chloride	ug/l		< 0.29
Benzene	ug/l	5	< 0.10
Bromobenzene	ug/l		< 0.21
Bromochloromethane	ug/l		< 0.27
Bromodichloromethane	ug/l	0.6	< 0.22
Bromoform	ug/l	4.4	< 0.80

**Table 3
Groundwater Analytical Data Summary
Husky Energy Property- Future Substation Site
Superior, WI**

		Location	SB-3
		Date	6/22/2018
		Depth	14.5 - 19.5 ft
		Sample Type	N
Parameter	Units	Wisconsin Groundwater Public Health Enforcement Standards	Wisconsin Groundwater Preventive Action Limits
Effective Date		07/01/2015	07/01/2015
Exceedance Key		No Exceed	No Exceed
Bromomethane	ug/l	10	1
Butylbenzene	ug/l		< 0.24
Butylbenzene, sec	ug/l		< 0.15
Butylbenzene, tert	ug/l		< 0.15
Carbon tetrachloride	ug/l	5	0.5
Chlorobenzene	ug/l	100	20
Chlorodibromomethane	ug/l	60	6
Chloroethane	ug/l	400	80
Chloroform	ug/l	6	0.6
Chloromethane	ug/l	30	3
Chlorotoluene, o	ug/l		< 0.16
Chlorotoluene, p	ug/l		< 0.13
Cumene (isopropyl benzene)	ug/l		< 0.18
Cymene p- (toluene isopropyl p-)	ug/l		< 0.15
Dibromomethane (methylene bromide)	ug/l		< 0.16
Dichlorodifluoromethane (Freon-12)	ug/l	1000	200
Dichlorofluoromethane (Freon-21)	ug/l	7000	< 0.14
Ethyl benzene	ug/l	700	140
Ethyl ether	ug/l	1000	100
Hexachlorobutadiene	ug/l		< 0.31
Methyl ethyl ketone (2-butanone)	ug/l	4000	800
Methyl isobutyl ketone (MIBK)	ug/l	500	50
Methyl tertiary butyl ether (MTBE)	ug/l	60	12
Methylene chloride	ug/l	5	0.5
Naphthalene	ug/l	100	10
Propylbenzene	ug/l		< 0.10
Styrene	ug/l	100	10
Tetrachloroethylene	ug/l	5	0.5
Tetrahydrofuran	ug/l	50	10
Toluene	ug/l	800	160
Trichloroethylene (TCE)	ug/l	5	0.5
Trichlorofluoromethane (Freon-11)	ug/l	3490	698
Trichlorotrifluoroethane (Freon 113)	ug/l		< 0.22
Vinyl chloride	ug/l	0.2	0.02
Xylene, total	ug/l	2000 (4)	400 (4)

Data Footnotes and Qualifiers

Barr Standard Footnotes and Qualifiers

--	Not analyzed/Not available.
j	Estimated detected value. The reported value is less than the stated laboratory quantitation limit but greater than the laboratory method detection limit.
*	Estimated value, QA/QC criteria not met.
**	Non-detect VOC compounds reported on a wet weight basis per WIDNR requirements.

Wisconsin RCLs

CR3	Value represents the criteria for Chromium(III)
XYL	Value represents the criteria for Xylene, total (m-,o-,p- combined).

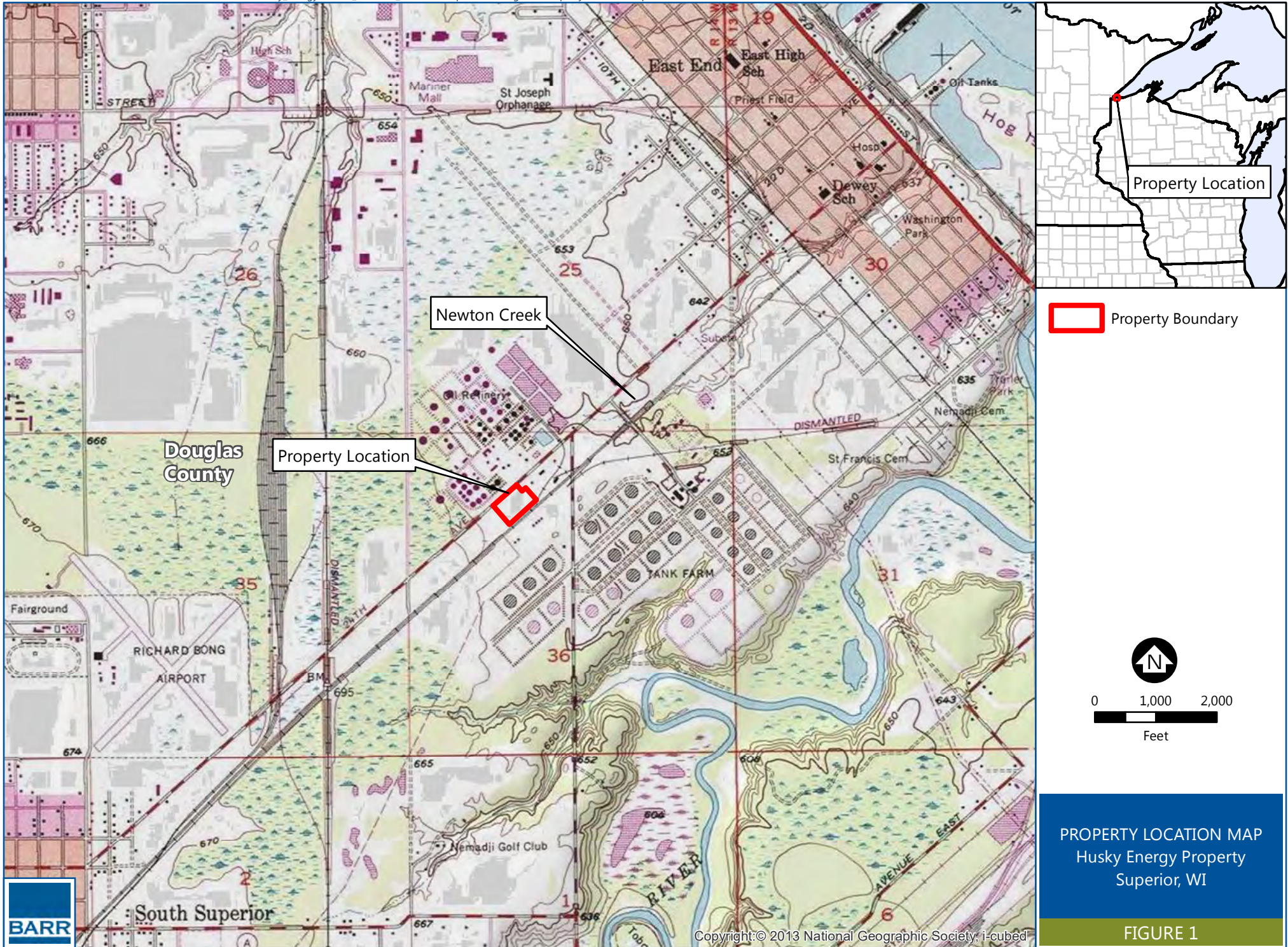
Wisconsin Groundwater Public Health Enforcement Standards

(4)	Xylene includes meta-, ortho-, and para-xylene combined.
c	Value represents the criteria for Trimethylbenzes (1,2,4- and 1,3,5- combined).

Wisconsin Preventive Action Limits

(4)	Xylene includes meta-, ortho-, and para-xylene combined.
c	Value represents the criteria for Trimethylbenzes (1,2,4- and 1,3,5- combined).

Figures



PROPERTY LOCATION MAP
Husky Energy Property
Superior, WI

FIGURE 1



Attachments

Attachment A

Standard Operating Procedures

Collection of Groundwater Samples

Collection of Soil Samples

Decontamination of Sampling Equipment

Field Screening of Soil Samples



Standard Operating Procedure

Collection of Groundwater Samples from a Temporary or Permanent Monitoring Well (Includes Well Purging and Stabilization)

Revision 1

April 5, 2016

Approved By:

<u>Kim Johannessen</u>	<u><i>Kim Johannessen</i></u>	<u>04/05/16</u>
Print	Technical Reviewer Signature	Date
<u>Terri Olson</u>	<u><i>Terri A. Olson</i></u>	<u>04/05/16</u>
Print	QA Manager Signature	Date

Review of the SOP has been performed and the SOP still reflects current practice.

Initials: _____	Date: _____
Initials: _____	Date: _____
Initials: _____	Date: _____
Initials: _____	Date: _____

Collection of Groundwater Samples from a Monitoring Well (Includes Well Purging and Stabilization)

1.0 Scope and Applicability

The purpose of this Standard Operating Procedure (SOP) is to describe the methods used for monitoring well purging, stabilization, and sampling (excluding residential/water supply systems). The SOP also provides details regarding the calculation of purge volumes and measurement of groundwater stabilization criteria and identifies the common container, preservative, and holding times for typical groundwater sample analyses.

The recommended procedures in this SOP should be followed unless conditions make it impractical or inappropriate to do so. Modifications should be noted in the applicable documentation and communicated to appropriate personnel. Significant changes may result in a revision or newly created SOP.

2.0 Limitations

- Sample collection methods can vary by project. If not specified in the project scope of work and/or documentation (e.g., Work Plan, Sampling Analysis Plan (SAP), or Quality Assurance Project Plan (QAPP)), consult with the appropriate regulatory agency for guidance.
- Collection of groundwater samples from residential/water supply systems are not discussed within this SOP.
- Dedicated sampling equipment and/or decontamination of sampling equipment is required to prevent cross-contamination.
- Low-flow sampling methods are not discussed within this SOP.
- Sample collection using 'clean hands/dirty hands' methods is not discussed within this SOP.

3.0 Responsibilities

Equipment Technicians are responsible to maintain equipment in working order and aid in troubleshooting equipment issues.

The role of the Project Health and Safety Team Leader is to oversee all aspects of on-site safety activities.

The Project Manager, in conjunction with the client, develops the site specific scope of work (e.g., Work Plan, SAP, etc.).

Experienced Field Technician(s) are responsible for the measurement of well pumping rates, calculation of well purge volume, field screening procedures, field equipment and calibration, proper sample identification, collection of samples, quality control procedures, and documentation.

Project staff are responsible for ordering sample containers prior to the sampling event.

4.0 Safety

Barr staff is responsible for conducting all aspects of the job safely. When applicable, refer to the appropriate Project Health and Safety Plan (PHASP) to understand the hazards associated with suspected

contamination, symptoms of exposure, methods to minimize exposure, personal protection equipment (PPE), and personal air monitoring required when using this SOP. Minimum protection of two pair of chemical resistant gloves (e.g., nitrile) and safety glasses with side shields should be worn to prevent sample contact with the skin and eyes. When sampling waters contaminated with corrosive materials, emergency eye flushing facilities should be available.

5.0 Equipment, Reagents, and Supplies

- Water quality meter (e.g., YSI, or equivalent)
- Polyethylene bailer and rope
- Sample tubing and fittings
- Turbidimeter (optional)
- Coolers
- Ice
- Chemical resistant gloves (e.g., nitrile)
- Custody seal, if applicable
- Calculator
- Locks/keys
- Pump (peristaltic or submersible), power source, and appropriate drive tubing
- Cord reel (optional)
- Graduated measuring container
- Plastic bags
- Waterproof ink pen or pencil
- Clock or stopwatch
- Sample containers (method specific)
- Sample labels
- Chain-of-custody (COC)

6.0 Procedure

This section describes the procedure(s) for calibrating field equipment, measuring pumping rates, calculating purge volumes, well purging, measuring well stabilization, and the sampling, handling, and delivery of groundwater samples. Best practices include setting up the purging, stabilization, and sampling equipment in an upwind direction from any potential source of contamination.

This SOP describes the groundwater collection from a bore hole, temporary well, or permanent monitoring well. Typically, a direct-push (Geoprobe® or equivalent) will be used to create the bore hole or temporary well by advancing the direct-push sampler to the desired sampling interval (sampling depth). When the sampling depth is reached, small diameter extension rods are inserted through the steel probe rods to hold the groundwater sampler screen in place while the rods and screen sheath are retracted, exposing the screen. The groundwater sampler screen can typically be exposed up to 41 inches, but can be exposed a shorter length depending on project requirements. Alternately, a small diameter PVC well screen and riser pipe may be installed in the bore hole for use as a temporary well. Polyethylene (or project specified) tubing is placed into the bore hole or temporary well, and a peristaltic pump (or equivalent) or project specified pump is used to draw water samples to the surface for collection. Well stabilization is not always necessary for temporary wells but if required by the project, see Section 6.2.6 of this SOP.

After each borehole or temporary well is constructed, the probe rods are decontaminated by the drilling contractor in accordance with project requirements. The polyethylene (or project specified) tubing is discarded after each sample is collected and new tubing is used for the collection of the next sample. The

borehole and temporary well locations will be permanently sealed following applicable state and local regulations.

6.1 Calibration

The water quality meter and turbidimeter will be calibrated as per the applicable Barr SOP. The meters will undergo calibration checks, at a minimum, before and after sampling. The calibration check will be documented on a calibration form (as appropriate) and/or in the field notebook. Any significant issues found during the calibration check will be noted in the field notebook and the Equipment Technicians will be notified.

6.2 Purging/Well Stabilization/Sampling

Prior to sampling, purging of the monitoring well is performed to remove stagnant water from within the well and to stabilize the well to allow for representative groundwater sample collection. The term 'purge volume' refers to the amount of water removed from a well before groundwater sample collection occurs.

Purging well volumes and stabilizing to remove stagnant water from a temporary well may not be necessary due to the short time frame between well installation and sampling. Purging and well stabilization procedure for temporary wells may vary by project or by well. Recommended practice is to purge a temporary well until the water clears, if possible, prior to sampling; however, purging prior to sampling may not be possible at all if water is limited (as it might be in a perched water zone), or water recharge is slow (as it would be in a clayey or silty water bearing zone).

6.2.1 Purge Volume

The volume of standing water in the well is calculated to determine the purge volume that needs to be removed from the well. The water level must be measured in order to determine the volume (see applicable Barr SOP). Calculation of the purge volume is addressed in Section 6.3, Data Reduction/Calculation of this SOP and Table 1. If a well is pumped dry, this constitutes an adequate purge and the well can be sampled following recovery. Refer to project documentation for volumes required to be purged.

6.2.2 Bailer Purging

A bailer can be used for slowly recovering wells with minimal water volume and a depth to groundwater greater than 25 feet. A new disposable polyethylene bailer with a check valve can be attached to a cord reel or a downrigger and support assembly. Polyethylene bailers can be hauled using stainless steel wire or new nylon line (rope).

- Put on gloves for skin protection and to prevent sample contamination.
- Secure the bailer and lower slowly into the water column until the bailer is submerged. Avoid rapid movements of the bailer to minimize turbidity. A cord reel can be used to aid in the lowering of the bailer.
- Raise the bailer and empty the water collected from the bailer into a graduated measuring container.
- Sampling may begin once desired volume is purged and the well has stabilized (see Section 6.2.6, Well Stabilization of this SOP).

6.2.3 Peristaltic Pump Purging

A peristaltic pump is used when the water level is within suction lift (e.g., within about 25 feet of the ground surface but may be less at higher altitudes). It usually is a low-volume suction pump with low pumping rates suitable for sampling shallow, small-diameter wells.

- Put on gloves for skin protection and to prevent sample contamination.
- Lower tubing into the well water (1 to 2 feet below surface) and cut to the desired length.
- Connect the well tubing to the drive tubing entering the pump.
- Connect the drive tubing exiting the pump to the short section of tubing entering the flow-through cell or graduated measuring container.
- Turn on pump and set the speed at the desired rate of flow.
- Sampling may begin once desired volume is purged and the well has stabilized (see Section 6.2.6, Well Stabilization of this SOP).

6.2.4 Submersible Pump Purging

A submersible pump is used when the water level is greater than the suction lift associated with a peristaltic pump. It is commonly used in conjunction with a control box to achieve the desired pumping rate (low to high). Variable rate submersible pumps are available to fit inside 2 inch or larger wells.

6.2.4.1 1.5-inch Submersible Pump

This is a type of submersible pump that can be used in 2-inch or larger diameter wells. It can purge water from depths down to 200 feet or greater, depending on pump model and manufacturer.

- Put on gloves for skin protection and to prevent sample contamination.
- Attach appropriate diameter tubing to pump intake, lower pump, and secure at desired depth.
- Cut off tubing, allowing additional tubing length for discharge.
- Plug the pump into the controller. Pump will begin pumping using the variable speed controller. There are a variety of speed controllers available, typically designed for a specific pump.
- Attach the controller to the power supply.
- Turn on the controller and dial the speed control to the desired flow rate. The controller can slow the purge rate down to the optimum rate.

Note: If the submersible pump is not running, turn off the pump and then disconnect from the power supply. Check connections and try again.

- Attach the flow-through cell for the water quality meter.
Note: If water is considerably turbid after initial pump start-up, the flow-through cell may be connected after purge water has cleared visually.
- Sampling may begin once desired volume is purged and the well has stabilized (see Section 6.2.6, Well Stabilization of this SOP).

6.2.4.2 3 or 4-inch Submersible Pump

This pump may be used to purge water samples from any depth.

- Put on gloves for skin protection and to prevent sample contamination.

- Attach purging hose to the pipe connected on the top of the submersible pump.
- Lower the submersible pump slowly into the well until it is completely submersed into the water and secure at desired depth.
- Connect the pump to the generator with an extension cord.
- Turn switch to start the generator, put choke on, pull recoil rope, and let generator idle until it is running smoothly
- Turn on power (which is located on the front of the generator).

Note: Submersible pump should be running; if not, turn off the generator and check connections.

- Adjust flow rate to desired rate with the valve and measure the flow rate with the graduated measuring container.
 - Attach the flow-through cell for the water quality meter.
- Note: If water is considerably turbid after initial pump start-up, the flow-through cell may be connected after purge water has cleared visually.*
- Sampling may begin once desired volume is purged and the well has stabilized (see Section 6.2.6, Well Stabilization of this SOP).

6.2.5 Well Purging with In-place Plumbing

In-place plumbing consists of dedicated, submersible pumps that are permanently installed in a well.

- Put on gloves for skin protection and to prevent sample contamination.
- Turn switch to start the generator, put choke on, pull recoil rope, and let generator idle until it is running smooth.
- Connect the pump to the generator with an extension cord.
- Connect the pipe, elbow, and valve to the discharge pipe of the submersible pump (located at the top of the well) and turn on the generator.

Note: If the pump does not start, check the connection from the generator to the pump.

- When water flows from discharge of the pump, adjust the flow according to desired flow rate and measure the flow rate with the graduated measuring container.
- Attach the flow-through cell for the water quality meter.

Note: If water is considerably turbid after initial pump start-up, the flow-through cell may be connected after purge water has cleared visually.

- Sampling may begin once desired volume is purged and the well has stabilized (see Section 6.2.6, Well Stabilization of this SOP).

Note: Each dedicated pump has its own pipe, elbow, and valve. These pieces are left at each well.

6.2.6 Well Stabilization

Well stabilization is typically conducted to help verify that the groundwater sample is representative of aquifer conditions. A well is considered 'stabilized' after the well purge volume has been met and the groundwater (or well) stabilization parameter measurements are within acceptable limits for three consecutive readings. Well stabilization parameters may vary by project or regulatory agency but at a minimum typically include pH, temperature, and specific conductance (temperature corrected electrical conductivity). Dissolved oxygen (DO) and oxidation-reduction potential (ORP) may also be used as stabilization parameters.

The procedure to stabilize a well includes recording well stabilization parameter measurements collected with the water quality meter at the beginning of the well purging process and after subsequently purged well volumes. A well volume is measured as the volume of water present inside a well screen and/or casing (i.e., from the base of the well to the water level measurement) and is defined in the footnotes of Table 1. Groundwater aliquots used for stabilization parameter measurements are typically collected by either directing the purge water discharge line through a flow-through cell or by pouring groundwater from a bailer into a container holding the water quality meter probe (depending on the purging method used).

Documentation of the well stabilization process typically includes recording pertinent information such as the pump type, pumping rate, volume pumped, and well stabilization measurements on the field log data sheets or field notebook. If only the minimum parameters are used for stabilization, the DO and ORP should still be measured and recorded as they may be needed to interpret other chemical parameter results. Turbidity is measured with a standalone turbidimeter but is typically not used as a stabilization parameter. A qualitative determination of turbidity may also be noted (e.g. clear, cloudy, very cloudy, etc.).

The well may be sampled after three consecutive measurements (typically one well volume per measurement), collected at the intervals described above, are within specific project criteria or the criteria presented in Section 7.2, Measurement Criteria of this SOP.

If field parameters do not stabilize after five well volumes have been purged, then the field technician will verify that the probes and related equipment are functioning properly and that operator error is not an issue. They will also re-evaluate whether or not water is being withdrawn from the appropriate depth to effectively evacuate the well. If all the checks produce no new insight, a decision will need to be made by the project team on whether to collect samples for laboratory analysis. When samples are collected, it will be clearly documented that stabilization was not achieved; at a minimum, this fact will be reported on the field log data sheets and in the Field Sampling Report.

If the well was purged dry, it shall be allowed to recharge and the samples should then be collected. If there is insufficient sample volume for the analyses being sampled, the project team will need to decide if sampling should be carried out or if a reduced prioritized list of analyses should be collected.

6.2.7 Sampling

The project team will determine the order for sampling the wells but general guidelines are below:

- Where water quality data are available, the least contaminated wells would be sampled first, proceeding to increasingly contaminated wells.
- Where the distribution of contaminants is not known, wells considered to be up gradient from likely sources of contamination would be sampled first and downgradient wells closest to the suspected contamination would be last.
- Make certain to keep records of the order in which wells were sampled.

Similar to purging, sampling requires the use of pumps or bailers. It may be appropriate to use a different device to sample than that which was used to purge. The most common example of this is the use of a pump to purge and a bailer to sample. There are several factors to take into consideration when choosing

a sampling device. The experience of the project team will be used to determine which is appropriate and care should be taken when reviewing the advantages or disadvantages of any one device.

To prevent the possible loss of some volatile organic compounds (VOCs), samples for volatile parameters should be collected first with as little agitation and disturbance as possible, then proceed in order towards the least volatile parameter as listed in Barr's 'Water Sampling Guidelines' form. The 40 mL vials used to collect the VOC samples should be checked for air bubbles. Air bubbles may be caused by insufficient meniscus when sealing the vial, degassing after sample collection or during sample shipment, or reaction between the sample and preservative (HCl). If air bubbles > 6 mm (pea-sized) are observed during sampling, discard the vial and recollect the sample using a new vial. If air bubbles are believed to be due to the sample reacting with the preservative, the sample should be collected in an unpreserved vial if possible.

Put on new sampling gloves at each sampling site to reduce the risk of sample cross-contamination and exposure to skin. Never reuse old gloves.

Prepare sampling containers by filling out the label, using an indelible permanent pen, with the following information at a minimum:

- Sample ID
- Date and time of sample collection
- Preservative
- Sample analysis (if required by the lab)

When filling the containers, do not insert the tubing into the containers and do not overfill preserved containers. When all samples are containerized, place the filled sample containers in a sampling cooler with ice, turn off any equipment, disassemble the sampling apparatus, dispose of all one-time use (disposable) equipment, and decontaminate reusable equipment per Barr's SOP 'Decontamination of Sampling Equipment'.

6.2.7.1 Bailer Sampling

After the well has been purged and stabilized, secure the bailer and slowly lower into the top of the water column making certain not to stir up the water with the bailer, which could result in volatilizing the samples. Keep the bailer in the top portion of the water column when collecting the sample.

When the bailer is filled, slowly raise the bailer out of the well. A clean tarp may be used to cover the ground to minimize the contact of the rope with the ground. Fill containers in the order listed in Barr's 'Water Sampling Guidelines' form.

6.2.7.2 Peristaltic / Submersible Pump Sampling

After the well has been purged and stabilized, disconnect the tubing exiting the pump from the flow-through cell, if used and fill containers as listed in Barr's 'Water Sampling Guidelines' form.

6.2.7.3 Check Valve Sampling

Sampling temporary wells through tubing with a check valve may be conducted following a drilling subcontractor's procedure.

6.2.8 Preservation

Container volume, type, and preservative are important considerations in sample collection. Container volume must be adequate to meet laboratory requirements for quality control, split samples, or repeat analyses. The container type varies with the analysis required. Typically, the analytical laboratory will preserve the container before shipment. Preservation and shelf life vary; contact the laboratory to determine if an on-hand container is still useful. Barr's 'Water Sampling Guidelines' form lists the parameter, container type, container volume, and preservative for many of the most common parameters collected.

6.2.9 Handling

The samples will be bubble wrapped or bagged after collection, stored in a sample cooler, and packed on double bagged wet ice. Samples will be kept cold (≤ 6 °C, but not frozen), until receipt at the laboratory (where applicable).

Note: Samples may need to be stored indoors in winter to prevent freezing.

6.2.10 Shipment/Delivery

Once the cooler is packed to prevent breaking of bottles, the proper chain-of-custody (COC) documentation is signed and placed inside a plastic bag then added to the cooler.

All samples will be kept secured to prevent tampering. If sample coolers are left in a vehicle or field office for temporary storage, the area will be locked and secured.

Custody seals may be present, but at a minimum, the coolers must be taped shut to prevent the lid from opening during shipment.

The coolers must be delivered to the laboratory via hand or overnight delivery courier, if possible, in accordance with all Federal, State and Local transportation regulations and Barr's SOP 'Domestic Transport of Samples to the Laboratory'.

6.3 Data Reduction/Calculations

Table 1 provides the volume of water (per foot or meter of depth) based on the diameter of the casing or hole. The following are two examples of calculations used in Table 1:

Volume of Standing Water (V), cubic feet

$$V = (\pi)(r^2)(h)$$

Where: π = 3.1416

r = Well radius (ft)

h = Total well depth (ft) – depth to static water (ft) = Water column height (ft)

Note: For the table calculations, 'h' is equal to one foot.

Well Volume (WV), gallons

$$WV = (V)(7.48)$$

Where: V = Volume of standing water, cubic feet

7.48 = Cubic foot to US Gallons conversion factor

Calculate the volume of water to be purged using the equation below:

$$VP = (WV)(NMV)$$

Where: VP = Volume of water to be purged

WV = Well volume in gallons

NMV = Number of well volumes to be purged per project requirements

6.4 Disposal

Waste generated by this process will be disposed of in accordance with Federal, State and Local regulations and Barr's SOP 'Investigative Derived Waste'. Where reasonably feasible, technological changes have been implemented to minimize the potential for environmental pollution.

7.0 Quality Control and Quality Assurance (QA/QC)

The QC activities described below allow the self-verification of the quality and consistency of the work.

7.1 QA/QC Samples

QA/QC samples are defined in Barr's SOP 'Collection of Quality Control Samples'. The sampling frequency should be performed at the frequency noted in the project scope of work and/or documentation (e.g., Work Plan, SAP, or QAPP).

7.2 Well Stabilization Criteria

Well stabilization criteria to be used if there are no project specific criteria:

- pH \pm 0.1 standard units
- Temperature \pm 0.5 °C
- Specific conductance \pm 5%
- Optional Criteria:
 - ORP \pm 10 mV
 - Dissolved oxygen \pm 10% (> 0.5 mg/L)

Note: Three consecutive readings \leq 0.5 mg/L can be considered stabilized.
 - Turbidity \pm 10% (> 5 Nephelometric Turbidity Units (NTU))

Note: Three consecutive readings \leq 5 NTU can be considered stabilized.

8.0 Records

The field technician will document the pumping flow rate, well volume, time purged, volume purged, water level, total well depth and stabilization test measurements on the field log data sheet and/or field notebook. They will also document the type and number of bottles on the chain-of-custody record, as appropriate. The analysis for each container and the laboratory used will be documented on the chain-of-custody record. Refer to Barr's SOP 'Documentation on a Chain-of-Custody (COC)' for further information.

Examples of common field documentation are available in Barr's "Compendium of Field Documentation". Field documentation specific to this SOP are listed below:

- Chain-of-custody (COC)

- Sample label
- Custody seal (if applicable)
- Water Level Data Sheet
- Field Log Data Sheet
- Field Log Cover Sheet
- Field Sampling Report
- Water Sampling Guidelines (includes sampling order, container, preservation, and holding time)

The field documents and COCs are provided to a Barr Data Management Administrator for storage on the internal Barr network.

Additional records information can be found in Barr's "Records Management System Manual".

Other Barr SOP subjects referenced within this SOP: water level measurement, water quality meter, turbidimeter, collection of QC samples, decontamination of sampling equipment, and documentation on a COC.

9.0 References

Environmental Protection Agency. *Title 40 of the Code of Federal Regulations, Part 136.3.*

Environmental Protection Agency, EPA/540/P-91/007. 1999. *Compendium of ERT Groundwater Sampling Procedures.*

Minnesota Pollution Control Agency, Water Quality Division. 2006. *Sampling Procedures for Groundwater Monitoring Wells.*

Table 1**Volume of Water in Casing or Hole**

Diameter of Casing or Hole (In)	Gallons per Foot of Depth (WV)	Cubic Feet per Foot of Depth (V)	Liters per Meter of Depth	Cubic Meters per Meter of Depth
1	0.041	0.0055	0.509	0.509 x 10 ⁻³
1½	0.092	0.0123	1.142	1.142 x 10 ⁻³
2	0.163	0.0218	2.024	2.024 x 10 ⁻³
2½	0.255	0.0341	3.167	3.167 x 10 ⁻³
3	0.367	0.0491	4.558	4.558 x 10 ⁻³
3½	0.500	0.0668	6.209	6.209 x 10 ⁻³
4	0.653	0.0873	8.110	8.110 x 10 ⁻³
4½	0.826	0.1104	10.26	10.26 x 10 ⁻³
5	1.020	0.1364	12.67	12.67 x 10 ⁻³
5½	1.234	0.1650	15.33	15.33 x 10 ⁻³
6	1.469	0.1963	18.24	18.24 x 10 ⁻³
7	2.000	0.2673	24.84	24.84 x 10 ⁻³
8	2.611	0.3491	32.43	32.43 x 10 ⁻³
9	3.305	0.4418	41.04	42.04 x 10 ⁻³
10	4.080	0.5454	50.67	50.67 x 10 ⁻³
11	4.937	0.6600	61.31	61.31 x 10 ⁻³
12	5.875	0.7854	72.96	72.96 x 10 ⁻³
14	8.000	1.069	99.35	99.35 x 10 ⁻³
16	10.44	1.396	129.65	129.65 x 10 ⁻³
18	13.22	1.767	164.18	164.18 x 10 ⁻³
20	16.32	2.182	202.68	202.68 x 10 ⁻³
22	19.75	2.640	245.28	245.28 x 10 ⁻³
24	23.50	3.142	291.85	291.85 x 10 ⁻³
26	27.58	3.687	342.52	342.52 x 10 ⁻³
28	32.00	4.276	397.41	397.41 x 10 ⁻³
30	36.72	4.909	456.02	456.02 x 10 ⁻³
32	41.78	5.585	518.87	518.87 x 10 ⁻³
34	47.16	6.305	585.68	585.68 x 10 ⁻³
36	52.88	7.069	656.72	656.72 x 10 ⁻³

1 gallon = 3.7854 liters

1 liter = 0.26417 gallons

1 meter = 3.281 feet

1 gallon water weighs 8.33 lbs. = 3.785 kilograms

1 liter water weighs 1 kilogram = 2.205 lbs.

1 gallon per foot of depth = 12.419 liters per foot of depth

1 gallon per meter of depth = 12.419 x 10⁻³ cubic meters per meter of depth



Standard Operating Procedure Collection of Soil Samples

Revision 8

February 23, 2016

Approved By:

Kevin McGilp *Kevin McGilp* 02/23/16

Print Technical Reviewer Signature Date

Terri Olson *Terri A. Olson* 02/23/16

Print QA Manager Signature Date

Review of the SOP has been performed and the SOP still reflects current practice.

Initials: _____	Date: _____
Initials: _____	Date: _____
Initials: _____	Date: _____
Initials: _____	Date: _____

Collection of Soil Samples

1.0 Scope and Applicability

The purpose of this Standard Operating Procedure (SOP) is to describe the collection of a representative soil sample using a variety of methods (including compositing of discrete samples) and equipment depending on the depth and type of sample required. This procedure applies to the collection of soil samples for volatiles (VOC), semivolatiles (SVOC), metals, and inorganics analyses. It also identifies the container, preservative, and weight required for each analysis type.

The recommended procedures in this SOP should be followed unless conditions make it impractical or inappropriate to do so. Modifications should be noted in the applicable documentation and communicated to appropriate personnel. Significant changes may result in a revision or newly created SOP.

2.0 Limitations

- Sample collection methods can vary by project. If not specified in the project scope of work and/or documentation (e.g., Work Plan, Sampling Analysis Plan (SAP), or Quality Assurance Project Plan (QAPP)), consult with the appropriate regulatory agency for guidance.
- Inadequate homogenization of the samples, where applicable, can result in non-representative samples and results.
- Decontamination of sampling equipment is required to prevent cross-contamination.
- Contact the local utilities hotline prior to digging to have utilities identified at sampling locations.

3.0 Responsibilities

Equipment Technicians are responsible to maintain equipment in working order and aid in troubleshooting equipment issues.

The role of the Project Health and Safety Team Leader is to oversee all aspects of on-site safety activities.

The Project Manager, in conjunction with the client, develops the site specific scope of work (e.g., Work Plan, SAP, etc.).

Experienced Field Technicians are responsible for the proper sample identification, collection of samples, field screening procedures, field equipment and calibration, quality control procedures, and documentation.

Project staff are responsible for ordering sample containers prior to the sampling event.

4.0 Safety

Barr staff is responsible for conducting all aspects of the job safely. When applicable, refer to the appropriate Project Health and Safety Plan (PHASP) to understand the hazards associated with suspected contamination, symptoms of exposure, methods to minimize exposure, personal protection equipment (PPE), and personal air monitoring required when using this SOP. Minimum protection of two pair of chemical resistant gloves (e.g., nitrile) and safety glasses with side shields should be worn to prevent

sample contact with the skin and eyes. When sampling soils contaminated with corrosive materials, emergency eye flushing facilities should be available.

Some of the sample containers may require the use of preservatives. Consult the applicable Safety Data Sheet to review hazards and appropriate PPE to minimize exposure.

5.0 Equipment, Reagents, and Supplies

- Sampling devices/tools
- Stainless steel mixing bowl and spoon
- Sample containers (method specific)
- Balance
- Coolers
- Plastic bags
- Non-phosphorus containing detergent (e.g., Liquinox™)
- Chemical resistant gloves (e.g., nitrile)
- Paper towels/laboratory tissues
- Chain-of-custody (COC)
- Sample label
- Custody seal, if applicable
- Waterproof ink pen or pencil
- Ice

6.0 Procedure

This section describes the procedure(s) for the sampling, handling, and delivery of soil samples.

6.1 Calibration

No specific calibration procedures are required for the actual sampling equipment; however, the calibration of the balance should be verified prior to use. Refer to the applicable Barr SOP.

6.2 Sampling

General considerations to be taken into account when planning and conducting sampling operations are the required sample weight, sample holding times, sample handling, and special precautions for trace contaminant sampling.

To prevent sample cross-contamination, the soil sampling equipment is carefully cleaned before initially sampling and after working at each sampling point per Barr's SOP 'Decontamination of Sampling Equipment'. A new, clean outer pair of disposable gloves will be worn for each sample location and sample containers are placed in separate plastic bags after collecting, preserving and tagging. Sample collection activities will proceed progressively from the least contaminated area to the most contaminated area (when known).

Depending on the project work to be done, soil samples will be collected for analysis by either a drilling apparatus (equipped with a split spoon or core barrel sampler), hand excavation (hand auger, trowel, or shovel), or direct-push (Geoprobe®) technology

- If a drilling apparatus was used, retrieve the split spoon or core barrel sampler from the desired sampling interval and open. If a liner (sleeve) is present and will not be sampled in the field, wrap the ends of the liner with heavy-duty aluminum foil, taking care to not pierce the foil. Tape the foil to the brass liner with duct tape to seal. Cover the ends of the liner with plastic caps or duct tape to fully protect the foil and package for shipment to the laboratory. If a liner is being sampled in the field, open the liner to sample the soil.

- If hand excavating, dig with a trowel or shovel to the desired sampling interval and expose a fresh soil surface to sample. Collect a large sample on a shovel and bring it to the surface or collect the sample directly from the fresh soil surface. The hand excavation technique may be done from the bucket of a backhoe also.
- If direct-push (Geoprobe®) technology is used, soils are typically sampled following the subcontractor's soil sampling procedures. This method generally utilizes a direct-push soil boring rig, steel drive rods and a 2-inch outside diameter (O.D.) soil core sampler with a dedicated 1.75-inch inside diameter (I.D.) removable acetate plastic sampler liner. The probe rods and sampling unit are driven to the desired sampling depth by the static weight of the carrier vehicle and hydraulic hammer percussion. Two, four, or five-foot sample cores are typically collected. The assembly is brought to the surface and the soil sample is exposed by cutting open the sampler liner.

In most investigations, the soil samples are field screened for moisture, odor, oil sheen, discoloration and the presence of organic soil vapors and classified in accordance with ASTM D-2488, Standard Practice for Description and Identification of Soils (Visual-Manual Procedure). Refer to Barr's SOP 'Screening Soil Samples'.

The form 'Soil Sampling Guidelines' lists the analyses (in order of collection) and describes the weight of sample, preservation, container, and holding time for the most common sampling media (information can vary depending on the laboratory used). The container size, type, preservative, and holding time are important considerations in sample collection. Sample and container size must be adequate to meet laboratory requirements for quality control, split samples, or repeat analyses. The container type varies with the analysis required. Typically, the analytical laboratory will preserve the container before shipment, where applicable. Preservation and shelf life vary; contact the laboratory to determine if an on-hand container is still useful.

Both discrete and composite samples can be used for environmental investigations. A discrete sample is a sample that originated from a specific area at a specific time. The sample may be transferred directly from the sampler or sampling location to the sample container.

A composite sample is a collection of multiple temporary or discrete samples of the same medium that are combined, thoroughly homogenized, and treated as a single sample. Composite samples are valuable in characterizing a large area or volume of soil.

NOTE: Samples collected for analysis of volatile organic compounds (VOC) should not be homogenized or composited, due to aeration of the sample during mixing which may result in loss of VOC.

6.2.1 Volatile Organic Compounds (VOC)

If VOC or similar analyses (e.g., GRO, TPH as Gasoline) are being analyzed, these samples should be collected as soon as possible after the soil is removed from the ground from a representative area of the most undisturbed soil possible. Please refer to Barr's SOP 'Screening Soil Samples'. It is important to note that there are different containers and sampling media available for collecting a soil sample for VOC. Typically, the VOC sample is collected at a 1:1 weight ratio with a preservative. A coring device, such as a Terra Core® or En Core® sampler, is the first choice for sampling. After VOC samples are collected, mix the remaining soil from the sampling locations/intervals prior to filling the rest of the sample containers.

Note: Analytical samples should not be collected from polyethylene bags sometimes used for field screening purposes.

6.2.1.1 Terra Core® Sampler

The Terra Core® Sampler is a single use device that is typically supplied with a 40 mL VOA vial containing preservative (e.g., methanol) and an unpreserved container for % moisture/% solids determination. To use the Terra Core®, make certain the plunger is aligned with, and seated in, the handle. Push the Terra Core® into freshly exposed soil until the sample chamber is filled. Depending on the Terra Core® sampler size, a filled chamber will deliver approximately 5 or 10 g of soil. If a 1:1 ratio of soil to preservative is needed, verify the correct size sampler is being used.

Wipe the outside of the sampler, check that the soil plug is flush with the mouth of the sampler, and remove any excess soil. Rotate the plunger 90° until it is aligned with the slots in the body. Extrude the sample into the appropriate container by pushing the plunger down. To provide a good sealing surface, wipe the container lip and screw threads to remove soil and immediately screw on the lid. If preservative is present in the container, swirl to immerse the sample. Record the sample ID on the container and package for shipment to the laboratory.

6.2.1.2 En Core® Sampler

The disposable En Core® sampler is a single use device that is pushed into the soil using a reusable En Core® T-handle. Two, 5 g samplers are typically supplied with an unpreserved container for % moisture/% solids determination. Hold the En Core® coring body and push plunger down until the small O-ring rests against the tabs so the plunger moves freely.

Depress the locking lever on the T-handle. Place coring body plunger end first into the open end of the T-Handle, aligning the slots on the coring body with the locking pins in the T-Handle. Twist coring body clockwise to lock pins in slots. Make certain that the sampler is locked in place.

Turn T-handle with T-up and coring body down. This will position the plunger bottom flush with bottom of coring body. Using T-handle, push sampler into soil until coring body is completely full. When full the small O-ring will be centered in the T-handle viewing hole. Remove excess soil from the coring body exterior.

Cap the coring body while it is still on the T-handle by pushing and twisting the cap over the bottom until grooves on locking arms seat over ridge on coring body. Remove the coring body from the T-handle and lock plunger by rotating extended plunger rod fully counterclockwise until wings rest firmly against tabs.

Attach the accompanying label and package for shipment to the laboratory.

6.2.1.3 Other

If no coring device is available, an estimate of the amount of soil needed to provide the desired weight can be determined. Place an extra laboratory container, disposable weigh boat, paper towel, or laboratory tissue on a balance pan. Using a stainless steel spoon, add the desired weight (10 g or 25 g) of a representative soil sample on the balance. Once the amount has been established, discard the soil used in the estimation and collect the sample as per form 'Soil Sampling Guidelines'.

If allowed by applicable regulations for VOC sample collection, the VOC aliquot may be weighed directly into the sample container by placing the pre-weighed sample container on the balance, taring the balance, then adding the appropriate amount of soil to the container to reach the desired aliquot weight. This should be done quickly to reduce the possible loss of VOCs.

6.2.2 Compositing Discrete Samples

Discrete samples, to be used for compositing, are stored at ≤ 6 °C until each individual sample is obtained. A minimum volume of soil obtained during discrete sampling will be dependent on the final analytical requirements for the composite sample; however, a minimum weight of eight ounces should be sufficient for analysis of semivolatiles (SVOC), PCBs, pesticides, and metals.

After discrete samples have been obtained, record the locations to be included in a final composited sample in the field documentation. Appropriate laboratory containers should be labeled with this final sample identifier and the date of collection.

Retrieve the samples selected for compositing from storage. One container from each discrete sample location should remain in storage in case individual sample confirmations are necessary. Empty the entire contents of each container into a stainless steel mixing bowl, removing any large debris or rocks, and mix thoroughly.

6.2.3 Diesel Range Organics (DRO) / SVOC / General Chemistry / Metals

Using either a composited sample or a homogenized, discrete sample, fill the remaining containers in the order listed on form 'Soil Sampling Guidelines'. Unless aliquot weights are listed, pack the soil into the sample jars leaving no headspace. If allowed by applicable regulations, the WIDRO sample may be weighed directly into the sample container by placing the pre-weighed sample container on the field balance, taring the field balance, then adding the appropriate amount of soil to the container to reach the desired sample weight (~25 g).

Wipe the container lip and screw threads to remove soil and provide a good sealing surface, and immediately screw on the lid.

6.2.4 Handling

After collection, all samples should be handled as few times as possible. Samplers should use extreme care to ensure that samples are not contaminated. Immediately after samples are collected, they are bubble wrap or bagged and placed in a cooler containing bagged ice. Samples will be kept cold (≤ 6 °C, but not frozen) until receipt at the laboratory, where they are to be stored in a refrigerated area.

Keep samples secure to prevent tampering. If sample coolers are left in a vehicle or field office for temporary storage, the area will be locked and secured.

6.2.5 Shipment/Delivery

Once the cooler is packed to prevent breaking of containers, the proper COC documentation is relinquished by the sampler, placed into a plastic bag, and included in the cooler. Custody seals may be used, and the coolers should be taped shut if not hand delivered.

The coolers must be delivered to the laboratory via hand or overnight delivery courier in accordance with all Federal, State and Local transportation regulations and Barr's SOP 'Domestic Transport of Samples to the Laboratory'.

Note: Samples may have to be stored indoors in winter to prevent freezing.

6.3 Data Reduction/Calculations

No data reduction or calculations are associated with this procedure.

6.4 Disposal

Waste generated by this process will be disposed of in accordance with Federal, State and Local regulations and Barr's SOP 'Investigative Derived Waste'. Where reasonably feasible, technological changes have been implemented to minimize the potential for environmental pollution.

7.0 Quality Control and Quality Assurance (QA/QC)

The QC activities described below allow the self-verification of the quality and consistency of the work.

7.1 QA/QC Samples

QA/QC samples are defined in Barr's SOP 'Collection of Quality Control Samples'. The sampling frequency should be performed as written in the project scope of work and/or documentation (e.g., Work Plan, SAP, or QAPP).

7.2 Measurement Criteria

No specific criteria apply to the implementation of this SOP.

8.0 Records

The field technician will document the soil sampling event in a project dedicated field logbook or on field log data sheets. The analysis for each container, the number of bottles, and the laboratory used will be documented on the chain-of-custody record. Refer to Barr's SOP 'Documentation on a Chain-of-Custody (COC)' for further information.

Examples of common field documentation are available in Barr's "Compendium of Field Documentation". Field documentation specific to this SOP are listed below:

- Field Sampling Report
- Field Log Data Sheet
- COC
- Sample label
- Custody seal (if applicable)
- Soil Sampling Guidelines (includes sampling order, container, preservation, and holding time)

Field documentation and COC are provided to a Barr Data Management Administrator for storage on the internal Barr network.

Additional records information can be found in Barr's "Records Management System Manual."

Other Barr SOP subjects referenced within this SOP: screening soil samples, balance calibration, collection of QC samples, decontamination of sampling equipment, investigative derived waste, domestic transport of samples, and documentation on a COC.

9.0 References

USEPA Environmental Response Team. 2000. *SOP for Soil Sampling*.



Standard Operating Procedure Decontamination of Sampling Equipment

Revision 1

March 15, 2018

Approved By:

John W. Juntilla *John W. Juntilla* 03/15/18
Print Technical Reviewer Signature Date

Terri Olson *Terri A. Olson* 03/15/18
Print QA Manager Signature Date

Review of the SOP has been performed and the SOP still reflects current practice.

Initials: _____	Date: _____
Initials: _____	Date: _____
Initials: _____	Date: _____
Initials: _____	Date: _____

Decontamination of Sampling Equipment

1.0 Scope and Applicability

The purpose of this Standard Operating Procedure (SOP) is to define the process used for decontaminating environmental sampling-related equipment including pumps, meters, and materials coming into contact with actual sampling equipment or with sampling personnel. This procedure is applicable to all personnel who are collecting samples and/or decontaminating sampling and field equipment.

The recommended procedures in this SOP should be followed unless conditions make it impractical or inappropriate to do so. Modifications should be noted in the applicable documentation and communicated to appropriate personnel. Significant changes may result in a revision or newly created SOP.

2.0 Limitations

- Equipment used once and discarded such as bailers, protective gear, and filtration devices are not part of this SOP.

3.0 Responsibilities

The equipment technician is responsible for ensuring field equipment has been thoroughly decontaminated and prepared for use out in the field. The field technician(s) are responsible for decontamination in the field at each individual sampling point and for ensuring adherence to any investigative derived waste (IDW) project-specific requirements set forth in a QAPP or SAP (if applicable).

The role of the Field Safety Representative is to oversee on-site safety activities.

4.0 Safety

Barr staff is responsible for implementing aspects of the job safely. Where available, refer to the appropriate Project Health and Safety Plan (PHASP) to determine the proper personal protection equipment (PPE) required when using this SOP. Barr staff is responsible for conducting all aspects of the job safely. When applicable, refer to the appropriate Project Health and Safety Plan (PHASP) to understand the hazards associated with suspected contamination, symptoms of exposure, methods to minimize exposure, personal protection equipment (PPE), and personal air monitoring required when using this SOP. Minimum protection of one pair of chemical resistant gloves (e.g., nitrile) and safety glasses with side shields should be worn to prevent sample contact with the skin and eyes. When sampling soils contaminated with corrosive materials, emergency eye flushing facilities should be available.

Some of the sample containers may require the use of preservatives. Consult the applicable Safety Data Sheet to review hazards and appropriate PPE to minimize exposure.

5.0 Equipment, Reagents, and Supplies

- Non-phosphorus detergent (e.g., Liquinox™)
- Scrub brush made of inert materials
- Oven
- Bucket
- Tap water
- Analyte-free water (e.g., distilled or deionized (DI) water, or equivalent)
- Kimwipes®, or equivalent
- Chemical resistant gloves (e.g., nitrile)
- Spray bottle
- Organic solvent (e.g. methanol)

6.0 Procedure

This section describes the procedure(s) for the decontamination of equipment used to sample water, soil, or air.

6.1 Calibration

Calibration is not applicable to this SOP.

6.2 Operation

Decontamination of sampling equipment will be performed before sampling and after working at each sampling point, if applicable.

6.2.1 Water Sampling Equipment

Equipment that does not contact sample water or the inside of the well should be rinsed with analyte-free water and inspected for remaining particles or surface film. If these are noted, repeat cleaning and rinse procedures.

Equipment that contacts sample water or the inside of the well should be cleaned (inside and outside where possible) with a non-phosphorus detergent solution applied with a spray bottle and/or scrub brush (if needed). Rinse with analyte-free water and containerize with other IDW if required by the SAP or QAPP and inspect for remaining particles or surface film. If these are noted, repeat cleaning and rinse procedures. Shake off remaining water and allow to air dry.

The internal surfaces of pumps and tubing that cannot be adequately cleaned by the above methods alone will also be cleaned by first circulating a non-phosphorus detergent solution through them followed by circulating analyte-free water. Special care will be exercised to ensure that the "rinse" fluids will be circulated in sufficient quantities to completely flush out contaminants and detergents.

When transporting or storing equipment after cleaning, the equipment will be stored in a manner that minimizes the potential for contamination.

6.2.2 Soil/Sediment Sampling Equipment

A variety of samplers (split-barrel, split-barrel with brass liners, piston sampler, backhoe, hand-auger, or shovel) may be used to retrieve soil from sampling locations. The soil sample will either be sealed within the sampler (e.g., collecting volatile samples) or the soil sample will be transferred to laboratory-supplied containers depending on the analysis to be conducted on the soil sample. The equipment required to transfer the soil from the sampler to the laboratory-supplied sample containers includes: stainless-steel

spoons or scoops and the appropriate personal protective equipment necessary for collection and handling of soil samples as described in the PHASP.

All soil sampling equipment, including split-barrels, stainless-steel spoons and scoops, will be carefully cleaned before and during sampling with a tap water and non-phosphorus detergent solution, using a brush if necessary to remove particulate matter and films. The equipment is then rinsed three times with tap water and/or three times with analyte-free water. Inspect equipment and repeat procedure if any residual soil or visible contaminants are present. Dry sampler with a Kimwipes®. Organic solvents (e.g., methanol) may be used to aid with desorbing organic material but should be kept to a minimum and must be collected and containerized if used.

At the completion of the work day, the samplers should be decontaminated following the procedure above and stored in a manner that minimizes the potential for contamination.

6.2.3 Air Sampling Equipment

For non-laboratory manifold equipment, methanol soak manifold components for a minimum of two hours. Remove from the methanol bath and place in an oven pre-heated to 90 °C and continue to heat manifold components for at least 3 hours or until interior and exterior surface inspections of the manifold components indicate that they are free of liquid methanol.

6.2.4 Handling

All equipment will be handled in a manner that minimizes cross-contamination between points. After cleaning, the equipment will be visibly inspected to detect any residues or other substances that may exist after normal cleaning. If inspection reveals that decontamination was insufficient, the decontamination procedures will be repeated.

6.3 Data Reduction/Calculations

No data reduction or calculations are associated with this procedure.

6.4 Disposal

IDW generated by this process will be disposed of in accordance with Federal, State and Local regulations and/or as required by project-specific SAP or Work Plan. Where reasonably feasible, technological changes have been implemented to minimize the potential for environmental pollution.

7.0 Quality Control and Quality Assurance (QA/QC)

The QC activities described below allow the self-verification of the quality and consistency of the work.

7.1 QA/QC Samples

Decontamination procedures may be monitored through the use of an equipment blank which consists of analyte-free water processed through non-disposable or non-dedicated aqueous or solid sampling equipment after equipment decontamination and before field sample collection. The equipment blank is analyzed for the same parameters as the samples at a project specific frequency (e.g., one per twenty samples).

7.2 Measurement Criteria

Equipment blank results should be below the laboratory's method detection limit or reporting limit (depending on the data quality objectives).

8.0 Records

When required, the field technician(s) will document the field equipment decontamination procedures in a project dedicated field logbook or on field log data sheets.

Examples of common field documentation are available in Barr's "Compendium of Field Documentation". Field documentation is listed in the applicable sample collection SOP.

Field documentation and COC are provided to a Barr Data Management Administrator for storage on the internal Barr network.

Additional records information can be found in Barr's "Records Management System Manual."

Other Barr SOP subjects referenced within this SOP: collection of samples and investigative derived waste.

9.0 References

ASTM. 2015. Standard Practice for Decontamination of Field Equipment Used at Waste Sites.



Standard Operating Procedure Field Screening Soil Samples

Revision 7

April 27, 2017

Approved By:

John W. Juntilla *John W. Juntilla* 04/27/17
Print Technical Reviewer Signature Date

Terri A. Olson *Terri A. Olson* 04/27/17
Print QA Manager Signature Date

Review of the SOP has been performed and the SOP still reflects current practice.

Initials: _____	Date: _____
Initials: _____	Date: _____
Initials: _____	Date: _____
Initials: _____	Date: _____

Field Screening of Soil Samples

1.0 Scope and Applicability

The purpose of this Standard Operating Procedure (SOP) is to describe the procedure for properly screening soil or sediment samples in the field. This procedure applies to all field technicians responsible for field screening soil or sediment samples.

The recommended procedures in this SOP should be followed unless conditions make it impractical or inappropriate to do so. Modifications should be noted in the applicable documentation and communicated to appropriate personnel. Significant changes may result in a revision or newly created SOP.

2.0 Limitations

- Screening techniques can vary by project. If not specified in the project scope of work and/or documentation (e.g., Work Plan, Sampling Analysis Plan (SAP), or Quality Assurance Project Plan (QAPP)), consult with the appropriate regulatory agency for guidance, if applicable.
- Interferences on the test can be caused by any contaminant that can cause an oil sheen on water. The samples will be carefully observed for characteristic appearance or odors which may indicate a possible contaminant other than coal tar or petroleum substances.
- Sunlight and low temperatures may interfere with headspace development.
- Water and soil particles may interfere with PID and FID measurements.
- Decontamination of screening equipment is required to prevent cross-contamination.
- Contact the local utilities hotline prior to digging to have utilities identified at sampling locations.

3.0 Responsibilities

Equipment Technicians are responsible to maintain equipment in working order and aid in troubleshooting equipment issues.

The role of the Project Health and Safety Team Leader is to oversee all aspects of on-site safety activities.

The Project Manager, in conjunction with the client, develops the site specific scope of work (e.g., Work Plan, SAP, etc.).

Experienced Field Technicians are responsible for the proper sample identification, field screening procedures, field equipment and calibration, quality control procedures, and documentation.

4.0 Safety

Barr staff is responsible for conducting all aspects of the job safely. When applicable, refer to the appropriate Project Health and Safety Plan (PHASP) to understand the hazards associated with suspected contamination, symptoms of exposure, methods to minimize exposure, personal protection equipment (PPE), and personal air monitoring required when using this SOP. Minimum protection of two pair of chemical resistant gloves (e.g., nitrile) and safety glasses with side shields should be worn to prevent sample contact with the skin and eyes. When screening soils contaminated with corrosive materials, emergency eye flushing facilities should be available.

Consult the applicable Safety Data Sheet to review hazards and appropriate PPE to minimize exposure.

5.0 Equipment, Reagents, and Supplies

- Photoionization detector (PID)
- Flame ionization detector (FID)
- Squirt bottle with tap water
- Waterproof ink pen or pencil
- Chemical resistant gloves (e.g., nitrile)
- Stainless steel spoon
- Polyethylene bags

6.0 Procedure

The field screening techniques for soils are as follows: visual examination, odor, headspace organic vapor screening, and oil sheen. The results of these four screening procedures may be used to screen soil samples for possible contamination.

6.1 Calibration

The PID or FID shall be calibrated or checked against a known concentration of a calibration gas standard prior to collection of field measurements. Calibration of the PID or FID shall follow the recommended procedures as described in the manufacturer's operation manual or as per the applicable Barr SOP.

Regular calibration checks (bump tests) are expected to be performed by the field technician a minimum of once per day of use in the field. It is recommended that bump tests be conducted around mid-day and at the end of the day. More frequent bump testing may be completed if warranted by field conditions. The bump testing results should be recorded in the field log book or field log data sheets.

If problems occur during calibration, during bump tests, or if the unit will not stay calibrated, the field technician should document the issue in the field notes then contact the equipment technician or project manager for assistance.

6.2 Screening Techniques

The field screening techniques for soils are as follows: visual examination, odor, headspace organic vapor screening, and oil sheen. The results of these four screening procedures may be used to screen soil samples for possible contamination. To prevent sample cross-contamination, the screening equipment is carefully cleaned before and after working with each sample per Barr's SOP 'Decontamination of Sampling Equipment'.

6.2.1 Visual Examination

A visual examination of the soil sample will include noting any discoloration of the soil or visible oiliness or tar.

6.2.2 Odor

The field technician will note odor only if noticed incidentally while handling the soil sample. Field technicians will not unduly expose themselves to sample odors. Odor will be described as trace, light, moderate, or strong, and appropriate description of the type of odor, if evident.

6.2.3 Headspace Organic Vapor Screening

The polyethylene bag headspace method recommended by the Minnesota Pollution Control Agency will be used in the field to screen soils suspected to contain volatile organic compounds. The screening method is intended to be used in conjunction with other "real time" observations.

The following equipment is required to conduct headspace organic vapor screening: PID or FID, polyethylene bag, log book or record sheet, and appropriate PPE. Soil samples collected from a split-barrel sampler or a direct-push (i.e., Geoprobe) sample liner will be collected immediately after opening the barrel or liner. If the sample is collected from an excavation wall, soil pile, or backhoe bucket, it will be collected from a freshly exposed surface.

- Half-fill the bag with the sample to be analyzed using a stainless-steel spoon or a gloved hand and immediately seal it. Agitate the bag for 15 seconds and manually break up any soil clumps within the bag.
- Allow headspace development for approximately 10 minutes. The sample should be kept in a shaded area out of direct sunlight. Ambient temperatures during headspace development should be recorded. When ambient temperatures are below 50°F, headspace development should be conducted inside a heated vehicle or building. After completing the headspace development, agitate the bag for an additional 15 seconds.
- Quickly puncture the bag with the sampling probe of the PID or FID at a point about one-half of the headspace depth. Exercise care to avoid uptake of water droplets or soil particles.
- Record the highest PID or FID meter response as the headspace concentration. The maximum response will likely occur between 0 to 5 seconds.
- When using a FID, it may be necessary to correct for methane. In this case, take a reading first with the carbon filter, then without. This will require two duplicate bag samples. The second reading less the first is the headspace adjusted for methane. Adjusted readings less than zero are considered zero. Methane correction is not necessary if a PID is used.

6.2.4 Oil Sheen Test

The oil sheen or hydrocarbon test is a method used to immediately determine the approximate magnitude of coal tar or petroleum contamination in soil by observation of the sample in the field. The test is useful in soils which do not have a high binding capacity with petroleum compounds or polycyclic aromatic hydrocarbons (PAHs) (i.e., petroleum compounds or PAHs are free on the surface of the soil particles and can be released by a stream of water).

The equipment required to conduct the oil sheen test includes: a stainless-steel spoon, a squirt bottle filled with tap water, a log book or field log data sheet, and the appropriate personal protective equipment necessary for collection and handling of soil samples as described in the Project Health and Safety Plan.

The procedure for conducting the oil sheen test consists of obtaining approximately 50 grams (about 30 cc) of representative soil with the spoon and then directing a stream of water onto the soil in the spoon with the squirt bottle until the soil is saturated and water begins to collect around the soil. The amount of oil sheen present on the water is determined by observation and the results of the test are reported as a magnitude of oil sheen observed: none, trace, light, moderate, heavy or rainbow. The test results, sample location, and observations of the sample's appearance and odor are recorded in the log book or field log data sheet.

The specific soil types at the area of investigation should be accounted for when performing the oil sheen test. The best results are obtained in silts, sands, and/or gravels with low organic content. The results obtained from clay soils may appear deceptively low. Typical descriptions of each test result are provided in the table below.

Oil Sheen Test Result	Description
None	No sheen detected.
Trace	Possible or faint oil sheen observed (may not continue to generate sheen as additional water is added).
Light	Obvious sheen that may not cover entire water surface
Moderate	Definite oil sheen that covers entire surface, but "rainbow colors" not distinguishable.
Heavy	Definite oil film or product that does not display rainbow colors.
Rainbow	Definite oil sheen, film or product that displays rainbow colors.

6.3 Data Reduction/Calculations

No data reduction or calculations are associated with this procedure.

6.4 Disposal

Waste generated by this process will be disposed of in accordance with Federal, State and Local regulations and Barr's SOP 'Investigative Derived Waste'. Where reasonably feasible, technological changes have been implemented to minimize the potential for environmental pollution.

7.0 Quality Control and Quality Assurance (QA/QC)

Field background readings are measured for the headspace organic vapor screening. PID and FID readings should be duplicated every 20 field samples.

8.0 Records

The field technician(s) will document the field screening activities and measurements in a project dedicated field logbook or on field log data sheets.

Examples of common field documentation are available in Barr's "Compendium of Field Documentation". Field documentation specific to this SOP are listed below:

- Field Sampling Report
- Field Log Data Sheet

Field documentation are provided to a Barr Data Management Administrator for storage on the internal Barr network.

Additional records information can be found in Barr's "Records Management System Manual."

Other Barr SOP subjects referenced within this SOP: PID and FID equipment, decontamination of sampling equipment, and investigative derived waste.

9.0 References

PID and FID operation manuals.

Attachment B

Representative Photographs



Photo 1: Setting up at SB-1.



Photo 2: Typical soil boring recovery. Pictured is recovery from SB-4, 0-5 feet bgs. Thin layer of organic topsoil visible on right (top) end of sample sleeve. Soil below is stiff glaciolacustrine lean clay.



Photo 3: Advancing sampler at SB-4.



Photo 4: Attempting to sample the temporary monitoring well at SB-1.

Attachment C

Soil Boring Logs



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 325 South Lake Avenue, Suite 700
 Duluth, MN 55802
 Telephone: 218-529-8200

LOG OF BORING SB-1

SHEET 1 OF 1

Project: Husky/MNPower Phase II 49161423.00 200
 Project No.: Superior, WI
 Location: UTM 15T N:5170970.147m,
 Coordinates: E:571189.0276m NAD 83
 Datum:
 Surface Elevation: 6/21/2018
 Drilling Method: Direct Push
 Sampling Method: Macro-Core
 Completion Depth: 20.0 ft

P:\IMPLS\49 W\16\49161423 SUPERIOR REFINING CO ENV ASSISWORKFILES\PHASE II INVESTIGATION\BORING LOGS\HUSKY MNPOWER LIM PH II\GP.J BARR\LIBRARY\GLB ENVIRO LOG BARR TEMPLATE.GDT

Depth, feet	Sample Type & Recovery	Sample No.	ENVIRONMENTAL DATA	SSCSU	Graphic Log	LITHOLOGIC DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL	Elevation, feet
0						ORGANIC SOIL (OL): brown; moist; medium stiff; with 20% grass fibers and trace medium to coarse-grained angular sand and fine gravel.		
			PID:0.3 D/O/S:N/ N/ N			LEAN CLAY (CL): Red-brown; moist; medium stiff; medium to high plasticity; no dilatancy; glacialacustrine deposit; with trace medium to coarse-grained angular sand and fine gravel.		
			PID:0.3 D/O/S:N/ N/ N			SB-1_2-3 ft collected for VOCs, RCRA 8 metals and PAHs.		
5								
			PID:0.8 D/O/S:N/ N/ N		CL			
			PID:0.6 D/O/S:N/ N/ N					
10								
			PID:0.5 D/O/S:N/ N/ N					
			PID:0.5 D/O/S:N/ N/ N			SB-1_12-13 ft collected for VOCs, RCRA 8 metals and PAHs.		
15						FAT CLAY (CH): Red-brown; moist; soft; high plasticity; no dilatancy; glacialacustrine deposit; with trace medium to coarse-grained angular sand and fine gravel.		
			PID:0.4 D/O/S:N/ N/ N		CH			
			PID:0.2 D/O/S:N/ N/ N			Very soft, 15-20 ft.		
20						End of boring 20.0 feet Target depth reached.		

Date Boring Started: 6/21/18 2:00 pm
 Date Boring Completed: 6/22/18 11:05 am
 Logged By: MAB
 Drilling Contractor: Twin Ports Testing
 Drill Rig: Geoprobe 7822DT

Remarks: Boring advanced in SE corner of property. Ground surface was hummocky, covered with recently chipped brush, vegetated with marsh grass, and submerged with approximately 2 inches of standing water.

PID = Headspace; D/O/S = Discoloration/Odor/Sheen; FID/MC = FID/Methane Corrected; G/S/F = Gravel/Sand/Fines
 Additional data may have been collected in the field which is not included on this log.



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LOG OF BORING SB-2

SHEET 1 OF 1

Project: Husky/MNPower Phase II 49161423.00 200
 Project No.: Superior, WI
 Location: UTM 15T N:5170941.164m,
 Coordinates: E:571114.8391m NAD 83
 Datum:
 Surface Elevation: 6/21/2018
 Drilling Method: Direct Push
 Sampling Method: Macro-Core
 Completion Depth: 20.0 ft

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Depth, feet	Sample Type & Recovery	Sample No.	ENVIRONMENTAL DATA	SSCSU	Graphic Log	LITHOLOGIC DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL	Elevation, feet
0								
0-1			PID:0.1 D/O/S:N/ N/ N		OL	ORGANIC SOIL WITH GRAVEL (OL): dark brown; moist; soft; with 30% angular basalt fine gravel.		
1-5			PID:0.2 D/O/S:N/ N/ N		CL	LEAN CLAY (CL): brown; moist; stiff; medium to high plasticity; no dilatancy; glacialacustrine deposit; with trace angular medium to coarse-grained sand and fine gravel. SB-2_0-1 ft collected for VOCs, RCRA 8 metals and PAHs. Red-brown below 5 ft bgs.		
5-7			PID:0.2 D/O/S:N/ N/ N		CL	With 1-2mm long planar gray mottles, 5-7 ft bgs. SB-2_6-7 ft collected for VOCs, RCRA 8 metals and PAHs.		
7-10			PID:0.3 D/O/S:N/ N/ N		CL			
10-14			PID:0.4 D/O/S:N/ N/ N		CL			
14-19			PID:0.4 D/O/S:N/ N/ N		CL			
19-20			PID:0.4 D/O/S:N/ N/ N		CL			
20						End of boring 20.0 feet Target depth reached.		

Date Boring Started: 6/21/18 3:05 pm
 Date Boring Completed: 6/22/18 11:10 am
 Logged By: MAB
 Drilling Contractor: Twin Ports Testing
 Drill Rig: Geoprobe 7822DT

Remarks: Boring advanced in center of property. Ground surface was dry, flat, and grass-covered.

PID = Headspace; D/O/S = Discoloration/Odor/Sheen; FID/MC = FID/Methane Corrected; G/S/F = Gravel/Sand/Fines
 Additional data may have been collected in the field which is not included on this log.



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LOG OF BORING SB-3

SHEET 1 OF 1

Project: Husky/MNPower Phase II 49161423.00 200
 Project No.: Superior, WI
 Location: UTM 15T N:5170886.079m,
 Coordinates: E:571073.1286m NAD 83
 Datum:

Surface Elevation: 657.3 ft
 Drilling Method: Direct Push
 Sampling Method: Macro-Core
 Completion Depth: 20.0 ft

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Depth, feet	Sample Type & Recovery	Sample No.	ENVIRONMENTAL DATA	LOG	Graphic Log	LITHOLOGIC DESCRIPTION	WELL OR PIEZOMETER CONSTRUCTION DETAIL	Elevation, feet
0				OL		ORGANIC SOIL (OL): dark brown; moist; soft; with 20% grass fibers.		655
			PID:0.1 D/O/S:N/ N/ N			LEAN CLAY (CL): red-brown; moist; stiff; medium to high plasticity; no dilatancy; glacialacustrine deposit; with trace angular medium to coarse-grained sand and fine gravel. SB-3_0-2 ft collected for VOCs, RCRA 8 metals and PAHs.		
			PID:0.1 D/O/S:N/ N/ N					
5			PID:0.1 D/O/S:N/ N/ N			With trace faint 1mm-long brown-gray mottling, 5-10' bgs.		650
			PID:0.2 D/O/S:N/ N/ N			SB-3_8-9 ft collected for VOCs, RCRA 8 metals and PAHs.	-Temporary Monitoring Well	
10			PID:0.2 D/O/S:N/ N/ N	CL		Medium soft consistency from 9-13.5 ft bgs.		645
			PID:0.2 D/O/S:N/ N/ N			Trace weathered fine gravel from 10-15 ft bgs.		
			PID:0.2 D/O/S:N/ N/ N			Soft consistency below 13.5 ft bgs.		
15			PID:0.2 D/O/S:N/ N/ N				-Screened at 14.5-19.5'	640
			PID:0.2 D/O/S:N/ N/ N				-Water at 9.5 ft bgs on 6/22/18, one day after installation. Likely surface water draining into boring.	
20			PID:0.2 D/O/S:N/ N/ N			End of boring 20.0 feet Target depth reached.	-SB-3_14.5-19.5 (groundwater) collected for VOCs and PAHs	

Date Boring Started: 6/22/18 4:15 pm
 Date Boring Completed: 6/22/18 11:30 am
 Logged By: MAB
 Drilling Contractor: Twin Ports Testing
 Drill Rig: Geoprobe 7822DT

Remarks: Boring advanced in SW corner of property. Ground surface was soft, vegetated with marsh grass and submerged by approximately one inch of standing water.

PID = Headspace; D/O/S = Discoloration/Odor/Sheen; FID/MC = FID/Methane Corrected; G/S/F = Gravel/Sand/Fines
 Additional data may have been collected in the field which is not included on this log.



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LOG OF BORING SB-4

SHEET 1 OF 1

Project: Husky/MNPower Phase II 49161423.00 200
 Project No.: Superior, WI
 Location: UTM 15T N:5170910.454m,
 Coordinates: E:571048.3472m NAD 83
 Datum:

Surface Elevation: 657.4 ft
 Drilling Method: Direct Push
 Sampling Method: Macro-Core
 Completion Depth: 20.0 ft

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Depth, feet	Sample Type & Recovery	Sample No.	ENVIRONMENTAL DATA	SSCSU	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation, feet
0						ORGANIC SOIL (OL): dark brown; moist; soft; with 30% grass fibers.	
			PID:0.3 D/O/S:N/ N/ N			LEAN CLAY (CL): red-brown; moist; stiff; medium plasticity; no dilatancy; glacialacustrine deposit; with trace angular medium to coarse-grained sand and fine gravel. SB-4_0-2 ft collected for VOCs, RCRA 8 metals and PAHs.	655
5			PID:0.2 D/O/S:N/ N/ N				
			PID:0.1 D/O/S:N/ N/ N			SB-4_6-7 ft collected for VOCs, RCRA 8 metals and PAHs.	650
10			PID:0.0 D/O/S:N/ N/ N			1/2-inch diameter very weathered basalt clast at 8.5 ft bgs.	
			PID:0.0 D/O/S:N/ N/ N	CL			645
15			PID:0.0 D/O/S:N/ N/ N				
			PID:0.0 D/O/S:N/ N/ N				640
20			PID:0.0 D/O/S:N/ N/ N			End of boring 20.0 feet Target depth reached.	

Date Boring Started: 6/22/18 8:35 am
 Date Boring Completed: 6/22/18 9:00 am
 Logged By: MAB
 Drilling Contractor: Twin Ports Testing
 Drill Rig: Geoprobe 7822DT

Remarks: Boring advanced in NW corner of property. Ground surface was hummocky, covered with recently chipped brush, vegetated with marsh grass, and covered in approximately 2 inches of standing water.

PID = Headspace; D/O/S = Discoloration/Odor/Sheen; FID/MC = FID/Methane Corrected; G/S/F = Gravel/Sand/Fines
 Additional data may have been collected in the field which is not included on this log.



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LOG OF BORING SB-5

SHEET 1 OF 1

Project: Husky/MNPower Phase II 49161423.00
 Project No.: 200
 Location: Superior, WI
 Coordinates: UTM 15T N:5170984.65m, E:571138.864m
 Datum: NAD 83

Surface Elevation: 657.6 ft
 Drilling Method: Direct Push
 Sampling Method: Macro-Core
 Completion Depth: 20.0 ft

P:\IMPLS\49 WI\16\49161423 SUPERIOR REFINING CO ENV ASSISWORKFILES\PHASE II INVESTIGATION\BORING LOGS\HUSKY MNPOWER LIM PH II\GPJ BARR\LIBRARY\GLB ENVIRO LOG BARR TEMPLATE.GDT

Depth, feet	Sample Type & Recovery	Sample No.	ENVIRONMENTAL DATA	SSCSU	Graphic Log	LITHOLOGIC DESCRIPTION	Elevation, feet
0							
0 - 1			PID:1.2 D/O/S:Black/ N/ N	SM		FILL; SILTY SAND WITH GRAVEL (SM): black; moist; 70% shiny black angular fine to coarse-grained sand and fine gravel; apparent weathered asphalt pavement with topsoil. SB-5_0-1 ft collected for VOCs, RCRA 8 metals and PAHs.	657.6
1 - 5			PID:N/A D/O/S:N/ N/ N			Insufficient recovery for headspace reading.	655
5 - 8			PID:0.4 D/O/S:N/ N/ N				650
8 - 9			PID:0.5 D/O/S:N/ N/ N			SB-5_8-9 ft collected for VOCs, RCRA 8 metals and PAHs.	650
9 - 15			PID:0.3 D/O/S:N/ N/ N	CL		With trace 1-2mm-long, planar gray mottles from 5-15 ft bgs.	645
15 - 20			PID:0.3 D/O/S:N/ N/ N				640
20			PID:0.3 D/O/S:N/ N/ N			End of boring 20.0 feet Target depth reached.	

Date Boring Started: 6/22/18 9:30 am
 Date Boring Completed: 6/22/18 9:55 am
 Logged By: MAB
 Drilling Contractor: Twin Ports Testing
 Drill Rig: Geoprobe 7822DT

Remarks: Boring advanced in NE corner of property. Ground surface was dry, level, and covered with grass and gravel.

PID = Headspace; D/O/S = Discoloration/Odor/Sheen; FID/MC = FID/Methane Corrected; G/S/F = Gravel/Sand/Fines
 Additional data may have been collected in the field which is not included on this log.

Attachment D

Soil and Groundwater Laboratory Analytical Reports

July 03, 2018

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

RE: Project: 49161423.00 Husky Phase II
Pace Project No.: 10436863

Dear Jim Taraldsen:

Enclosed are the analytical results for sample(s) received by the laboratory on June 22, 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,



Amanda Albrecht
amanda.albrecht@pacelabs.com
(612)607-6382
Project Manager

Enclosures

cc: BarrDM, Barr Engineering



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Minnesota Certification IDs

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414-2485

A2LA Certification #: 2926.01

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: 17-009

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014

Arkansas Certification #: 88-0680

California Certification #: 2929

CNMI Saipan Certification #: MP0003

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

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

Florida Certification #: E87605

Georgia Certification #: 959

Guam EPA Certification #: MN00064

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 #: 03086

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064

Maryland Certification #: 322

Massachusetts Certification #: M-MN064

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: MN00064

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 #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon NwTPH 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

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DW Certification #: 9952 C

West Virginia DEP Certification #: 382

Wisconsin Certification #: 999407970

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: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10436863001	SB-1_2-3	Solid	06/21/18 14:05	06/22/18 20:00
10436863002	SB-1_12-13	Solid	06/21/18 14:30	06/22/18 20:00
10436863003	SB-2_0-1	Solid	06/21/18 15:15	06/22/18 20:00
10436863004	SB-2_6-7	Solid	06/21/18 15:30	06/22/18 20:00
10436863005	SB-3_0-2	Solid	06/21/18 16:20	06/22/18 20:00
10436863006	SB-3_8-9	Solid	06/21/18 16:35	06/22/18 20:00
10436863007	SB-4_0-2	Solid	06/22/18 08:40	06/22/18 20:00
10436863008	SB-4_6-7	Solid	06/22/18 08:55	06/22/18 20:00
10436863009	SB-5_0-1	Solid	06/22/18 09:35	06/22/18 20:00
10436863010	SB-5_8-9	Solid	06/22/18 09:50	06/22/18 20:00
10436863011	SB-3_14.5-19.5	Water	06/22/18 11:20	06/22/18 20:00
10436863012	Trip Blank	Water	06/21/18 00:00	06/22/18 20:00
10436863013	MeOH Trip Blank	Solid	06/21/18 00:00	06/22/18 20:00

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SAMPLE ANALYTE COUNT

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10436863001	SB-1_2-3	EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	STB	18	PASI-M
		EPA 8260	SMT	39	PASI-G
10436863002	SB-1_12-13	EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	STB	18	PASI-M
		EPA 8260	SMT	39	PASI-G
10436863003	SB-2_0-1	EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	STB	18	PASI-M
		EPA 8260	SMT	39	PASI-G
10436863004	SB-2_6-7	EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	STB	18	PASI-M
		EPA 8260	SMT	39	PASI-G
10436863005	SB-3_0-2	EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	STB	18	PASI-M
		EPA 8260	SMT	39	PASI-G
10436863006	SB-3_8-9	EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	STB	18	PASI-M
		EPA 8260	SMT	39	PASI-G
10436863007	SB-4_0-2	EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	STB	18	PASI-M
		EPA 8260	SMT	39	PASI-G
10436863008	SB-4_6-7	EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M

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SAMPLE ANALYTE COUNT

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10436863009	SB-5_0-1	ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	STB	18	PASI-M
		EPA 8260	SMT	39	PASI-G
		EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
10436863010	SB-5_8-9	EPA 8270D by SIM	STB	18	PASI-M
		EPA 8260	SMT	39	PASI-G
		EPA 6010D	DM	7	PASI-M
		EPA 7471B	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D by SIM	STB	18	PASI-M
10436863011	SB-3_14.5-19.5	EPA 8260	SMT	39	PASI-G
		EPA 8270D by SIM	STB	18	PASI-M
		EPA 8260B	DS2	70	PASI-M
10436863012	Trip Blank	EPA 8260B	DS2	70	PASI-M
10436863013	MeOH Trip Blank	EPA 8260	SMT	39	PASI-G

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-1_2-3 **Lab ID:** 10436863001 Collected: 06/21/18 14:05 Received: 06/22/18 20:00 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
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Arsenic	3.1	mg/kg	1.6	0.48	1	06/26/18 04:58	06/27/18 06:54	7440-38-2	M1
Barium	245	mg/kg	4.2	1.3	5	06/26/18 04:58	06/27/18 15:29	7440-39-3	M1
Cadmium	<0.075	mg/kg	0.25	0.075	1	06/26/18 04:58	06/27/18 06:54	7440-43-9	
Chromium	49.6	mg/kg	5.1	1.5	5	06/26/18 04:58	06/27/18 15:29	7440-47-3	
Lead	10.5	mg/kg	5.3	1.6	5	06/26/18 04:58	06/27/18 15:29	7439-92-1	
Selenium	0.56J	mg/kg	1.9	0.56	1	06/26/18 04:58	06/27/18 06:54	7782-49-2	M1
Silver	<0.11	mg/kg	0.38	0.11	1	06/26/18 04:58	06/27/18 06:54	7440-22-4	M1
7471B Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.023J	mg/kg	0.033	0.0098	1	06/25/18 07:21	06/28/18 17:46	7439-97-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	27.6	%	0.10	0.10	1		06/27/18 16:25		
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.56	ug/kg	1.9	0.56	1	06/25/18 06:31	06/26/18 18:00	83-32-9	
Acenaphthylene	<0.68	ug/kg	2.3	0.68	1	06/25/18 06:31	06/26/18 18:00	208-96-8	
Anthracene	<0.65	ug/kg	2.2	0.65	1	06/25/18 06:31	06/26/18 18:00	120-12-7	
Benzo(a)anthracene	<1.5	ug/kg	5.0	1.5	1	06/25/18 06:31	06/26/18 18:00	56-55-3	
Benzo(a)pyrene	<0.95	ug/kg	3.2	0.95	1	06/25/18 06:31	06/26/18 18:00	50-32-8	
Benzo(b)fluoranthene	1.1J	ug/kg	1.7	0.52	1	06/25/18 06:31	06/26/18 18:00	205-99-2	
Benzo(g,h,i)perylene	<0.87	ug/kg	2.9	0.87	1	06/25/18 06:31	06/26/18 18:00	191-24-2	
Benzo(k)fluoranthene	<1.2	ug/kg	3.9	1.2	1	06/25/18 06:31	06/26/18 18:00	207-08-9	
Chrysene	<1.9	ug/kg	6.3	1.9	1	06/25/18 06:31	06/26/18 18:00	218-01-9	
Dibenz(a,h)anthracene	<0.64	ug/kg	2.1	0.64	1	06/25/18 06:31	06/26/18 18:00	53-70-3	
Fluoranthene	1.8J	ug/kg	2.0	0.59	1	06/25/18 06:31	06/26/18 18:00	206-44-0	
Fluorene	<0.43	ug/kg	1.4	0.43	1	06/25/18 06:31	06/26/18 18:00	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.93	ug/kg	3.1	0.93	1	06/25/18 06:31	06/26/18 18:00	193-39-5	
Naphthalene	<1.1	ug/kg	3.5	1.1	1	06/25/18 06:31	06/26/18 18:00	91-20-3	
Phenanthrene	<2.7	ug/kg	8.8	2.7	1	06/25/18 06:31	06/26/18 18:00	85-01-8	
Pyrene	<2.1	ug/kg	7.0	2.1	1	06/25/18 06:31	06/26/18 18:00	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	58	%	42-125		1	06/25/18 06:31	06/26/18 18:00	321-60-8	
p-Terphenyl-d14 (S)	75	%	57-125		1	06/25/18 06:31	06/26/18 18:00	1718-51-0	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 18:02	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 18:02	591-78-6	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-1_2-3 **Lab ID: 10436863001** Collected: 06/21/18 14:05 Received: 06/22/18 20:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 18:02	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 18:02	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 18:02	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 18:02	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 18:02	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 18:02	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:02	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	107	%	57-148		1	06/28/18 11:30	06/28/18 18:02	1868-53-7	
Toluene-d8 (S)	95	%	58-142		1	06/28/18 11:30	06/28/18 18:02	2037-26-5	
4-Bromofluorobenzene (S)	81	%	48-130		1	06/28/18 11:30	06/28/18 18:02	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-1_12-13 **Lab ID:** 10436863002 Collected: 06/21/18 14:30 Received: 06/22/18 20:00 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
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Arsenic	3.8	mg/kg	1.8	0.53	1	06/26/18 04:58	06/27/18 07:02	7440-38-2	
Barium	193	mg/kg	0.92	0.28	1	06/26/18 04:58	06/27/18 07:02	7440-39-3	
Cadmium	<0.082	mg/kg	0.27	0.082	1	06/26/18 04:58	06/27/18 07:02	7440-43-9	
Chromium	42.9	mg/kg	1.1	0.34	1	06/26/18 04:58	06/27/18 07:02	7440-47-3	
Lead	9.5	mg/kg	1.2	0.35	1	06/26/18 04:58	06/27/18 07:02	7439-92-1	
Selenium	<0.61	mg/kg	2.0	0.61	1	06/26/18 04:58	06/27/18 07:02	7782-49-2	
Silver	<0.12	mg/kg	0.41	0.12	1	06/26/18 04:58	06/27/18 07:02	7440-22-4	
7471B Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.026J	mg/kg	0.039	0.012	1	06/25/18 07:21	06/28/18 17:52	7439-97-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	35.3	%	0.10	0.10	1		06/27/18 16:26		
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.63	ug/kg	2.1	0.63	1	06/25/18 06:31	06/26/18 18:23	83-32-9	
Acenaphthylene	<0.76	ug/kg	2.5	0.76	1	06/25/18 06:31	06/26/18 18:23	208-96-8	
Anthracene	<0.72	ug/kg	2.4	0.72	1	06/25/18 06:31	06/26/18 18:23	120-12-7	
Benzo(a)anthracene	<1.7	ug/kg	5.5	1.7	1	06/25/18 06:31	06/26/18 18:23	56-55-3	
Benzo(a)pyrene	<1.1	ug/kg	3.5	1.1	1	06/25/18 06:31	06/26/18 18:23	50-32-8	
Benzo(b)fluoranthene	<0.57	ug/kg	1.9	0.57	1	06/25/18 06:31	06/26/18 18:23	205-99-2	
Benzo(g,h,i)perylene	<0.97	ug/kg	3.2	0.97	1	06/25/18 06:31	06/26/18 18:23	191-24-2	
Benzo(k)fluoranthene	<1.3	ug/kg	4.3	1.3	1	06/25/18 06:31	06/26/18 18:23	207-08-9	
Chrysene	<2.1	ug/kg	7.0	2.1	1	06/25/18 06:31	06/26/18 18:23	218-01-9	
Dibenz(a,h)anthracene	<0.71	ug/kg	2.4	0.71	1	06/25/18 06:31	06/26/18 18:23	53-70-3	
Fluoranthene	<0.66	ug/kg	2.2	0.66	1	06/25/18 06:31	06/26/18 18:23	206-44-0	
Fluorene	<0.48	ug/kg	1.6	0.48	1	06/25/18 06:31	06/26/18 18:23	86-73-7	
Indeno(1,2,3-cd)pyrene	<1.0	ug/kg	3.4	1.0	1	06/25/18 06:31	06/26/18 18:23	193-39-5	
Naphthalene	<1.2	ug/kg	4.0	1.2	1	06/25/18 06:31	06/26/18 18:23	91-20-3	
Phenanthrene	<3.0	ug/kg	9.8	3.0	1	06/25/18 06:31	06/26/18 18:23	85-01-8	
Pyrene	<2.4	ug/kg	7.8	2.4	1	06/25/18 06:31	06/26/18 18:23	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	60	%	42-125		1	06/25/18 06:31	06/26/18 18:23	321-60-8	
p-Terphenyl-d14 (S)	78	%	57-125		1	06/25/18 06:31	06/26/18 18:23	1718-51-0	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 18:25	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 18:25	591-78-6	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-1_12-13 **Lab ID: 10436863002** Collected: 06/21/18 14:30 Received: 06/22/18 20:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 18:25	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 18:25	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 18:25	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 18:25	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 18:25	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 18:25	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:25	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	110	%	57-148		1	06/28/18 11:30	06/28/18 18:25	1868-53-7	
Toluene-d8 (S)	94	%	58-142		1	06/28/18 11:30	06/28/18 18:25	2037-26-5	
4-Bromofluorobenzene (S)	80	%	48-130		1	06/28/18 11:30	06/28/18 18:25	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: **SB-2_0-1** Lab ID: **10436863003** Collected: 06/21/18 15:15 Received: 06/22/18 20:00 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
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Arsenic	3.0	mg/kg	1.4	0.42	1	06/26/18 04:58	06/27/18 07:04	7440-38-2	
Barium	145	mg/kg	0.73	0.22	1	06/26/18 04:58	06/27/18 07:04	7440-39-3	
Cadmium	<0.065	mg/kg	0.22	0.065	1	06/26/18 04:58	06/27/18 07:04	7440-43-9	
Chromium	37.0	mg/kg	0.89	0.27	1	06/26/18 04:58	06/27/18 07:04	7440-47-3	
Lead	7.6	mg/kg	0.93	0.28	1	06/26/18 04:58	06/27/18 07:04	7439-92-1	
Selenium	<0.49	mg/kg	1.6	0.49	1	06/26/18 04:58	06/27/18 07:04	7782-49-2	
Silver	<0.098	mg/kg	0.33	0.098	1	06/26/18 04:58	06/27/18 07:04	7440-22-4	
7471B Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.022J	mg/kg	0.028	0.0084	1	06/25/18 07:21	06/28/18 17:54	7439-97-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	20.3	%	0.10	0.10	1		06/27/18 16:26		
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.51	ug/kg	1.7	0.51	1	06/25/18 06:31	06/26/18 18:46	83-32-9	
Acenaphthylene	<0.62	ug/kg	2.1	0.62	1	06/25/18 06:31	06/26/18 18:46	208-96-8	
Anthracene	<0.59	ug/kg	2.0	0.59	1	06/25/18 06:31	06/26/18 18:46	120-12-7	
Benzo(a)anthracene	<1.4	ug/kg	4.5	1.4	1	06/25/18 06:31	06/26/18 18:46	56-55-3	
Benzo(a)pyrene	<0.86	ug/kg	2.9	0.86	1	06/25/18 06:31	06/26/18 18:46	50-32-8	
Benzo(b)fluoranthene	<0.47	ug/kg	1.6	0.47	1	06/25/18 06:31	06/26/18 18:46	205-99-2	
Benzo(g,h,i)perylene	<0.79	ug/kg	2.6	0.79	1	06/25/18 06:31	06/26/18 18:46	191-24-2	
Benzo(k)fluoranthene	<1.1	ug/kg	3.5	1.1	1	06/25/18 06:31	06/26/18 18:46	207-08-9	
Chrysene	<1.7	ug/kg	5.7	1.7	1	06/25/18 06:31	06/26/18 18:46	218-01-9	
Dibenz(a,h)anthracene	<0.58	ug/kg	1.9	0.58	1	06/25/18 06:31	06/26/18 18:46	53-70-3	
Fluoranthene	<0.54	ug/kg	1.8	0.54	1	06/25/18 06:31	06/26/18 18:46	206-44-0	
Fluorene	<0.39	ug/kg	1.3	0.39	1	06/25/18 06:31	06/26/18 18:46	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.84	ug/kg	2.8	0.84	1	06/25/18 06:31	06/26/18 18:46	193-39-5	
Naphthalene	<0.97	ug/kg	3.2	0.97	1	06/25/18 06:31	06/26/18 18:46	91-20-3	
Phenanthrene	<2.4	ug/kg	8.0	2.4	1	06/25/18 06:31	06/26/18 18:46	85-01-8	
Pyrene	<1.9	ug/kg	6.4	1.9	1	06/25/18 06:31	06/26/18 18:46	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	60	%	42-125		1	06/25/18 06:31	06/26/18 18:46	321-60-8	
p-Terphenyl-d14 (S)	74	%	57-125		1	06/25/18 06:31	06/26/18 18:46	1718-51-0	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 18:47	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 18:47	591-78-6	W

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-2_0-1 **Lab ID: 10436863003** Collected: 06/21/18 15:15 Received: 06/22/18 20:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 18:47	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 18:47	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 18:47	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 18:47	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 18:47	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 18:47	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 18:47	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	117	%	57-148		1	06/28/18 11:30	06/28/18 18:47	1868-53-7	
Toluene-d8 (S)	102	%	58-142		1	06/28/18 11:30	06/28/18 18:47	2037-26-5	
4-Bromofluorobenzene (S)	87	%	48-130		1	06/28/18 11:30	06/28/18 18:47	460-00-4	

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-2_6-7 **Lab ID: 10436863004** Collected: 06/21/18 15:30 Received: 06/22/18 20:00 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
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Arsenic	3.3	mg/kg	1.5	0.45	1	06/26/18 04:58	06/27/18 07:06	7440-38-2	
Barium	150	mg/kg	0.79	0.24	1	06/26/18 04:58	06/27/18 07:06	7440-39-3	
Cadmium	<0.070	mg/kg	0.23	0.070	1	06/26/18 04:58	06/27/18 07:06	7440-43-9	
Chromium	39.5	mg/kg	0.96	0.29	1	06/26/18 04:58	06/27/18 07:06	7440-47-3	
Lead	8.1	mg/kg	1.0	0.30	1	06/26/18 04:58	06/27/18 07:06	7439-92-1	
Selenium	<0.52	mg/kg	1.7	0.52	1	06/26/18 04:58	06/27/18 07:06	7782-49-2	
Silver	<0.11	mg/kg	0.35	0.11	1	06/26/18 04:58	06/27/18 07:06	7440-22-4	
7471B Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.020J	mg/kg	0.032	0.0097	1	06/25/18 07:21	06/28/18 17:56	7439-97-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	24.5	%	0.10	0.10	1		06/27/18 16:26		
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.54	ug/kg	1.8	0.54	1	06/25/18 06:31	06/26/18 19:10	83-32-9	
Acenaphthylene	<0.66	ug/kg	2.2	0.66	1	06/25/18 06:31	06/26/18 19:10	208-96-8	
Anthracene	<0.62	ug/kg	2.1	0.62	1	06/25/18 06:31	06/26/18 19:10	120-12-7	
Benzo(a)anthracene	<1.4	ug/kg	4.8	1.4	1	06/25/18 06:31	06/26/18 19:10	56-55-3	
Benzo(a)pyrene	<0.91	ug/kg	3.0	0.91	1	06/25/18 06:31	06/26/18 19:10	50-32-8	
Benzo(b)fluoranthene	<0.49	ug/kg	1.6	0.49	1	06/25/18 06:31	06/26/18 19:10	205-99-2	
Benzo(g,h,i)perylene	<0.84	ug/kg	2.8	0.84	1	06/25/18 06:31	06/26/18 19:10	191-24-2	
Benzo(k)fluoranthene	<1.1	ug/kg	3.7	1.1	1	06/25/18 06:31	06/26/18 19:10	207-08-9	
Chrysene	<1.8	ug/kg	6.0	1.8	1	06/25/18 06:31	06/26/18 19:10	218-01-9	
Dibenz(a,h)anthracene	<0.61	ug/kg	2.0	0.61	1	06/25/18 06:31	06/26/18 19:10	53-70-3	
Fluoranthene	<0.57	ug/kg	1.9	0.57	1	06/25/18 06:31	06/26/18 19:10	206-44-0	
Fluorene	<0.41	ug/kg	1.4	0.41	1	06/25/18 06:31	06/26/18 19:10	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.89	ug/kg	3.0	0.89	1	06/25/18 06:31	06/26/18 19:10	193-39-5	
Naphthalene	<1.0	ug/kg	3.4	1.0	1	06/25/18 06:31	06/26/18 19:10	91-20-3	
Phenanthrene	<2.5	ug/kg	8.5	2.5	1	06/25/18 06:31	06/26/18 19:10	85-01-8	
Pyrene	<2.0	ug/kg	6.7	2.0	1	06/25/18 06:31	06/26/18 19:10	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	55	%	42-125		1	06/25/18 06:31	06/26/18 19:10	321-60-8	
p-Terphenyl-d14 (S)	75	%	57-125		1	06/25/18 06:31	06/26/18 19:10	1718-51-0	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 17:40	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 17:40	591-78-6	W

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-2_6-7 **Lab ID: 10436863004** Collected: 06/21/18 15:30 Received: 06/22/18 20:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 17:40	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 17:40	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 17:40	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 17:40	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 17:40	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 17:40	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:40	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	109	%	57-148		1	06/28/18 11:30	06/28/18 17:40	1868-53-7	
Toluene-d8 (S)	105	%	58-142		1	06/28/18 11:30	06/28/18 17:40	2037-26-5	
4-Bromofluorobenzene (S)	89	%	48-130		1	06/28/18 11:30	06/28/18 17:40	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-3_0-2 Lab ID: 10436863005 Collected: 06/21/18 16:20 Received: 06/22/18 20:00 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
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Arsenic	3.5	mg/kg	1.5	0.44	1	06/26/18 04:58	06/27/18 07:10	7440-38-2	
Barium	174	mg/kg	0.77	0.23	1	06/26/18 04:58	06/27/18 07:10	7440-39-3	
Cadmium	<0.069	mg/kg	0.23	0.069	1	06/26/18 04:58	06/27/18 07:10	7440-43-9	
Chromium	41.7	mg/kg	0.94	0.28	1	06/26/18 04:58	06/27/18 07:10	7440-47-3	
Lead	9.0	mg/kg	0.99	0.30	1	06/26/18 04:58	06/27/18 07:10	7439-92-1	
Selenium	<0.51	mg/kg	1.7	0.51	1	06/26/18 04:58	06/27/18 07:10	7782-49-2	
Silver	<0.10	mg/kg	0.35	0.10	1	06/26/18 04:58	06/27/18 07:10	7440-22-4	
7471B Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.026J	mg/kg	0.031	0.0094	1	06/25/18 07:21	06/28/18 18:03	7439-97-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	24.5	%	0.10	0.10	1		06/27/18 16:26		
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.54	ug/kg	1.8	0.54	1	06/25/18 06:31	06/26/18 19:33	83-32-9	
Acenaphthylene	<0.65	ug/kg	2.2	0.65	1	06/25/18 06:31	06/26/18 19:33	208-96-8	
Anthracene	<0.62	ug/kg	2.1	0.62	1	06/25/18 06:31	06/26/18 19:33	120-12-7	
Benzo(a)anthracene	<1.4	ug/kg	4.7	1.4	1	06/25/18 06:31	06/26/18 19:33	56-55-3	
Benzo(a)pyrene	<0.91	ug/kg	3.0	0.91	1	06/25/18 06:31	06/26/18 19:33	50-32-8	
Benzo(b)fluoranthene	<0.49	ug/kg	1.6	0.49	1	06/25/18 06:31	06/26/18 19:33	205-99-2	
Benzo(g,h,i)perylene	<0.83	ug/kg	2.8	0.83	1	06/25/18 06:31	06/26/18 19:33	191-24-2	
Benzo(k)fluoranthene	<1.1	ug/kg	3.7	1.1	1	06/25/18 06:31	06/26/18 19:33	207-08-9	
Chrysene	<1.8	ug/kg	6.0	1.8	1	06/25/18 06:31	06/26/18 19:33	218-01-9	
Dibenz(a,h)anthracene	<0.61	ug/kg	2.0	0.61	1	06/25/18 06:31	06/26/18 19:33	53-70-3	
Fluoranthene	<0.56	ug/kg	1.9	0.56	1	06/25/18 06:31	06/26/18 19:33	206-44-0	
Fluorene	<0.41	ug/kg	1.4	0.41	1	06/25/18 06:31	06/26/18 19:33	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.88	ug/kg	2.9	0.88	1	06/25/18 06:31	06/26/18 19:33	193-39-5	
Naphthalene	<1.0	ug/kg	3.4	1.0	1	06/25/18 06:31	06/26/18 19:33	91-20-3	
Phenanthrene	<2.5	ug/kg	8.4	2.5	1	06/25/18 06:31	06/26/18 19:33	85-01-8	
Pyrene	<2.0	ug/kg	6.7	2.0	1	06/25/18 06:31	06/26/18 19:33	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	79	%	42-125		1	06/25/18 06:31	06/26/18 19:33	321-60-8	
p-Terphenyl-d14 (S)	77	%	57-125		1	06/25/18 06:31	06/26/18 19:33	1718-51-0	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 19:10	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 19:10	591-78-6	W

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-3_0-2 **Lab ID: 10436863005** Collected: 06/21/18 16:20 Received: 06/22/18 20:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 19:10	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 19:10	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 19:10	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 19:10	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 19:10	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 19:10	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:10	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	109	%	57-148		1	06/28/18 11:30	06/28/18 19:10	1868-53-7	
Toluene-d8 (S)	99	%	58-142		1	06/28/18 11:30	06/28/18 19:10	2037-26-5	
4-Bromofluorobenzene (S)	83	%	48-130		1	06/28/18 11:30	06/28/18 19:10	460-00-4	

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-3_8-9 **Lab ID: 10436863006** Collected: 06/21/18 16:35 Received: 06/22/18 20:00 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
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Arsenic	2.8	mg/kg	1.7	0.50	1	06/26/18 04:58	06/27/18 07:12	7440-38-2	
Barium	176	mg/kg	0.87	0.26	1	06/26/18 04:58	06/27/18 07:12	7440-39-3	
Cadmium	0.11J	mg/kg	0.26	0.077	1	06/26/18 04:58	06/27/18 07:12	7440-43-9	
Chromium	42.6	mg/kg	1.1	0.32	1	06/26/18 04:58	06/27/18 07:12	7440-47-3	
Lead	7.8	mg/kg	1.1	0.33	1	06/26/18 04:58	06/27/18 07:12	7439-92-1	
Selenium	<0.58	mg/kg	1.9	0.58	1	06/26/18 04:58	06/27/18 07:12	7782-49-2	
Silver	<0.12	mg/kg	0.39	0.12	1	06/26/18 04:58	06/27/18 07:12	7440-22-4	
7471B Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.021J	mg/kg	0.037	0.011	1	06/25/18 07:21	06/28/18 18:05	7439-97-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	31.6	%	0.10	0.10	1		06/27/18 16:27		
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.60	ug/kg	2.0	0.60	1	06/25/18 06:31	06/26/18 19:57	83-32-9	
Acenaphthylene	<0.72	ug/kg	2.4	0.72	1	06/25/18 06:31	06/26/18 19:57	208-96-8	
Anthracene	<0.68	ug/kg	2.3	0.68	1	06/25/18 06:31	06/26/18 19:57	120-12-7	
Benzo(a)anthracene	<1.6	ug/kg	5.3	1.6	1	06/25/18 06:31	06/26/18 19:57	56-55-3	
Benzo(a)pyrene	1.2J	ug/kg	3.3	1.0	1	06/25/18 06:31	06/26/18 19:57	50-32-8	
Benzo(b)fluoranthene	2.2	ug/kg	1.8	0.55	1	06/25/18 06:31	06/26/18 19:57	205-99-2	
Benzo(g,h,i)perylene	2.3J	ug/kg	3.1	0.93	1	06/25/18 06:31	06/26/18 19:57	191-24-2	
Benzo(k)fluoranthene	2.2J	ug/kg	4.1	1.2	1	06/25/18 06:31	06/26/18 19:57	207-08-9	
Chrysene	<2.0	ug/kg	6.6	2.0	1	06/25/18 06:31	06/26/18 19:57	218-01-9	
Dibenz(a,h)anthracene	2.2J	ug/kg	2.2	0.67	1	06/25/18 06:31	06/26/18 19:57	53-70-3	
Fluoranthene	1.9J	ug/kg	2.1	0.63	1	06/25/18 06:31	06/26/18 19:57	206-44-0	
Fluorene	<0.46	ug/kg	1.5	0.46	1	06/25/18 06:31	06/26/18 19:57	86-73-7	
Indeno(1,2,3-cd)pyrene	2.2J	ug/kg	3.3	0.98	1	06/25/18 06:31	06/26/18 19:57	193-39-5	
Naphthalene	<1.1	ug/kg	3.8	1.1	1	06/25/18 06:31	06/26/18 19:57	91-20-3	
Phenanthrene	<2.8	ug/kg	9.3	2.8	1	06/25/18 06:31	06/26/18 19:57	85-01-8	
Pyrene	<2.2	ug/kg	7.4	2.2	1	06/25/18 06:31	06/26/18 19:57	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	60	%	42-125		1	06/25/18 06:31	06/26/18 19:57	321-60-8	
p-Terphenyl-d14 (S)	77	%	57-125		1	06/25/18 06:31	06/26/18 19:57	1718-51-0	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 19:32	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 19:32	591-78-6	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-3_8-9 **Lab ID: 10436863006** Collected: 06/21/18 16:35 Received: 06/22/18 20:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 19:32	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 19:32	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 19:32	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 19:32	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 19:32	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 19:32	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:32	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	103	%	57-148		1	06/28/18 11:30	06/28/18 19:32	1868-53-7	
Toluene-d8 (S)	98	%	58-142		1	06/28/18 11:30	06/28/18 19:32	2037-26-5	
4-Bromofluorobenzene (S)	82	%	48-130		1	06/28/18 11:30	06/28/18 19:32	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II
Pace Project No.: 10436863

Sample: **SB-4_0-2** Lab ID: **10436863007** Collected: 06/22/18 08:40 Received: 06/22/18 20:00 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
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Arsenic	3.0	mg/kg	1.5	0.46	1	06/26/18 04:58	06/27/18 07:14	7440-38-2	
Barium	191	mg/kg	0.79	0.24	1	06/26/18 04:58	06/27/18 07:14	7440-39-3	
Cadmium	<0.071	mg/kg	0.24	0.071	1	06/26/18 04:58	06/27/18 07:14	7440-43-9	
Chromium	48.6	mg/kg	0.97	0.29	1	06/26/18 04:58	06/27/18 07:14	7440-47-3	
Lead	9.1	mg/kg	1.0	0.30	1	06/26/18 04:58	06/27/18 07:14	7439-92-1	
Selenium	<0.53	mg/kg	1.8	0.53	1	06/26/18 04:58	06/27/18 07:14	7782-49-2	
Silver	<0.11	mg/kg	0.36	0.11	1	06/26/18 04:58	06/27/18 07:14	7440-22-4	
7471B Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.023J	mg/kg	0.032	0.0097	1	06/25/18 07:21	06/28/18 18:07	7439-97-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	26.7	%	0.10	0.10	1		06/27/18 16:27		
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.56	ug/kg	1.9	0.56	1	06/25/18 06:31	06/26/18 20:20	83-32-9	
Acenaphthylene	<0.67	ug/kg	2.2	0.67	1	06/25/18 06:31	06/26/18 20:20	208-96-8	
Anthracene	<0.64	ug/kg	2.1	0.64	1	06/25/18 06:31	06/26/18 20:20	120-12-7	
Benzo(a)anthracene	<1.5	ug/kg	4.9	1.5	1	06/25/18 06:31	06/26/18 20:20	56-55-3	
Benzo(a)pyrene	<0.94	ug/kg	3.1	0.94	1	06/25/18 06:31	06/26/18 20:20	50-32-8	
Benzo(b)fluoranthene	<0.51	ug/kg	1.7	0.51	1	06/25/18 06:31	06/26/18 20:20	205-99-2	
Benzo(g,h,i)perylene	<0.86	ug/kg	2.9	0.86	1	06/25/18 06:31	06/26/18 20:20	191-24-2	
Benzo(k)fluoranthene	<1.2	ug/kg	3.8	1.2	1	06/25/18 06:31	06/26/18 20:20	207-08-9	
Chrysene	<1.9	ug/kg	6.2	1.9	1	06/25/18 06:31	06/26/18 20:20	218-01-9	
Dibenz(a,h)anthracene	<0.63	ug/kg	2.1	0.63	1	06/25/18 06:31	06/26/18 20:20	53-70-3	
Fluoranthene	<0.58	ug/kg	1.9	0.58	1	06/25/18 06:31	06/26/18 20:20	206-44-0	
Fluorene	<0.43	ug/kg	1.4	0.43	1	06/25/18 06:31	06/26/18 20:20	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.91	ug/kg	3.0	0.91	1	06/25/18 06:31	06/26/18 20:20	193-39-5	
Naphthalene	<1.1	ug/kg	3.5	1.1	1	06/25/18 06:31	06/26/18 20:20	91-20-3	
Phenanthrene	<2.6	ug/kg	8.7	2.6	1	06/25/18 06:31	06/26/18 20:20	85-01-8	
Pyrene	<2.1	ug/kg	6.9	2.1	1	06/25/18 06:31	06/26/18 20:20	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	64	%	42-125		1	06/25/18 06:31	06/26/18 20:20	321-60-8	
p-Terphenyl-d14 (S)	74	%	57-125		1	06/25/18 06:31	06/26/18 20:20	1718-51-0	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	71-55-6	W
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 19:55	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 19:55	591-78-6	W

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-4_0-2 **Lab ID: 10436863007** Collected: 06/22/18 08:40 Received: 06/22/18 20:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 19:55	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 19:55	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 19:55	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 19:55	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 19:55	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 19:55	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 19:55	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	109	%	57-148		1	06/28/18 11:30	06/28/18 19:55	1868-53-7	
Toluene-d8 (S)	97	%	58-142		1	06/28/18 11:30	06/28/18 19:55	2037-26-5	
4-Bromofluorobenzene (S)	80	%	48-130		1	06/28/18 11:30	06/28/18 19:55	460-00-4	

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II
Pace Project No.: 10436863

Sample: **SB-4_6-7** Lab ID: **10436863008** Collected: 06/22/18 08:55 Received: 06/22/18 20:00 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
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Arsenic	3.0	mg/kg	1.6	0.48	1	06/26/18 04:58	06/27/18 07:15	7440-38-2	
Barium	160	mg/kg	0.84	0.25	1	06/26/18 04:58	06/27/18 07:15	7440-39-3	
Cadmium	0.097J	mg/kg	0.25	0.075	1	06/26/18 04:58	06/27/18 07:15	7440-43-9	
Chromium	39.4	mg/kg	1.0	0.31	1	06/26/18 04:58	06/27/18 07:15	7440-47-3	
Lead	7.7	mg/kg	1.1	0.32	1	06/26/18 04:58	06/27/18 07:15	7439-92-1	
Selenium	<0.56	mg/kg	1.9	0.56	1	06/26/18 04:58	06/27/18 07:15	7782-49-2	
Silver	<0.11	mg/kg	0.38	0.11	1	06/26/18 04:58	06/27/18 07:15	7440-22-4	
7471B Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.021J	mg/kg	0.038	0.011	1	06/25/18 07:21	06/28/18 18:09	7439-97-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	29.4	%	0.10	0.10	1		06/27/18 16:27		
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.58	ug/kg	1.9	0.58	1	06/25/18 06:31	06/26/18 20:44	83-32-9	
Acenaphthylene	<0.70	ug/kg	2.3	0.70	1	06/25/18 06:31	06/26/18 20:44	208-96-8	
Anthracene	<0.66	ug/kg	2.2	0.66	1	06/25/18 06:31	06/26/18 20:44	120-12-7	
Benzo(a)anthracene	<1.5	ug/kg	5.1	1.5	1	06/25/18 06:31	06/26/18 20:44	56-55-3	
Benzo(a)pyrene	<0.97	ug/kg	3.2	0.97	1	06/25/18 06:31	06/26/18 20:44	50-32-8	
Benzo(b)fluoranthene	<0.53	ug/kg	1.8	0.53	1	06/25/18 06:31	06/26/18 20:44	205-99-2	
Benzo(g,h,i)perylene	<0.90	ug/kg	3.0	0.90	1	06/25/18 06:31	06/26/18 20:44	191-24-2	
Benzo(k)fluoranthene	<1.2	ug/kg	4.0	1.2	1	06/25/18 06:31	06/26/18 20:44	207-08-9	
Chrysene	<1.9	ug/kg	6.4	1.9	1	06/25/18 06:31	06/26/18 20:44	218-01-9	
Dibenz(a,h)anthracene	<0.65	ug/kg	2.2	0.65	1	06/25/18 06:31	06/26/18 20:44	53-70-3	
Fluoranthene	<0.61	ug/kg	2.0	0.61	1	06/25/18 06:31	06/26/18 20:44	206-44-0	
Fluorene	<0.44	ug/kg	1.5	0.44	1	06/25/18 06:31	06/26/18 20:44	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.95	ug/kg	3.2	0.95	1	06/25/18 06:31	06/26/18 20:44	193-39-5	
Naphthalene	<1.1	ug/kg	3.6	1.1	1	06/25/18 06:31	06/26/18 20:44	91-20-3	
Phenanthrene	<2.7	ug/kg	9.0	2.7	1	06/25/18 06:31	06/26/18 20:44	85-01-8	
Pyrene	<2.2	ug/kg	7.2	2.2	1	06/25/18 06:31	06/26/18 20:44	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	75	%	42-125		1	06/25/18 06:31	06/26/18 20:44	321-60-8	
p-Terphenyl-d14 (S)	74	%	57-125		1	06/25/18 06:31	06/26/18 20:44	1718-51-0	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 20:18	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 20:18	591-78-6	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-4_6-7 **Lab ID: 10436863008** Collected: 06/22/18 08:55 Received: 06/22/18 20:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 20:18	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 20:18	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 20:18	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 20:18	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 20:18	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 20:18	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:18	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	108	%	57-148		1	06/28/18 11:30	06/28/18 20:18	1868-53-7	
Toluene-d8 (S)	93	%	58-142		1	06/28/18 11:30	06/28/18 20:18	2037-26-5	
4-Bromofluorobenzene (S)	80	%	48-130		1	06/28/18 11:30	06/28/18 20:18	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-5_0-1 **Lab ID:** 10436863009 Collected: 06/22/18 09:35 Received: 06/22/18 20:00 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
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Arsenic	5.1J	mg/kg	7.5	2.3	5	06/26/18 04:58	06/27/18 07:19	7440-38-2	D3
Barium	287	mg/kg	3.9	1.2	5	06/26/18 04:58	06/27/18 07:19	7440-39-3	
Cadmium	0.56J	mg/kg	1.2	0.35	5	06/26/18 04:58	06/27/18 07:19	7440-43-9	D3
Chromium	1850	mg/kg	9.5	2.9	10	06/26/18 04:58	06/27/18 07:20	7440-47-3	
Lead	88.2	mg/kg	10.0	3.0	10	06/26/18 04:58	06/27/18 07:20	7439-92-1	
Selenium	<5.2	mg/kg	17.4	5.2	10	06/26/18 04:58	06/27/18 07:20	7782-49-2	D3
Silver	1.1J	mg/kg	3.5	1.1	10	06/26/18 04:58	06/27/18 07:20	7440-22-4	D3
7471B Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.10	mg/kg	0.033	0.0098	1	06/25/18 07:21	06/28/18 18:11	7439-97-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	23.3	%	0.10	0.10	1		06/27/18 16:27		
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	6.9	ug/kg	1.8	0.53	1	06/25/18 06:31	06/26/18 21:07	83-32-9	
Acenaphthylene	3.4	ug/kg	2.1	0.64	1	06/25/18 06:31	06/26/18 21:07	208-96-8	
Anthracene	11.0	ug/kg	2.0	0.61	1	06/25/18 06:31	06/26/18 21:07	120-12-7	
Benzo(a)anthracene	77.8	ug/kg	4.7	1.4	1	06/25/18 06:31	06/26/18 21:07	56-55-3	
Benzo(a)pyrene	128	ug/kg	3.0	0.89	1	06/25/18 06:31	06/26/18 21:07	50-32-8	
Benzo(b)fluoranthene	162	ug/kg	1.6	0.49	1	06/25/18 06:31	06/26/18 21:07	205-99-2	
Benzo(g,h,i)perylene	116	ug/kg	2.7	0.82	1	06/25/18 06:31	06/26/18 21:07	191-24-2	
Benzo(k)fluoranthene	55.7	ug/kg	3.7	1.1	1	06/25/18 06:31	06/26/18 21:07	207-08-9	
Chrysene	98.1	ug/kg	5.9	1.8	1	06/25/18 06:31	06/26/18 21:07	218-01-9	
Dibenz(a,h)anthracene	32.5	ug/kg	2.0	0.60	1	06/25/18 06:31	06/26/18 21:07	53-70-3	
Fluoranthene	90.4	ug/kg	1.9	0.56	1	06/25/18 06:31	06/26/18 21:07	206-44-0	
Fluorene	2.5	ug/kg	1.4	0.41	1	06/25/18 06:31	06/26/18 21:07	86-73-7	
Indeno(1,2,3-cd)pyrene	94.4	ug/kg	2.9	0.87	1	06/25/18 06:31	06/26/18 21:07	193-39-5	
Naphthalene	4.3	ug/kg	3.3	1.0	1	06/25/18 06:31	06/26/18 21:07	91-20-3	
Phenanthrene	39.1	ug/kg	8.3	2.5	1	06/25/18 06:31	06/26/18 21:07	85-01-8	
Pyrene	75.2	ug/kg	6.6	2.0	1	06/25/18 06:31	06/26/18 21:07	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	77	%	42-125		1	06/25/18 06:31	06/26/18 21:07	321-60-8	
p-Terphenyl-d14 (S)	85	%	57-125		1	06/25/18 06:31	06/26/18 21:07	1718-51-0	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 20:40	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 20:40	591-78-6	W

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-5_0-1 **Lab ID: 10436863009** Collected: 06/22/18 09:35 Received: 06/22/18 20:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 20:40	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 20:40	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 20:40	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 20:40	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 20:40	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	127-18-4	W
Toluene	38.8J	ug/kg	78.3	32.6	1	06/28/18 11:30	06/28/18 20:40	108-88-3	
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 20:40	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 20:40	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	111	%	57-148		1	06/28/18 11:30	06/28/18 20:40	1868-53-7	
Toluene-d8 (S)	99	%	58-142		1	06/28/18 11:30	06/28/18 20:40	2037-26-5	
4-Bromofluorobenzene (S)	83	%	48-130		1	06/28/18 11:30	06/28/18 20:40	460-00-4	

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-5_8-9 **Lab ID: 10436863010** Collected: 06/22/18 09:50 Received: 06/22/18 20:00 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
6010D MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3050									
Arsenic	3.4	mg/kg	1.6	0.47	1	06/26/18 04:58	06/27/18 07:22	7440-38-2	
Barium	173	mg/kg	0.82	0.25	1	06/26/18 04:58	06/27/18 07:22	7440-39-3	
Cadmium	<0.073	mg/kg	0.24	0.073	1	06/26/18 04:58	06/27/18 07:22	7440-43-9	
Chromium	42.0	mg/kg	1.0	0.30	1	06/26/18 04:58	06/27/18 07:22	7440-47-3	
Lead	8.4	mg/kg	1.0	0.31	1	06/26/18 04:58	06/27/18 07:22	7439-92-1	
Selenium	<0.54	mg/kg	1.8	0.54	1	06/26/18 04:58	06/27/18 07:22	7782-49-2	
Silver	<0.11	mg/kg	0.37	0.11	1	06/26/18 04:58	06/27/18 07:22	7440-22-4	
7471B Mercury									
Analytical Method: EPA 7471B Preparation Method: EPA 7471B									
Mercury	0.017J	mg/kg	0.032	0.0096	1	06/25/18 07:21	06/28/18 18:13	7439-97-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	28.1	%	0.10	0.10	1		06/27/18 16:28		
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3550									
Acenaphthene	<0.57	ug/kg	1.9	0.57	1	06/25/18 06:31	06/26/18 21:31	83-32-9	
Acenaphthylene	<0.69	ug/kg	2.3	0.69	1	06/25/18 06:31	06/26/18 21:31	208-96-8	
Anthracene	<0.65	ug/kg	2.2	0.65	1	06/25/18 06:31	06/26/18 21:31	120-12-7	
Benzo(a)anthracene	<1.5	ug/kg	5.0	1.5	1	06/25/18 06:31	06/26/18 21:31	56-55-3	
Benzo(a)pyrene	<0.95	ug/kg	3.2	0.95	1	06/25/18 06:31	06/26/18 21:31	50-32-8	
Benzo(b)fluoranthene	<0.52	ug/kg	1.7	0.52	1	06/25/18 06:31	06/26/18 21:31	205-99-2	
Benzo(g,h,i)perylene	<0.88	ug/kg	2.9	0.88	1	06/25/18 06:31	06/26/18 21:31	191-24-2	
Benzo(k)fluoranthene	<1.2	ug/kg	3.9	1.2	1	06/25/18 06:31	06/26/18 21:31	207-08-9	
Chrysene	<1.9	ug/kg	6.3	1.9	1	06/25/18 06:31	06/26/18 21:31	218-01-9	
Dibenz(a,h)anthracene	<0.64	ug/kg	2.1	0.64	1	06/25/18 06:31	06/26/18 21:31	53-70-3	
Fluoranthene	<0.59	ug/kg	2.0	0.59	1	06/25/18 06:31	06/26/18 21:31	206-44-0	
Fluorene	<0.43	ug/kg	1.4	0.43	1	06/25/18 06:31	06/26/18 21:31	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.93	ug/kg	3.1	0.93	1	06/25/18 06:31	06/26/18 21:31	193-39-5	
Naphthalene	<1.1	ug/kg	3.6	1.1	1	06/25/18 06:31	06/26/18 21:31	91-20-3	
Phenanthrene	<2.7	ug/kg	8.9	2.7	1	06/25/18 06:31	06/26/18 21:31	85-01-8	
Pyrene	<2.1	ug/kg	7.1	2.1	1	06/25/18 06:31	06/26/18 21:31	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	60	%	42-125		1	06/25/18 06:31	06/26/18 21:31	321-60-8	
p-Terphenyl-d14 (S)	74	%	57-125		1	06/25/18 06:31	06/26/18 21:31	1718-51-0	
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 21:03	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 21:03	591-78-6	W

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-5_8-9 **Lab ID: 10436863010** Collected: 06/22/18 09:50 Received: 06/22/18 20:00 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 21:03	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 21:03	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 21:03	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 21:03	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 21:03	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 21:03	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 21:03	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	103	%	57-148		1	06/28/18 11:30	06/28/18 21:03	1868-53-7	
Toluene-d8 (S)	94	%	58-142		1	06/28/18 11:30	06/28/18 21:03	2037-26-5	
4-Bromofluorobenzene (S)	82	%	48-130		1	06/28/18 11:30	06/28/18 21:03	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: SB-3_14.5-19.5 **Lab ID:** 10436863011 Collected: 06/22/18 11:20 Received: 06/22/18 20:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270D MSSV PAH by SIM									
Analytical Method: EPA 8270D by SIM Preparation Method: EPA Mod. 3510C									
Acenaphthene	<0.0043	ug/L	0.014	0.0043	1	06/26/18 14:37	06/27/18 17:24	83-32-9	
Acenaphthylene	<0.0063	ug/L	0.021	0.0063	1	06/26/18 14:37	06/27/18 17:24	208-96-8	
Anthracene	<0.0083	ug/L	0.028	0.0083	1	06/26/18 14:37	06/27/18 17:24	120-12-7	
Benzo(a)anthracene	<0.0053	ug/L	0.018	0.0053	1	06/26/18 14:37	06/27/18 17:24	56-55-3	
Benzo(a)pyrene	<0.0054	ug/L	0.018	0.0054	1	06/26/18 14:37	06/27/18 17:24	50-32-8	
Benzo(b)fluoranthene	<0.017	ug/L	0.057	0.017	1	06/26/18 14:37	06/27/18 17:24	205-99-2	
Benzo(g,h,i)perylene	<0.013	ug/L	0.044	0.013	1	06/26/18 14:37	06/27/18 17:24	191-24-2	
Benzo(k)fluoranthene	<0.014	ug/L	0.047	0.014	1	06/26/18 14:37	06/27/18 17:24	207-08-9	
Chrysene	<0.012	ug/L	0.041	0.012	1	06/26/18 14:37	06/27/18 17:24	218-01-9	
Dibenz(a,h)anthracene	<0.012	ug/L	0.041	0.012	1	06/26/18 14:37	06/27/18 17:24	53-70-3	
Fluoranthene	<0.025	ug/L	0.082	0.025	1	06/26/18 14:37	06/27/18 17:24	206-44-0	
Fluorene	<0.0080	ug/L	0.027	0.0080	1	06/26/18 14:37	06/27/18 17:24	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.018	ug/L	0.060	0.018	1	06/26/18 14:37	06/27/18 17:24	193-39-5	
Naphthalene	<0.0092	ug/L	0.031	0.0092	1	06/26/18 14:37	06/27/18 17:24	91-20-3	
Phenanthrene	<0.014	ug/L	0.047	0.014	1	06/26/18 14:37	06/27/18 17:24	85-01-8	
Pyrene	<0.020	ug/L	0.066	0.020	1	06/26/18 14:37	06/27/18 17:24	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	72	%	30-145		1	06/26/18 14:37	06/27/18 17:24	321-60-8	A5
p-Terphenyl-d14 (S)	88	%	30-149		1	06/26/18 14:37	06/27/18 17:24	1718-51-0	
8260B VOC									
Analytical Method: EPA 8260B									
Acetone	<9.2	ug/L	30.8	9.2	1		06/27/18 15:59	67-64-1	
Allyl chloride	<0.29	ug/L	0.97	0.29	1		06/27/18 15:59	107-05-1	
Benzene	<0.10	ug/L	0.34	0.10	1		06/27/18 15:59	71-43-2	
Bromobenzene	<0.21	ug/L	0.69	0.21	1		06/27/18 15:59	108-86-1	
Bromochloromethane	<0.27	ug/L	0.91	0.27	1		06/27/18 15:59	74-97-5	
Bromodichloromethane	<0.22	ug/L	0.72	0.22	1		06/27/18 15:59	75-27-4	
Bromoform	<0.80	ug/L	2.7	0.80	1		06/27/18 15:59	75-25-2	
Bromomethane	<1.8	ug/L	6.1	1.8	1		06/27/18 15:59	74-83-9	
2-Butanone (MEK)	<0.99	ug/L	3.3	0.99	1		06/27/18 15:59	78-93-3	
n-Butylbenzene	<0.24	ug/L	0.80	0.24	1		06/27/18 15:59	104-51-8	
sec-Butylbenzene	<0.15	ug/L	0.50	0.15	1		06/27/18 15:59	135-98-8	
tert-Butylbenzene	<0.15	ug/L	0.49	0.15	1		06/27/18 15:59	98-06-6	
Carbon tetrachloride	<0.19	ug/L	0.63	0.19	1		06/27/18 15:59	56-23-5	
Chlorobenzene	<0.17	ug/L	0.57	0.17	1		06/27/18 15:59	108-90-7	
Chloroethane	<0.49	ug/L	1.6	0.49	1		06/27/18 15:59	75-00-3	
Chloroform	<0.45	ug/L	1.5	0.45	1		06/27/18 15:59	67-66-3	
Chloromethane	<0.16	ug/L	0.52	0.16	1		06/27/18 15:59	74-87-3	
2-Chlorotoluene	<0.16	ug/L	0.54	0.16	1		06/27/18 15:59	95-49-8	
4-Chlorotoluene	<0.13	ug/L	0.45	0.13	1		06/27/18 15:59	106-43-4	
1,2-Dibromo-3-chloropropane	<1.7	ug/L	5.5	1.7	1		06/27/18 15:59	96-12-8	
Dibromochloromethane	<0.12	ug/L	0.41	0.12	1		06/27/18 15:59	124-48-1	
1,2-Dibromoethane (EDB)	<0.24	ug/L	0.80	0.24	1		06/27/18 15:59	106-93-4	
Dibromomethane	<0.16	ug/L	0.54	0.16	1		06/27/18 15:59	74-95-3	
1,2-Dichlorobenzene	<0.14	ug/L	0.46	0.14	1		06/27/18 15:59	95-50-1	
1,3-Dichlorobenzene	<0.16	ug/L	0.54	0.16	1		06/27/18 15:59	541-73-1	

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II
Pace Project No.: 10436863

Sample: SB-3_14.5-19.5 Lab ID: 10436863011 Collected: 06/22/18 11:20 Received: 06/22/18 20:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC									
Analytical Method: EPA 8260B									
1,4-Dichlorobenzene	<0.17	ug/L	0.56	0.17	1		06/27/18 15:59	106-46-7	
Dichlorodifluoromethane	<0.23	ug/L	0.78	0.23	1		06/27/18 15:59	75-71-8	
1,1-Dichloroethane	<0.17	ug/L	0.57	0.17	1		06/27/18 15:59	75-34-3	
1,2-Dichloroethane	<0.22	ug/L	0.73	0.22	1		06/27/18 15:59	107-06-2	
1,1-Dichloroethene	<0.16	ug/L	0.53	0.16	1		06/27/18 15:59	75-35-4	
cis-1,2-Dichloroethene	<0.15	ug/L	0.51	0.15	1		06/27/18 15:59	156-59-2	
trans-1,2-Dichloroethene	<0.12	ug/L	0.39	0.12	1		06/27/18 15:59	156-60-5	
Dichlorofluoromethane	<0.14	ug/L	0.47	0.14	1		06/27/18 15:59	75-43-4	N2
1,2-Dichloropropane	<0.16	ug/L	0.55	0.16	1		06/27/18 15:59	78-87-5	
1,3-Dichloropropane	<0.070	ug/L	0.23	0.070	1		06/27/18 15:59	142-28-9	
2,2-Dichloropropane	<0.17	ug/L	0.57	0.17	1		06/27/18 15:59	594-20-7	
1,1-Dichloropropene	<0.20	ug/L	0.66	0.20	1		06/27/18 15:59	563-58-6	
cis-1,3-Dichloropropene	<0.20	ug/L	0.68	0.20	1		06/27/18 15:59	10061-01-5	
trans-1,3-Dichloropropene	<0.18	ug/L	0.61	0.18	1		06/27/18 15:59	10061-02-6	
Diethyl ether (Ethyl ether)	<0.095	ug/L	0.32	0.095	1		06/27/18 15:59	60-29-7	
Ethylbenzene	<0.14	ug/L	0.46	0.14	1		06/27/18 15:59	100-41-4	
Hexachloro-1,3-butadiene	<0.31	ug/L	1.0	0.31	1		06/27/18 15:59	87-68-3	
Isopropylbenzene (Cumene)	<0.18	ug/L	0.62	0.18	1		06/27/18 15:59	98-82-8	
p-Isopropyltoluene	<0.15	ug/L	0.51	0.15	1		06/27/18 15:59	99-87-6	
Methylene Chloride	<0.98	ug/L	3.3	0.98	1		06/27/18 15:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.42	ug/L	1.4	0.42	1		06/27/18 15:59	108-10-1	
Methyl-tert-butyl ether	<0.16	ug/L	0.54	0.16	1		06/27/18 15:59	1634-04-4	
Naphthalene	<0.48	ug/L	1.6	0.48	1		06/27/18 15:59	91-20-3	
n-Propylbenzene	<0.10	ug/L	0.34	0.10	1		06/27/18 15:59	103-65-1	
Styrene	<0.19	ug/L	0.62	0.19	1		06/27/18 15:59	100-42-5	
1,1,1,2-Tetrachloroethane	<0.20	ug/L	0.65	0.20	1		06/27/18 15:59	630-20-6	
1,1,2,2-Tetrachloroethane	<0.17	ug/L	0.57	0.17	1		06/27/18 15:59	79-34-5	
Tetrachloroethene	<0.17	ug/L	0.57	0.17	1		06/27/18 15:59	127-18-4	
Tetrahydrofuran	<2.2	ug/L	7.4	2.2	1		06/27/18 15:59	109-99-9	
Toluene	2.1	ug/L	0.28	0.083	1		06/27/18 15:59	108-88-3	
1,2,3-Trichlorobenzene	<0.21	ug/L	0.69	0.21	1		06/27/18 15:59	87-61-6	
1,2,4-Trichlorobenzene	<0.20	ug/L	0.66	0.20	1		06/27/18 15:59	120-82-1	
1,1,1-Trichloroethane	<0.14	ug/L	0.45	0.14	1		06/27/18 15:59	71-55-6	
1,1,2-Trichloroethane	<0.18	ug/L	0.60	0.18	1		06/27/18 15:59	79-00-5	
Trichloroethene	<0.15	ug/L	0.50	0.15	1		06/27/18 15:59	79-01-6	
Trichlorofluoromethane	<0.23	ug/L	0.77	0.23	1		06/27/18 15:59	75-69-4	
1,2,3-Trichloropropane	<0.26	ug/L	0.86	0.26	1		06/27/18 15:59	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.22	ug/L	0.72	0.22	1		06/27/18 15:59	76-13-1	
1,2,4-Trimethylbenzene	<0.20	ug/L	0.65	0.20	1		06/27/18 15:59	95-63-6	
1,3,5-Trimethylbenzene	<0.12	ug/L	0.41	0.12	1		06/27/18 15:59	108-67-8	
Vinyl chloride	<0.092	ug/L	0.31	0.092	1		06/27/18 15:59	75-01-4	
Xylene (Total)	<0.31	ug/L	1.0	0.31	1		06/27/18 15:59	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%	75-125		1		06/27/18 15:59	17060-07-0	
Toluene-d8 (S)	98	%	75-125		1		06/27/18 15:59	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1		06/27/18 15:59	460-00-4	

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: Trip Blank **Lab ID: 10436863012** Collected: 06/21/18 00:00 Received: 06/22/18 20:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC		Analytical Method: EPA 8260B							
Acetone	<9.2	ug/L	30.8	9.2	1		06/27/18 15:42	67-64-1	
Allyl chloride	<0.29	ug/L	0.97	0.29	1		06/27/18 15:42	107-05-1	
Benzene	<0.10	ug/L	0.34	0.10	1		06/27/18 15:42	71-43-2	
Bromobenzene	<0.21	ug/L	0.69	0.21	1		06/27/18 15:42	108-86-1	
Bromochloromethane	<0.27	ug/L	0.91	0.27	1		06/27/18 15:42	74-97-5	
Bromodichloromethane	<0.22	ug/L	0.72	0.22	1		06/27/18 15:42	75-27-4	
Bromoform	<0.80	ug/L	2.7	0.80	1		06/27/18 15:42	75-25-2	
Bromomethane	<1.8	ug/L	6.1	1.8	1		06/27/18 15:42	74-83-9	
2-Butanone (MEK)	<0.99	ug/L	3.3	0.99	1		06/27/18 15:42	78-93-3	
n-Butylbenzene	<0.24	ug/L	0.80	0.24	1		06/27/18 15:42	104-51-8	
sec-Butylbenzene	<0.15	ug/L	0.50	0.15	1		06/27/18 15:42	135-98-8	
tert-Butylbenzene	<0.15	ug/L	0.49	0.15	1		06/27/18 15:42	98-06-6	
Carbon tetrachloride	<0.19	ug/L	0.63	0.19	1		06/27/18 15:42	56-23-5	
Chlorobenzene	<0.17	ug/L	0.57	0.17	1		06/27/18 15:42	108-90-7	
Chloroethane	<0.49	ug/L	1.6	0.49	1		06/27/18 15:42	75-00-3	
Chloroform	<0.45	ug/L	1.5	0.45	1		06/27/18 15:42	67-66-3	
Chloromethane	<0.16	ug/L	0.52	0.16	1		06/27/18 15:42	74-87-3	
2-Chlorotoluene	<0.16	ug/L	0.54	0.16	1		06/27/18 15:42	95-49-8	
4-Chlorotoluene	<0.13	ug/L	0.45	0.13	1		06/27/18 15:42	106-43-4	
1,2-Dibromo-3-chloropropane	<1.7	ug/L	5.5	1.7	1		06/27/18 15:42	96-12-8	
Dibromochloromethane	<0.12	ug/L	0.41	0.12	1		06/27/18 15:42	124-48-1	
1,2-Dibromoethane (EDB)	<0.24	ug/L	0.80	0.24	1		06/27/18 15:42	106-93-4	
Dibromomethane	<0.16	ug/L	0.54	0.16	1		06/27/18 15:42	74-95-3	
1,2-Dichlorobenzene	<0.14	ug/L	0.46	0.14	1		06/27/18 15:42	95-50-1	
1,3-Dichlorobenzene	<0.16	ug/L	0.54	0.16	1		06/27/18 15:42	541-73-1	
1,4-Dichlorobenzene	<0.17	ug/L	0.56	0.17	1		06/27/18 15:42	106-46-7	
Dichlorodifluoromethane	<0.23	ug/L	0.78	0.23	1		06/27/18 15:42	75-71-8	
1,1-Dichloroethane	<0.17	ug/L	0.57	0.17	1		06/27/18 15:42	75-34-3	
1,2-Dichloroethane	<0.22	ug/L	0.73	0.22	1		06/27/18 15:42	107-06-2	
1,1-Dichloroethene	<0.16	ug/L	0.53	0.16	1		06/27/18 15:42	75-35-4	
cis-1,2-Dichloroethene	<0.15	ug/L	0.51	0.15	1		06/27/18 15:42	156-59-2	
trans-1,2-Dichloroethene	<0.12	ug/L	0.39	0.12	1		06/27/18 15:42	156-60-5	
Dichlorofluoromethane	<0.14	ug/L	0.47	0.14	1		06/27/18 15:42	75-43-4	N2
1,2-Dichloropropane	<0.16	ug/L	0.55	0.16	1		06/27/18 15:42	78-87-5	
1,3-Dichloropropane	<0.070	ug/L	0.23	0.070	1		06/27/18 15:42	142-28-9	
2,2-Dichloropropane	<0.17	ug/L	0.57	0.17	1		06/27/18 15:42	594-20-7	
1,1-Dichloropropene	<0.20	ug/L	0.66	0.20	1		06/27/18 15:42	563-58-6	
cis-1,3-Dichloropropene	<0.20	ug/L	0.68	0.20	1		06/27/18 15:42	10061-01-5	
trans-1,3-Dichloropropene	<0.18	ug/L	0.61	0.18	1		06/27/18 15:42	10061-02-6	
Diethyl ether (Ethyl ether)	<0.095	ug/L	0.32	0.095	1		06/27/18 15:42	60-29-7	
Ethylbenzene	<0.14	ug/L	0.46	0.14	1		06/27/18 15:42	100-41-4	
Hexachloro-1,3-butadiene	<0.31	ug/L	1.0	0.31	1		06/27/18 15:42	87-68-3	
Isopropylbenzene (Cumene)	<0.18	ug/L	0.62	0.18	1		06/27/18 15:42	98-82-8	
p-Isopropyltoluene	<0.15	ug/L	0.51	0.15	1		06/27/18 15:42	99-87-6	
Methylene Chloride	<0.98	ug/L	3.3	0.98	1		06/27/18 15:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.42	ug/L	1.4	0.42	1		06/27/18 15:42	108-10-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: Trip Blank **Lab ID: 10436863012** Collected: 06/21/18 00:00 Received: 06/22/18 20:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC Analytical Method: EPA 8260B									
Methyl-tert-butyl ether	<0.16	ug/L	0.54	0.16	1		06/27/18 15:42	1634-04-4	
Naphthalene	<0.48	ug/L	1.6	0.48	1		06/27/18 15:42	91-20-3	
n-Propylbenzene	<0.10	ug/L	0.34	0.10	1		06/27/18 15:42	103-65-1	
Styrene	<0.19	ug/L	0.62	0.19	1		06/27/18 15:42	100-42-5	
1,1,1,2-Tetrachloroethane	<0.20	ug/L	0.65	0.20	1		06/27/18 15:42	630-20-6	
1,1,2,2-Tetrachloroethane	<0.17	ug/L	0.57	0.17	1		06/27/18 15:42	79-34-5	
Tetrachloroethene	<0.17	ug/L	0.57	0.17	1		06/27/18 15:42	127-18-4	
Tetrahydrofuran	<2.2	ug/L	7.4	2.2	1		06/27/18 15:42	109-99-9	
Toluene	<0.083	ug/L	0.28	0.083	1		06/27/18 15:42	108-88-3	
1,2,3-Trichlorobenzene	<0.21	ug/L	0.69	0.21	1		06/27/18 15:42	87-61-6	
1,2,4-Trichlorobenzene	<0.20	ug/L	0.66	0.20	1		06/27/18 15:42	120-82-1	
1,1,1-Trichloroethane	<0.14	ug/L	0.45	0.14	1		06/27/18 15:42	71-55-6	
1,1,2-Trichloroethane	<0.18	ug/L	0.60	0.18	1		06/27/18 15:42	79-00-5	
Trichloroethene	<0.15	ug/L	0.50	0.15	1		06/27/18 15:42	79-01-6	
Trichlorofluoromethane	<0.23	ug/L	0.77	0.23	1		06/27/18 15:42	75-69-4	
1,2,3-Trichloropropane	<0.26	ug/L	0.86	0.26	1		06/27/18 15:42	96-18-4	
1,1,2-Trichlorotrifluoroethane	<0.22	ug/L	0.72	0.22	1		06/27/18 15:42	76-13-1	
1,2,4-Trimethylbenzene	<0.20	ug/L	0.65	0.20	1		06/27/18 15:42	95-63-6	
1,3,5-Trimethylbenzene	<0.12	ug/L	0.41	0.12	1		06/27/18 15:42	108-67-8	
Vinyl chloride	<0.092	ug/L	0.31	0.092	1		06/27/18 15:42	75-01-4	
Xylene (Total)	<0.31	ug/L	1.0	0.31	1		06/27/18 15:42	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%	75-125		1		06/27/18 15:42	17060-07-0	
Toluene-d8 (S)	98	%	75-125		1		06/27/18 15:42	2037-26-5	
4-Bromofluorobenzene (S)	96	%	75-125		1		06/27/18 15:42	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Sample: MeOH Trip Blank Lab ID: 10436863013 Collected: 06/21/18 00:00 Received: 06/22/18 20:00 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	71-55-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	79-34-5	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	79-00-5	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	75-34-3	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	75-35-4	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	107-06-2	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	78-87-5	W
2-Butanone (MEK)	<107	ug/kg	250	107	1	06/28/18 11:30	06/28/18 17:17	78-93-3	W
2-Hexanone	<52.0	ug/kg	250	52.0	1	06/28/18 11:30	06/28/18 17:17	591-78-6	W
4-Methyl-2-pentanone (MIBK)	<41.1	ug/kg	250	41.1	1	06/28/18 11:30	06/28/18 17:17	108-10-1	W
Acetone	<77.8	ug/kg	250	77.8	1	06/28/18 11:30	06/28/18 17:17	67-64-1	W
Benzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	71-43-2	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	75-27-4	W
Bromoform	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	75-25-2	W
Bromomethane	<69.9	ug/kg	250	69.9	1	06/28/18 11:30	06/28/18 17:17	74-83-9	W
Carbon disulfide	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	75-15-0	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	108-90-7	W
Chloroethane	<67.0	ug/kg	250	67.0	1	06/28/18 11:30	06/28/18 17:17	75-00-3	W
Chloroform	<46.4	ug/kg	250	46.4	1	06/28/18 11:30	06/28/18 17:17	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	74-87-3	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	124-48-1	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	1634-04-4	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	75-09-2	W
Styrene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	100-42-5	W
Tetrachloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	127-18-4	W
Toluene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	108-88-3	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	79-01-6	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	75-01-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	156-59-2	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	10061-01-5	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	06/28/18 11:30	06/28/18 17:17	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	95-47-6	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	156-60-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	06/28/18 11:30	06/28/18 17:17	10061-02-6	W
Surrogates									
Dibromofluoromethane (S)	110	%	57-148		1	06/28/18 11:30	06/28/18 17:17	1868-53-7	
Toluene-d8 (S)	102	%	58-142		1	06/28/18 11:30	06/28/18 17:17	2037-26-5	
4-Bromofluorobenzene (S)	94	%	48-130		1	06/28/18 11:30	06/28/18 17:17	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II
Pace Project No.: 10436863

QC Batch: 546627 Analysis Method: EPA 7471B
QC Batch Method: EPA 7471B Analysis Description: 7471B Mercury Solids
Associated Lab Samples: 10436863001, 10436863002, 10436863003, 10436863004, 10436863005, 10436863006, 10436863007, 10436863008, 10436863009, 10436863010

METHOD BLANK: 2972710 Matrix: Solid
Associated Lab Samples: 10436863001, 10436863002, 10436863003, 10436863004, 10436863005, 10436863006, 10436863007, 10436863008, 10436863009, 10436863010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.0080	0.027	06/28/18 17:42	

LABORATORY CONTROL SAMPLE: 2972711

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.47	0.46	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2972712 2972713

Parameter	Units	10436863001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.023J	.62	.62	0.63	0.64	97	98	75-125	1	20	

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

QC Batch:	546886	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3050	Analysis Description:	6010D Solids
Associated Lab Samples:	10436863001, 10436863002, 10436863003, 10436863004, 10436863005, 10436863006, 10436863007, 10436863008, 10436863009, 10436863010		

METHOD BLANK:	2973660	Matrix:	Solid
Associated Lab Samples:	10436863001, 10436863002, 10436863003, 10436863004, 10436863005, 10436863006, 10436863007, 10436863008, 10436863009, 10436863010		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<0.35	1.2	06/27/18 06:51	
Barium	mg/kg	<0.18	0.60	06/27/18 06:51	
Cadmium	mg/kg	<0.054	0.18	06/27/18 06:51	
Chromium	mg/kg	<0.22	0.74	06/27/18 06:51	
Lead	mg/kg	<0.23	0.77	06/27/18 06:51	
Selenium	mg/kg	<0.40	1.3	06/27/18 06:51	
Silver	mg/kg	<0.082	0.27	06/27/18 06:51	

LABORATORY CONTROL SAMPLE: 2973661

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	48.7	97	80-120	
Barium	mg/kg	50	51.9	104	80-120	
Cadmium	mg/kg	50	50.8	102	80-120	
Chromium	mg/kg	50	52.0	104	80-120	
Lead	mg/kg	50	51.9	104	80-120	
Selenium	mg/kg	50	47.4	95	80-120	
Silver	mg/kg	25	25.0	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2973662 2973663

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10436863001 Result	Spike Conc.	Spike Conc.	MS Result						
Arsenic	mg/kg	3.1	67.7	67.7	50.0	54.7	69	75-125	9	20	M1
Barium	mg/kg	245	67.7	67.7	326	284	119	75-125	14	20	M1
Cadmium	mg/kg	<0.075	67.7	67.7	50.8	55.8	75	75-125	9	20	
Chromium	mg/kg	49.6	67.7	67.7	113	123	94	75-125	8	20	
Lead	mg/kg	10.5	67.7	67.7	70.8	78.8	89	75-125	11	20	
Selenium	mg/kg	0.56J	67.7	67.7	45.5	48.9	66	75-125	7	20	M1
Silver	mg/kg	<0.11	33.9	33.9	24.4	27.0	72	75-125	10	20	M1

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II
Pace Project No.: 10436863

QC Batch: 547426 Analysis Method: ASTM D2974
QC Batch Method: ASTM D2974 Analysis Description: Dry Weight / %M by ASTM D2974
Associated Lab Samples: 10436863001, 10436863002, 10436863003, 10436863004, 10436863005, 10436863006, 10436863007, 10436863008, 10436863009, 10436863010

SAMPLE DUPLICATE: 2975910

Parameter	Units	10436863001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	27.6	27.4	1	30	

SAMPLE DUPLICATE: 2975911

Parameter	Units	10436863010 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	28.1	28.4	1	30	

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II
Pace Project No.: 10436863

QC Batch: 293184 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 10436863001, 10436863002, 10436863003, 10436863004, 10436863005, 10436863006, 10436863007, 10436863008, 10436863009, 10436863010, 10436863013

METHOD BLANK: 1714466 Matrix: Solid
Associated Lab Samples: 10436863001, 10436863002, 10436863003, 10436863004, 10436863005, 10436863006, 10436863007, 10436863008, 10436863009, 10436863010, 10436863013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	06/28/18 15:01	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	06/28/18 15:01	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	06/28/18 15:01	
1,1-Dichloroethane	ug/kg	<17.6	50.0	06/28/18 15:01	
1,1-Dichloroethene	ug/kg	<17.6	50.0	06/28/18 15:01	
1,2-Dichloroethane	ug/kg	<15.0	50.0	06/28/18 15:01	
1,2-Dichloropropane	ug/kg	<16.8	50.0	06/28/18 15:01	
2-Butanone (MEK)	ug/kg	<124	250	06/28/18 15:01	
2-Hexanone	ug/kg	<52.0	250	06/28/18 15:01	
4-Methyl-2-pentanone (MIBK)	ug/kg	<41.1	250	06/28/18 15:01	
Acetone	ug/kg	<98.6	250	06/28/18 15:01	
Benzene	ug/kg	<9.2	20.0	06/28/18 15:01	
Bromodichloromethane	ug/kg	<9.8	50.0	06/28/18 15:01	
Bromoform	ug/kg	<19.8	50.0	06/28/18 15:01	
Bromomethane	ug/kg	<69.9	250	06/28/18 15:01	
Carbon disulfide	ug/kg	<11.1	50.0	06/28/18 15:01	
Carbon tetrachloride	ug/kg	<12.1	50.0	06/28/18 15:01	
Chlorobenzene	ug/kg	<14.8	50.0	06/28/18 15:01	
Chloroethane	ug/kg	<67.0	250	06/28/18 15:01	
Chloroform	ug/kg	<46.4	250	06/28/18 15:01	
Chloromethane	ug/kg	<20.4	50.0	06/28/18 15:01	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	06/28/18 15:01	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	06/28/18 15:01	
Dibromochloromethane	ug/kg	<17.9	50.0	06/28/18 15:01	
Ethylbenzene	ug/kg	<12.4	50.0	06/28/18 15:01	
m&p-Xylene	ug/kg	<34.4	100	06/28/18 15:01	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	06/28/18 15:01	
Methylene Chloride	ug/kg	<16.2	50.0	06/28/18 15:01	
o-Xylene	ug/kg	<14.0	50.0	06/28/18 15:01	
Styrene	ug/kg	<9.0	50.0	06/28/18 15:01	
Tetrachloroethene	ug/kg	<12.9	50.0	06/28/18 15:01	
Toluene	ug/kg	<11.2	50.0	06/28/18 15:01	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	06/28/18 15:01	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	06/28/18 15:01	
Trichloroethene	ug/kg	<23.6	50.0	06/28/18 15:01	
Vinyl chloride	ug/kg	<21.1	50.0	06/28/18 15:01	
4-Bromofluorobenzene (S)	%	93	48-130	06/28/18 15:01	
Dibromofluoromethane (S)	%	116	57-148	06/28/18 15:01	
Toluene-d8 (S)	%	107	58-142	06/28/18 15:01	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

LABORATORY CONTROL SAMPLE: 1714467

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2590	104	70-130	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2840	114	68-130	
1,1,2-Trichloroethane	ug/kg	2500	2610	104	70-130	
1,1-Dichloroethane	ug/kg	2500	2550	102	67-132	
1,1-Dichloroethene	ug/kg	2500	2740	110	67-128	
1,2-Dichloroethane	ug/kg	2500	2500	100	65-137	
1,2-Dichloropropane	ug/kg	2500	2820	113	75-126	
Benzene	ug/kg	2500	2470	99	70-130	
Bromodichloromethane	ug/kg	2500	2750	110	70-130	
Bromoform	ug/kg	2500	2310	92	57-117	
Bromomethane	ug/kg	2500	2360	94	48-135	
Carbon disulfide	ug/kg	2500	2580	103	66-143	
Carbon tetrachloride	ug/kg	2500	2650	106	65-133	
Chlorobenzene	ug/kg	2500	2590	103	70-130	
Chloroethane	ug/kg	2500	2500	100	37-165	
Chloroform	ug/kg	2500	2530	101	72-126	
Chloromethane	ug/kg	2500	1960	78	34-120	
cis-1,2-Dichloroethene	ug/kg	2500	2430	97	70-130	
cis-1,3-Dichloropropene	ug/kg	2500	2700	108	69-130	
Dibromochloromethane	ug/kg	2500	2610	104	68-130	
Ethylbenzene	ug/kg	2500	2630	105	79-121	
m&p-Xylene	ug/kg	5000	5260	105	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2370	95	66-129	
Methylene Chloride	ug/kg	2500	2580	103	68-129	
o-Xylene	ug/kg	2500	2670	107	70-130	
Styrene	ug/kg	2500	2660	107	70-130	
Tetrachloroethene	ug/kg	2500	2630	105	70-130	
Toluene	ug/kg	2500	2660	106	80-123	
trans-1,2-Dichloroethene	ug/kg	2500	2540	102	70-130	
trans-1,3-Dichloropropene	ug/kg	2500	2290	91	67-130	
Trichloroethene	ug/kg	2500	2720	109	70-130	
Vinyl chloride	ug/kg	2500	2080	83	52-122	
4-Bromofluorobenzene (S)	%			98	48-130	
Dibromofluoromethane (S)	%			105	57-148	
Toluene-d8 (S)	%			101	58-142	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1714468 1714469

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10436863004 Result	Spike Conc.	Spike Conc.	MSD Result								
1,1,1-Trichloroethane	ug/kg	<25.0	1660	1660	1500	1440	90	87	62-130	4	20		
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	1660	1660	1670	1550	101	94	64-137	7	20		
1,1,2-Trichloroethane	ug/kg	<25.0	1660	1660	1650	1520	100	92	70-130	8	20		
1,1-Dichloroethane	ug/kg	<25.0	1660	1660	1590	1510	96	91	65-132	5	20		
1,1-Dichloroethene	ug/kg	<25.0	1660	1660	1460	1410	88	85	50-128	4	21		

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1714468 1714469											
Parameter	Units	10436863004 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
1,2-Dichloroethane	ug/kg	<25.0	1660	1660	1670	1570	101	95	65-139	6	20
1,2-Dichloropropane	ug/kg	<25.0	1660	1660	1790	1660	108	100	74-128	8	20
Benzene	ug/kg	<25.0	1660	1660	1550	1470	93	89	66-132	5	20
Bromodichloromethane	ug/kg	<25.0	1660	1660	1710	1650	103	99	69-130	4	20
Bromoform	ug/kg	<25.0	1660	1660	1600	1550	97	94	57-130	3	20
Bromomethane	ug/kg	<69.9	1660	1660	1330	1250	80	75	34-145	6	20
Carbon disulfide	ug/kg	<25.0	1660	1660	1320	1270	80	77	48-143	4	20
Carbon tetrachloride	ug/kg	<25.0	1660	1660	1480	1460	90	88	54-133	2	20
Chlorobenzene	ug/kg	<25.0	1660	1660	1670	1590	101	96	70-130	5	20
Chloroethane	ug/kg	<67.0	1660	1660	1370	1360	83	82	33-165	1	20
Chloroform	ug/kg	<46.4	1660	1660	1650	1570	99	95	72-128	5	20
Chloromethane	ug/kg	<25.0	1660	1660	836	777	50	47	20-120	7	20
cis-1,2-Dichloroethene	ug/kg	<25.0	1660	1660	1620	1480	98	90	69-130	9	20
cis-1,3-Dichloropropene	ug/kg	<25.0	1660	1660	1620	1500	98	91	65-130	7	20
Dibromochloromethane	ug/kg	<25.0	1660	1660	1620	1460	98	88	65-130	10	20
Ethylbenzene	ug/kg	<25.0	1660	1660	1590	1480	96	90	63-127	7	20
m&p-Xylene	ug/kg	<50.0	3310	3310	3250	3100	98	94	70-130	5	20
Methyl-tert-butyl ether	ug/kg	<25.0	1660	1660	1480	1390	89	84	62-135	6	20
Methylene Chloride	ug/kg	<25.0	1660	1660	1670	1560	101	94	68-129	7	20
o-Xylene	ug/kg	<25.0	1660	1660	1620	1530	98	92	69-130	6	20
Styrene	ug/kg	<25.0	1660	1660	1720	1580	104	96	70-130	8	20
Tetrachloroethene	ug/kg	<25.0	1660	1660	1570	1540	95	93	70-130	2	20
Toluene	ug/kg	<25.0	1660	1660	1680	1580	102	95	80-123	6	20
trans-1,2-Dichloroethene	ug/kg	<25.0	1660	1660	1590	1420	96	86	70-130	11	20
trans-1,3-Dichloropropene	ug/kg	<25.0	1660	1660	1460	1370	88	83	67-130	6	20
Trichloroethene	ug/kg	<25.0	1660	1660	1640	1590	99	96	70-130	3	20
Vinyl chloride	ug/kg	<25.0	1660	1660	928	899	56	54	39-122	3	20
4-Bromofluorobenzene (S)	%						97	90	48-130		
Dibromofluoromethane (S)	%						106	100	57-148		
Toluene-d8 (S)	%						102	96	58-142		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

QC Batch: 547301

Analysis Method: EPA 8260B

QC Batch Method: EPA 8260B

Analysis Description: 8260B MSV 465 W

Associated Lab Samples: 10436863011, 10436863012

METHOD BLANK: 2975400

Matrix: Water

Associated Lab Samples: 10436863011, 10436863012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.20	0.65	06/27/18 12:47	
1,1,1-Trichloroethane	ug/L	<0.14	0.45	06/27/18 12:47	
1,1,2,2-Tetrachloroethane	ug/L	<0.17	0.57	06/27/18 12:47	
1,1,2-Trichloroethane	ug/L	<0.18	0.60	06/27/18 12:47	
1,1,2-Trichlorotrifluoroethane	ug/L	<0.22	0.72	06/27/18 12:47	
1,1-Dichloroethane	ug/L	<0.17	0.57	06/27/18 12:47	
1,1-Dichloroethene	ug/L	<0.16	0.53	06/27/18 12:47	
1,1-Dichloropropene	ug/L	<0.20	0.66	06/27/18 12:47	
1,2,3-Trichlorobenzene	ug/L	<0.21	0.69	06/27/18 12:47	
1,2,3-Trichloropropane	ug/L	<0.26	0.86	06/27/18 12:47	
1,2,4-Trichlorobenzene	ug/L	<0.20	0.66	06/27/18 12:47	
1,2,4-Trimethylbenzene	ug/L	<0.20	0.65	06/27/18 12:47	
1,2-Dibromo-3-chloropropane	ug/L	<1.7	5.5	06/27/18 12:47	
1,2-Dibromoethane (EDB)	ug/L	<0.24	0.80	06/27/18 12:47	
1,2-Dichlorobenzene	ug/L	<0.14	0.46	06/27/18 12:47	
1,2-Dichloroethane	ug/L	<0.22	0.73	06/27/18 12:47	
1,2-Dichloropropane	ug/L	<0.16	0.55	06/27/18 12:47	
1,3,5-Trimethylbenzene	ug/L	<0.12	0.41	06/27/18 12:47	
1,3-Dichlorobenzene	ug/L	<0.16	0.54	06/27/18 12:47	
1,3-Dichloropropane	ug/L	<0.070	0.23	06/27/18 12:47	
1,4-Dichlorobenzene	ug/L	<0.17	0.56	06/27/18 12:47	
2,2-Dichloropropane	ug/L	<0.17	0.57	06/27/18 12:47	
2-Butanone (MEK)	ug/L	<0.99	3.3	06/27/18 12:47	
2-Chlorotoluene	ug/L	<0.16	0.54	06/27/18 12:47	
4-Chlorotoluene	ug/L	<0.13	0.45	06/27/18 12:47	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	1.4	06/27/18 12:47	
Acetone	ug/L	<9.2	30.8	06/27/18 12:47	
Allyl chloride	ug/L	<0.29	0.97	06/27/18 12:47	
Benzene	ug/L	<0.10	0.34	06/27/18 12:47	
Bromobenzene	ug/L	<0.21	0.69	06/27/18 12:47	
Bromochloromethane	ug/L	<0.27	0.91	06/27/18 12:47	
Bromodichloromethane	ug/L	<0.22	0.72	06/27/18 12:47	
Bromoform	ug/L	<0.80	2.7	06/27/18 12:47	
Bromomethane	ug/L	<1.8	6.1	06/27/18 12:47	
Carbon tetrachloride	ug/L	<0.19	0.63	06/27/18 12:47	
Chlorobenzene	ug/L	<0.17	0.57	06/27/18 12:47	
Chloroethane	ug/L	<0.49	1.6	06/27/18 12:47	
Chloroform	ug/L	<0.45	1.5	06/27/18 12:47	
Chloromethane	ug/L	<0.16	0.52	06/27/18 12:47	
cis-1,2-Dichloroethene	ug/L	<0.15	0.51	06/27/18 12:47	
cis-1,3-Dichloropropene	ug/L	<0.20	0.68	06/27/18 12:47	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

METHOD BLANK: 2975400

Matrix: Water

Associated Lab Samples: 10436863011, 10436863012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromochloromethane	ug/L	<0.12	0.41	06/27/18 12:47	
Dibromomethane	ug/L	<0.16	0.54	06/27/18 12:47	
Dichlorodifluoromethane	ug/L	<0.23	0.78	06/27/18 12:47	
Dichlorofluoromethane	ug/L	<0.14	0.47	06/27/18 12:47	N2
Diethyl ether (Ethyl ether)	ug/L	<0.095	0.32	06/27/18 12:47	
Ethylbenzene	ug/L	<0.14	0.46	06/27/18 12:47	
Hexachloro-1,3-butadiene	ug/L	<0.31	1.0	06/27/18 12:47	
Isopropylbenzene (Cumene)	ug/L	<0.18	0.62	06/27/18 12:47	
Methyl-tert-butyl ether	ug/L	<0.16	0.54	06/27/18 12:47	
Methylene Chloride	ug/L	<0.98	3.3	06/27/18 12:47	
n-Butylbenzene	ug/L	<0.24	0.80	06/27/18 12:47	
n-Propylbenzene	ug/L	<0.10	0.34	06/27/18 12:47	
Naphthalene	ug/L	<0.48	1.6	06/27/18 12:47	
p-Isopropyltoluene	ug/L	<0.15	0.51	06/27/18 12:47	
sec-Butylbenzene	ug/L	<0.15	0.50	06/27/18 12:47	
Styrene	ug/L	<0.19	0.62	06/27/18 12:47	
tert-Butylbenzene	ug/L	<0.15	0.49	06/27/18 12:47	
Tetrachloroethene	ug/L	<0.17	0.57	06/27/18 12:47	
Tetrahydrofuran	ug/L	<2.2	7.4	06/27/18 12:47	
Toluene	ug/L	<0.083	0.28	06/27/18 12:47	
trans-1,2-Dichloroethene	ug/L	<0.12	0.39	06/27/18 12:47	
trans-1,3-Dichloropropene	ug/L	<0.18	0.61	06/27/18 12:47	
Trichloroethene	ug/L	<0.15	0.50	06/27/18 12:47	
Trichlorofluoromethane	ug/L	<0.23	0.77	06/27/18 12:47	
Vinyl chloride	ug/L	<0.092	0.31	06/27/18 12:47	
Xylene (Total)	ug/L	<0.31	1.0	06/27/18 12:47	
1,2-Dichloroethane-d4 (S)	%	99	75-125	06/27/18 12:47	
4-Bromofluorobenzene (S)	%	96	75-125	06/27/18 12:47	
Toluene-d8 (S)	%	98	75-125	06/27/18 12:47	

LABORATORY CONTROL SAMPLE: 2975401

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	17.7	89	75-125	
1,1,1-Trichloroethane	ug/L	20	21.1	106	75-125	
1,1,2,2-Tetrachloroethane	ug/L	20	18.5	92	75-129	
1,1,2-Trichloroethane	ug/L	20	19.5	97	75-125	
1,1,2-Trichlorotrifluoroethane	ug/L	20	18.7	94	74-125	
1,1-Dichloroethane	ug/L	20	20.7	103	75-127	
1,1-Dichloroethene	ug/L	20	18.4	92	73-125	
1,1-Dichloropropene	ug/L	20	20.5	102	75-125	
1,2,3-Trichlorobenzene	ug/L	20	17.4	87	74-126	
1,2,3-Trichloropropane	ug/L	20	19.7	98	75-125	
1,2,4-Trichlorobenzene	ug/L	20	16.9	84	75-125	

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

LABORATORY CONTROL SAMPLE: 2975401

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	18.4	92	75-125	
1,2-Dibromo-3-chloropropane	ug/L	50	44.2	88	64-129	
1,2-Dibromoethane (EDB)	ug/L	20	18.3	92	75-125	
1,2-Dichlorobenzene	ug/L	20	18.8	94	75-125	
1,2-Dichloroethane	ug/L	20	19.8	99	74-125	
1,2-Dichloropropane	ug/L	20	20.6	103	75-125	
1,3,5-Trimethylbenzene	ug/L	20	18.7	93	75-125	
1,3-Dichlorobenzene	ug/L	20	18.6	93	75-125	
1,3-Dichloropropane	ug/L	20	19.5	98	75-125	
1,4-Dichlorobenzene	ug/L	20	18.1	91	75-125	
2,2-Dichloropropane	ug/L	20	21.0	105	70-125	
2-Butanone (MEK)	ug/L	100	106	106	57-130	
2-Chlorotoluene	ug/L	20	18.0	90	75-125	
4-Chlorotoluene	ug/L	20	18.3	92	75-125	
4-Methyl-2-pentanone (MIBK)	ug/L	100	103	103	69-137	
Acetone	ug/L	100	98.0	98	32-150	
Allyl chloride	ug/L	20	18.5	93	64-135	
Benzene	ug/L	20	19.6	98	75-126	
Bromobenzene	ug/L	20	20.0	100	75-125	
Bromochloromethane	ug/L	20	21.9	109	75-126	
Bromodichloromethane	ug/L	20	19.3	96	75-125	
Bromoform	ug/L	20	17.0	85	67-125	
Bromomethane	ug/L	20	14.1	71	30-150	
Carbon tetrachloride	ug/L	20	18.0	90	75-125	
Chlorobenzene	ug/L	20	19.8	99	75-125	
Chloroethane	ug/L	20	16.1	81	64-142	
Chloroform	ug/L	20	19.7	99	75-125	
Chloromethane	ug/L	20	15.9	80	40-150	
cis-1,2-Dichloroethene	ug/L	20	21.3	107	75-125	
cis-1,3-Dichloropropene	ug/L	20	17.5	87	75-125	
Dibromochloromethane	ug/L	20	17.6	88	75-125	
Dibromomethane	ug/L	20	19.5	97	75-125	
Dichlorodifluoromethane	ug/L	20	14.4	72	61-132	
Dichlorofluoromethane	ug/L	20	18.3	92	75-129	N2
Diethyl ether (Ethyl ether)	ug/L	20	20.1	101	74-125	
Ethylbenzene	ug/L	20	19.5	98	75-125	
Hexachloro-1,3-butadiene	ug/L	20	18.9	95	75-125	
Isopropylbenzene (Cumene)	ug/L	20	19.6	98	75-125	
Methyl-tert-butyl ether	ug/L	20	20.8	104	73-129	
Methylene Chloride	ug/L	20	19.9	99	72-125	
n-Butylbenzene	ug/L	20	16.8	84	75-125	
n-Propylbenzene	ug/L	20	18.4	92	75-125	
Naphthalene	ug/L	20	16.9	85	65-126	
p-Isopropyltoluene	ug/L	20	16.9	85	75-125	
sec-Butylbenzene	ug/L	20	17.9	89	75-125	
Styrene	ug/L	20	19.6	98	75-125	
tert-Butylbenzene	ug/L	20	18.3	92	75-125	

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

LABORATORY CONTROL SAMPLE: 2975401

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethane	ug/L	20	18.9	94	75-125	
Tetrahydrofuran	ug/L	200	206	103	30-150	
Toluene	ug/L	20	19.1	96	74-125	
trans-1,2-Dichloroethene	ug/L	20	19.9	99	70-126	
trans-1,3-Dichloropropene	ug/L	20	19.7	99	75-125	
Trichloroethene	ug/L	20	18.8	94	75-125	
Trichlorofluoromethane	ug/L	20	17.5	87	71-131	
Vinyl chloride	ug/L	20	18.1	90	65-137	
Xylene (Total)	ug/L	60	59.2	99	75-125	
1,2-Dichloroethane-d4 (S)	%			101	75-125	
4-Bromofluorobenzene (S)	%			96	75-125	
Toluene-d8 (S)	%			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2975423 2975424

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10436832003 Result	Spike Conc.	Spike Conc.	MS Result						
1,1,1,2-Tetrachloroethane	ug/L	<1.0	20	20	8.5	5.7	43	28	69-130	41	30 M1,R1
1,1,1-Trichloroethane	ug/L	<1.0	20	20	10.4	6.8	52	34	72-133	42	30 M1,R1
1,1,2,2-Tetrachloroethane	ug/L	<1.0	20	20	8.4	5.8	42	29	60-137	37	30 M1,R1
1,1,2-Trichloroethane	ug/L	<1.0	20	20	9.3	6.4	46	32	70-128	36	30 M1,R1
1,1,2-Trichlorotrifluoroethane	ug/L	<1.0	20	20	7.6	4.9	38	24	64-147	43	30 M1,R1
1,1-Dichloroethane	ug/L	<1.0	20	20	10.3	7.0	52	35	64-136	38	30 M1,R1
1,1-Dichloroethene	ug/L	<1.0	20	20	9.5	6.4	47	32	67-139	39	30 M1,R1
1,1-Dichloropropene	ug/L	<1.0	20	20	9.7	6.0	48	30	69-131	47	30 M1,R1
1,2,3-Trichlorobenzene	ug/L	<1.0	20	20	6.5	3.9	32	20	60-138	49	30 M1,R1
1,2,3-Trichloropropane	ug/L	<4.0	20	20	9.3	6.1	46	31	67-129	41	30 M1,R1
1,2,4-Trichlorobenzene	ug/L	<1.0	20	20	6.3	4.0	32	20	71-125	45	30 M1,R1
1,2,4-Trimethylbenzene	ug/L	<1.0	20	20	8.1	4.9	40	24	67-130	49	30 M1,R1
1,2-Dibromo-3-chloropropane	ug/L	<4.0	50	50	19.6	13.2	39	26	52-141	39	30 M1,R1
1,2-Dibromoethane (EDB)	ug/L	<1.0	20	20	8.7	6.1	43	31	66-130	34	30 M1,R1
1,2-Dichlorobenzene	ug/L	<1.0	20	20	8.2	5.2	41	26	72-126	44	30 M1,R1
1,2-Dichloroethane	ug/L	<1.0	20	20	9.5	6.9	47	35	64-125	32	30 M1,R1
1,2-Dichloropropane	ug/L	<4.0	20	20	9.9	6.9	50	34	65-128	37	30 M1,R1
1,3,5-Trimethylbenzene	ug/L	<1.0	20	20	8.0	4.8	40	24	63-139	51	30 M1,R1
1,3-Dichlorobenzene	ug/L	<1.0	20	20	7.9	4.9	39	24	70-128	47	30 M1,R1
1,3-Dichloropropane	ug/L	<1.0	20	20	9.2	6.3	46	31	70-131	38	30 M1,R1
1,4-Dichlorobenzene	ug/L	<1.0	20	20	7.6	5.0	38	25	74-125	42	30 M1,R1
2,2-Dichloropropane	ug/L	<4.0	20	20	10.9	7.5	55	37	58-137	38	30 M1,R1
2-Butanone (MEK)	ug/L	<5.0	100	100	50.6	35.1	51	35	45-132	36	30 M1,R1
2-Chlorotoluene	ug/L	<1.0	20	20	8.2	5.0	41	25	66-134	48	30 M1,R1
4-Chlorotoluene	ug/L	<1.0	20	20	7.9	4.9	40	25	70-132	46	30 M1,R1
4-Methyl-2-pentanone (MIBK)	ug/L	<5.0	100	100	49.1	33.6	49	34	54-143	38	30 M1,R1
Acetone	ug/L	<20.0	100	100	45.6	36.4	46	36	51-150	23	30 M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Parameter	Units	10436832003		2975423		2975424		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
Allyl chloride	ug/L	<4.0	20	20	8.9	6.7	45	34	52-150	28	30	M1	
Benzene	ug/L	<1.0	20	20	9.7	6.6	48	32	62-140	38	30	M1,R1	
Bromobenzene	ug/L	<1.0	20	20	9.3	5.9	47	29	70-128	45	30	M1,R1	
Bromochloromethane	ug/L	<1.0	20	20	10.6	7.2	53	36	65-131	38	30	M1,R1	
Bromodichloromethane	ug/L	<1.0	20	20	9.0	6.2	45	31	74-127	37	30	M1,R1	
Bromoform	ug/L	<4.0	20	20	7.6	5.4	38	27	59-125	34	30	M1,R1	
Bromomethane	ug/L	<4.0	20	20	9.8	5.8J	49	29	30-149	52	30	M1,R1	
Carbon tetrachloride	ug/L	<1.0	20	20	8.7	5.6	44	28	67-134	43	30	M1,R1	
Chlorobenzene	ug/L	<1.0	20	20	9.2	5.9	46	29	72-131	44	30	M1,R1	
Chloroethane	ug/L	<1.0	20	20	13.5	7.0	67	35	55-150	63	30	M1,R1	
Chloroform	ug/L	<1.0	20	20	9.3	6.4	47	32	67-125	38	30	M1,R1	
Chloromethane	ug/L	<4.0	20	20	13.3	7.3	67	37	43-148	58	30	M1,R1	
cis-1,2-Dichloroethene	ug/L	<1.0	20	20	10.3	7.0	51	35	62-132	38	30	M1,R1	
cis-1,3-Dichloropropene	ug/L	<4.0	20	20	8.1	5.6	41	28	63-129	37	30	M1,R1	
Dibromochloromethane	ug/L	<1.0	20	20	8.2	5.8	41	29	67-127	35	30	M1,R1	
Dibromomethane	ug/L	<4.0	20	20	9.2	6.4	46	32	68-132	36	30	M1,R1	
Dichlorodifluoromethane	ug/L	<1.0	20	20	12.6	5.6	63	28	59-144	76	30	M1,R1	
Dichlorofluoromethane	ug/L	<1.0	20	20	15.1	7.9	76	40	63-144	62	30	M1,N2,R1	
Diethyl ether (Ethyl ether)	ug/L	<4.0	20	20	9.8	6.8	49	34	52-139	36	30	M1,R1	
Ethylbenzene	ug/L	<1.0	20	20	9.5	5.9	45	28	75-131	46	30	M1,R1	
Hexachloro-1,3-butadiene	ug/L	<1.0	20	20	6.1	3.6	30	18	58-146	50	30	M1,R1	
Isopropylbenzene (Cumene)	ug/L	<1.0	20	20	8.9	5.2	45	26	71-132	52	30	M1,R1	
Methyl-tert-butyl ether	ug/L	<1.0	20	20	9.9	7.1	49	35	65-130	32	30	M1,R1	
Methylene Chloride	ug/L	<4.0	20	20	9.5	6.8	47	34	66-125	33	30	M1,R1	
n-Butylbenzene	ug/L	<1.0	20	20	6.1	3.7	30	18	57-141	49	30	M1,R1	
n-Propylbenzene	ug/L	<1.0	20	20	7.9	4.7	39	23	70-131	51	30	M1,R1	
Naphthalene	ug/L	<4.0	20	20	7.1	4.7	36	23	48-134	42	30	M1,R1	
p-Isopropyltoluene	ug/L	<1.0	20	20	6.9	4.0	34	20	66-136	52	30	M1,R1	
sec-Butylbenzene	ug/L	<1.0	20	20	7.5	4.1	37	20	69-134	58	30	M1,R1	
Styrene	ug/L	<1.0	20	20	8.9	5.5	44	28	65-134	46	30	M1,R1	
tert-Butylbenzene	ug/L	<1.0	20	20	8.3	4.7	41	23	71-130	56	30	M1,R1	
Tetrachloroethene	ug/L	<1.0	20	20	8.4	5.1	42	26	69-135	48	30	M1,R1	
Tetrahydrofuran	ug/L	<10.0	200	200	93.1	68.4	47	34	48-150	31	30	M1,R1	
Toluene	ug/L	<1.0	20	20	9.5	6.1	45	28	68-132	43	30	M1,R1	
trans-1,2-Dichloroethene	ug/L	<1.0	20	20	9.6	6.4	48	32	61-134	40	30	M1,R1	
trans-1,3-Dichloropropene	ug/L	<4.0	20	20	9.1	6.1	46	31	66-125	39	30	M1,R1	
Trichloroethene	ug/L	<0.40	20	20	9.1	6.0	45	30	64-136	41	30	M1,R1	
Trichlorofluoromethane	ug/L	<1.0	20	20	15.0	7.2	75	36	65-146	70	30	M1,R1	
Vinyl chloride	ug/L	<0.20	20	20	15.4	8.0	77	40	51-150	64	30	M1,R1	
Xylene (Total)	ug/L	<3.0	60	60	27.8	17.3	46	29	69-135	47	30	MS,RS	
1,2-Dichloroethane-d4 (S)	%						101	101	75-125				
4-Bromofluorobenzene (S)	%						95	96	75-125				
Toluene-d8 (S)	%						99	97	75-125				

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

QC Batch: 546641 Analysis Method: EPA 8270D by SIM
 QC Batch Method: EPA 3550 Analysis Description: 8270D Solid PAH by SIM MSSV
 Associated Lab Samples: 10436863001, 10436863002, 10436863003, 10436863004, 10436863005, 10436863006, 10436863007, 10436863008, 10436863009, 10436863010

METHOD BLANK: 2972761 Matrix: Solid
 Associated Lab Samples: 10436863001, 10436863002, 10436863003, 10436863004, 10436863005, 10436863006, 10436863007, 10436863008, 10436863009, 10436863010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/kg	<0.41	1.4	06/26/18 11:44	
Acenaphthylene	ug/kg	<0.50	1.6	06/26/18 11:44	
Anthracene	ug/kg	<0.47	1.6	06/26/18 11:44	
Benzo(a)anthracene	ug/kg	<1.1	3.6	06/26/18 11:44	
Benzo(a)pyrene	ug/kg	<0.69	2.3	06/26/18 11:44	
Benzo(b)fluoranthene	ug/kg	<0.37	1.2	06/26/18 11:44	
Benzo(g,h,i)perylene	ug/kg	<0.63	2.1	06/26/18 11:44	
Benzo(k)fluoranthene	ug/kg	<0.84	2.8	06/26/18 11:44	
Chrysene	ug/kg	<1.4	4.5	06/26/18 11:44	
Dibenz(a,h)anthracene	ug/kg	<0.46	1.5	06/26/18 11:44	
Fluoranthene	ug/kg	<0.43	1.4	06/26/18 11:44	
Fluorene	ug/kg	<0.31	1.0	06/26/18 11:44	
Indeno(1,2,3-cd)pyrene	ug/kg	<0.67	2.2	06/26/18 11:44	
Naphthalene	ug/kg	<0.77	2.6	06/26/18 11:44	
Phenanthrene	ug/kg	<1.9	6.4	06/26/18 11:44	
Pyrene	ug/kg	<1.5	5.1	06/26/18 11:44	
2-Fluorobiphenyl (S)	%	60	42-125	06/26/18 11:44	
p-Terphenyl-d14 (S)	%	78	57-125	06/26/18 11:44	

LABORATORY CONTROL SAMPLE: 2972762

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/kg	33.3	21.4	64	52-125	
Acenaphthylene	ug/kg	33.3	21.9	66	50-125	
Anthracene	ug/kg	33.3	31.2	94	65-125	
Benzo(a)anthracene	ug/kg	33.3	36.2	109	60-125	
Benzo(a)pyrene	ug/kg	33.3	33.4	100	69-125	
Benzo(b)fluoranthene	ug/kg	33.3	39.3	118	61-125	
Benzo(g,h,i)perylene	ug/kg	33.3	34.6	104	60-125	
Benzo(k)fluoranthene	ug/kg	33.3	31.2	94	67-125	
Chrysene	ug/kg	33.3	37.4	112	67-125	
Dibenz(a,h)anthracene	ug/kg	33.3	31.2	94	63-125	
Fluoranthene	ug/kg	33.3	37.6	113	75-125	
Fluorene	ug/kg	33.3	24.5	74	54-125	
Indeno(1,2,3-cd)pyrene	ug/kg	33.3	33.6	101	63-125	
Naphthalene	ug/kg	33.3	22.6	68	49-125	
Phenanthrene	ug/kg	33.3	28.6	86	65-125	
Pyrene	ug/kg	33.3	32.2	97	64-125	

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

LABORATORY CONTROL SAMPLE: 2972762

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Fluorobiphenyl (S)	%.			67	42-125	
p-Terphenyl-d14 (S)	%.			80	57-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2972763 2972764

Parameter	Units	10436821003		MSD		MSD		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Acenaphthene	ug/kg	ND	39.3	39.3	45.3	38.3	115	98	30-125		30		
Acenaphthylene	ug/kg	ND	39.3	39.3	36.1	28.8	92	73	30-133		30		
Anthracene	ug/kg	ND	39.3	39.3	<5.5	<5.5	0	0	30-150		30	M6	
Benzo(a)anthracene	ug/kg	ND	39.3	39.3	34.2J	33.1J	87	84	30-150		30		
Benzo(a)pyrene	ug/kg	ND	39.3	39.3	33.9	33.6	86	86	30-150		30		
Benzo(b)fluoranthene	ug/kg	ND	39.3	39.3	30.6	28.9	78	74	30-150		30		
Benzo(g,h,i)perylene	ug/kg	ND	39.3	39.3	32.5	32.0	82	81	30-150		30		
Benzo(k)fluoranthene	ug/kg	ND	39.3	39.3	37.3	31.1J	95	79	30-150		30		
Chrysene	ug/kg	ND	39.3	39.3	35.4J	37.2J	90	95	30-150		30		
Dibenz(a,h)anthracene	ug/kg	ND	39.3	39.3	31.4	29.4	80	75	30-131		30		
Fluoranthene	ug/kg	ND	39.3	39.3	36.6	35.1	93	89	30-150		30		
Fluorene	ug/kg	ND	39.3	39.3	32.3	28.1	82	72	30-147		30		
Indeno(1,2,3-cd)pyrene	ug/kg	ND	39.3	39.3	32.4	31.0	82	79	30-150		30		
Naphthalene	ug/kg	ND	39.3	39.3	28.8J	24.2J	73	62	30-131		30		
Phenanthrene	ug/kg	ND	39.3	39.3	51.6J	44.7J	131	114	30-150		30		
Pyrene	ug/kg	ND	39.3	39.3	60.3	53.6J	153	136	30-150		30	M6	
2-Fluorobiphenyl (S)	%.						0	0	42-125			D3,S4	
p-Terphenyl-d14 (S)	%.						0	0	57-125			S4	

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II
Pace Project No.: 10436863

QC Batch: 547072 Analysis Method: EPA 8270D by SIM
QC Batch Method: EPA Mod. 3510C Analysis Description: 8270D PAH by SIM MSSV
Associated Lab Samples: 10436863011

METHOD BLANK: 2974269 Matrix: Water
Associated Lab Samples: 10436863011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/L	<0.0032	0.011	06/27/18 09:55	
Acenaphthylene	ug/L	<0.0046	0.015	06/27/18 09:55	
Anthracene	ug/L	<0.0062	0.021	06/27/18 09:55	
Benzo(a)anthracene	ug/L	<0.0039	0.013	06/27/18 09:55	
Benzo(a)pyrene	ug/L	<0.0040	0.013	06/27/18 09:55	
Benzo(b)fluoranthene	ug/L	<0.013	0.042	06/27/18 09:55	
Benzo(g,h,i)perylene	ug/L	<0.0098	0.033	06/27/18 09:55	
Benzo(k)fluoranthene	ug/L	<0.010	0.035	06/27/18 09:55	
Chrysene	ug/L	<0.0092	0.031	06/27/18 09:55	
Dibenz(a,h)anthracene	ug/L	<0.0092	0.031	06/27/18 09:55	
Fluoranthene	ug/L	<0.018	0.061	06/27/18 09:55	
Fluorene	ug/L	<0.0059	0.020	06/27/18 09:55	
Indeno(1,2,3-cd)pyrene	ug/L	<0.013	0.044	06/27/18 09:55	
Naphthalene	ug/L	<0.0068	0.023	06/27/18 09:55	
Phenanthrene	ug/L	<0.010	0.035	06/27/18 09:55	
Pyrene	ug/L	<0.015	0.049	06/27/18 09:55	
2-Fluorobiphenyl (S)	%	76	30-145	06/27/18 09:55	
p-Terphenyl-d14 (S)	%	91	30-149	06/27/18 09:55	

LABORATORY CONTROL SAMPLE: 2974270

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/L	1	0.70	70	50-125	
Acenaphthylene	ug/L	1	0.72	72	47-125	
Anthracene	ug/L	1	0.93	93	65-125	
Benzo(a)anthracene	ug/L	1	0.91	91	60-125	
Benzo(a)pyrene	ug/L	1	0.92	92	67-125	
Benzo(b)fluoranthene	ug/L	1	0.88	88	64-125	
Benzo(g,h,i)perylene	ug/L	1	0.83	83	53-125	
Benzo(k)fluoranthene	ug/L	1	0.88	88	61-125	
Chrysene	ug/L	1	0.91	91	68-125	
Dibenz(a,h)anthracene	ug/L	1	0.75	75	45-125	
Fluoranthene	ug/L	1	0.91	91	73-125	
Fluorene	ug/L	1	0.72	72	53-125	
Indeno(1,2,3-cd)pyrene	ug/L	1	0.83	83	62-125	
Naphthalene	ug/L	1	0.74	74	46-125	
Phenanthrene	ug/L	1	0.81	81	66-125	
Pyrene	ug/L	1	0.89	89	65-125	
2-Fluorobiphenyl (S)	%			75	30-145	
p-Terphenyl-d14 (S)	%			94	30-149	

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QUALITY CONTROL DATA

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Parameter	Units	2974271		2974272		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		10436884010 Result	MS Spike Conc.	MSD Spike Conc.	MSD Result							
Acenaphthene	ug/L	ND	.95	.95	0.65	0.63	69	67	53-125	3	30	
Acenaphthylene	ug/L	ND	.95	.95	0.67	0.66	70	70	48-125	1	30	
Anthracene	ug/L	ND	.95	.95	0.88	0.89	92	94	66-125	2	30	
Benzo(a)anthracene	ug/L	ND	.95	.95	0.86	0.82	90	86	57-125	5	30	
Benzo(a)pyrene	ug/L	ND	.95	.95	0.84	0.87	89	91	62-125	2	30	
Benzo(b)fluoranthene	ug/L	ND	.95	.95	0.78	0.91	82	96	50-125	16	30	
Benzo(g,h,i)perylene	ug/L	ND	.95	.95	0.73	0.76	76	81	34-125	5	30	
Benzo(k)fluoranthene	ug/L	ND	.95	.95	0.80	0.77	84	81	50-125	4	30	
Chrysene	ug/L	ND	.95	.95	0.90	0.87	95	92	65-125	4	30	
Dibenz(a,h)anthracene	ug/L	ND	.95	.95	0.71	0.74	75	78	31-127	4	30	
Fluoranthene	ug/L	ND	.95	.95	0.88	0.90	92	95	70-125	2	30	
Fluorene	ug/L	ND	.95	.95	0.69	0.68	73	72	53-125	1	30	
Indeno(1,2,3-cd)pyrene	ug/L	ND	.95	.95	0.74	0.77	78	81	45-125	4	30	
Naphthalene	ug/L	ND	.95	.95	0.57	0.65	60	69	34-125	13	30	
Phenanthrene	ug/L	ND	.95	.95	0.78	0.79	82	84	61-125	1	30	
Pyrene	ug/L	ND	.95	.95	0.88	0.84	92	89	60-125	4	30	
2-Fluorobiphenyl (S)	%.						69	69	30-145			
p-Terphenyl-d14 (S)	%.						98	96	30-149			

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QUALIFIERS

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

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

PASI-M Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

- A5 Greater than 5% sediment in sample determined by visual observation. Aqueous portion decanted from the sediment and extracted. The sample container could not be rinsed with solvent per the method requirement.
- D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
- MS Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.
- N2 The lab does not hold NELAC/TNI accreditation for this parameter.
- R1 RPD value was outside control limits.
- RS The RPD value in one of the constituent analytes was outside the control limits.
- S4 Surrogate recovery not evaluated against control limits due to sample dilution.
- 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: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10436863001	SB-1_2-3	EPA 3050	546886	EPA 6010D	547086
10436863002	SB-1_12-13	EPA 3050	546886	EPA 6010D	547086
10436863003	SB-2_0-1	EPA 3050	546886	EPA 6010D	547086
10436863004	SB-2_6-7	EPA 3050	546886	EPA 6010D	547086
10436863005	SB-3_0-2	EPA 3050	546886	EPA 6010D	547086
10436863006	SB-3_8-9	EPA 3050	546886	EPA 6010D	547086
10436863007	SB-4_0-2	EPA 3050	546886	EPA 6010D	547086
10436863008	SB-4_6-7	EPA 3050	546886	EPA 6010D	547086
10436863009	SB-5_0-1	EPA 3050	546886	EPA 6010D	547086
10436863010	SB-5_8-9	EPA 3050	546886	EPA 6010D	547086
10436863001	SB-1_2-3	EPA 7471B	546627	EPA 7471B	546772
10436863002	SB-1_12-13	EPA 7471B	546627	EPA 7471B	546772
10436863003	SB-2_0-1	EPA 7471B	546627	EPA 7471B	546772
10436863004	SB-2_6-7	EPA 7471B	546627	EPA 7471B	546772
10436863005	SB-3_0-2	EPA 7471B	546627	EPA 7471B	546772
10436863006	SB-3_8-9	EPA 7471B	546627	EPA 7471B	546772
10436863007	SB-4_0-2	EPA 7471B	546627	EPA 7471B	546772
10436863008	SB-4_6-7	EPA 7471B	546627	EPA 7471B	546772
10436863009	SB-5_0-1	EPA 7471B	546627	EPA 7471B	546772
10436863010	SB-5_8-9	EPA 7471B	546627	EPA 7471B	546772
10436863001	SB-1_2-3	ASTM D2974	547426		
10436863002	SB-1_12-13	ASTM D2974	547426		
10436863003	SB-2_0-1	ASTM D2974	547426		
10436863004	SB-2_6-7	ASTM D2974	547426		
10436863005	SB-3_0-2	ASTM D2974	547426		
10436863006	SB-3_8-9	ASTM D2974	547426		
10436863007	SB-4_0-2	ASTM D2974	547426		
10436863008	SB-4_6-7	ASTM D2974	547426		
10436863009	SB-5_0-1	ASTM D2974	547426		
10436863010	SB-5_8-9	ASTM D2974	547426		
10436863001	SB-1_2-3	EPA 3550	546641	EPA 8270D by SIM	546989
10436863002	SB-1_12-13	EPA 3550	546641	EPA 8270D by SIM	546989
10436863003	SB-2_0-1	EPA 3550	546641	EPA 8270D by SIM	546989
10436863004	SB-2_6-7	EPA 3550	546641	EPA 8270D by SIM	546989
10436863005	SB-3_0-2	EPA 3550	546641	EPA 8270D by SIM	546989
10436863006	SB-3_8-9	EPA 3550	546641	EPA 8270D by SIM	546989
10436863007	SB-4_0-2	EPA 3550	546641	EPA 8270D by SIM	546989
10436863008	SB-4_6-7	EPA 3550	546641	EPA 8270D by SIM	546989
10436863009	SB-5_0-1	EPA 3550	546641	EPA 8270D by SIM	546989
10436863010	SB-5_8-9	EPA 3550	546641	EPA 8270D by SIM	546989
10436863011	SB-3_14.5-19.5	EPA Mod. 3510C	547072	EPA 8270D by SIM	547275
10436863001	SB-1_2-3	EPA 5035/5030B	293184	EPA 8260	293187
10436863002	SB-1_12-13	EPA 5035/5030B	293184	EPA 8260	293187
10436863003	SB-2_0-1	EPA 5035/5030B	293184	EPA 8260	293187
10436863004	SB-2_6-7	EPA 5035/5030B	293184	EPA 8260	293187
10436863005	SB-3_0-2	EPA 5035/5030B	293184	EPA 8260	293187

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 49161423.00 Husky Phase II

Pace Project No.: 10436863

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10436863006	SB-3_8-9	EPA 5035/5030B	293184	EPA 8260	293187
10436863007	SB-4_0-2	EPA 5035/5030B	293184	EPA 8260	293187
10436863008	SB-4_6-7	EPA 5035/5030B	293184	EPA 8260	293187
10436863009	SB-5_0-1	EPA 5035/5030B	293184	EPA 8260	293187
10436863010	SB-5_8-9	EPA 5035/5030B	293184	EPA 8260	293187
10436863013	MeOH Trip Blank	EPA 5035/5030B	293184	EPA 8260	293187
10436863011	SB-3_14.5-19.5	EPA 8260B	547301		
10436863012	Trip Blank	EPA 8260B	547301		

REPORT OF LABORATORY ANALYSIS

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Barr Engineering Co. Chain of Custody



- Ann Arbor Duluth Jefferson City
 Bismarck Hibbing Minneapolis

Sample Origination State:

- KS MO WI
 MI ND Other:
 MN SD

COC Number: **No 47625**

COC 2 of 2

REPORT TO		INVOICE TO	
Company: <u>Barr Engineering</u>	Company: <u>Barr</u>	Company: <u>Barr</u>	Company: <u>Barr</u>
Address: <u>325 S. Lake Ave. Duluth</u>	Address:	Address:	Address:
Name: <u>Lynette Carney</u>	Name:	Name:	Name:
email: <u>LMC@barr.com</u>	email:	email:	email:
Copy to: <u>datamgt@barr.com</u>	P.O.	P.O.	P.O.
Project Name: <u>Husky Phase II</u>	Barr Project No: <u>49161423.00</u>	Barr Project No: <u>49161423.00</u>	Barr Project No: <u>49161423.00</u>

Location	Sample Depth			Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix Code	Perform MS/MSD Y/N	Analysis Requested		% Solids
	Start	Stop	Unit (m./ft. or in.)					Water	Soil	
1. SB-3	14.5	19.5	ft	6/22/18	1120	GW	N	4	3	1
2. Trip Blank	-	-	-	-	-	-	N	3	2	1
3. MEATY Trip Blank										
4. 6/22/18 SD										
5.										
6.										
7.										
8.										
9.										
10.										

- Matrix Code:**
 GW = Groundwater
 SW = Surface Water
 WW = Waste Water
 DW = Drinking Water
 S = Soil/Solid
 SD = Sediment
 O = Other
- Preservative Code:**
 A = None
 B = HCl
 C = HNO₃
 D = H₂SO₄
 E = NaOH
 F = MeOH
 G = NaHSO₄
 H = Na₂S₂O₃
 I = Ascorbic Acid
 J = NH₄Cl
 K = Zn Acetate
 O = Other

Preservative Code
 Field Filtered Y/N

BARR USE ONLY		Relinquished by:	On Ice? <input type="radio"/> Y <input checked="" type="radio"/> N	Date	Time	Received by:	Date	Time
Sampled by: <u>MAB</u>	Relinquished by: <u>[Signature]</u>	<u>6/22/18</u>	<u>1435</u>	<u>6/22/18</u>	<u>14:35</u>	<u>[Signature]</u>	<u>6/22/18</u>	<u>14:35</u>
Barr Proj. Manager: <u>LMC</u>	Relinquished by: <u>[Signature]</u>	<u>6/22/18</u>	<u>1700</u>	<u>6/22/18</u>	<u>17:00</u>	<u>RCL</u>	<u>6-22-18</u>	<u>1700</u>
Barr DQ Manager: <u>JET</u>	Samples Shipped VIA: <input type="checkbox"/> Courier <input type="checkbox"/> Federal Express <input checked="" type="checkbox"/> Sampler	Air Bill Number:		Requested Due Date:				
Lab Name: <u>Pau</u>	<input type="checkbox"/> Other:	Temperature on Receipt (°C): <u>2.5</u>		Custody Seal Intact? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> None		<input checked="" type="checkbox"/> Standard Turn Around Time		
Lab Location: <u>MPLS</u>	Lab WO:	Temperature on Receipt (°C): <u>2.5</u>		Custody Seal Intact? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> None		<input type="checkbox"/> Rush (mm/dd/yyyy)		

Distribution - White-Original: Accompanies Shipment to Laboratory; Yellow Copy: Include in Field Documents; Pink Copy: Send to Data Management Administrators.
RCL 6-22-18 20:00 [Signature] 6/22/18 2000 To 2.5



Document Name:
Sample Condition Upon Receipt Form

Document No.:
F-MN-L-213-rev.23

Document Revised: 02May2018
Page 1 of 2

Issuing Authority:
Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Barr Project #: _____

WO# : 10436863

PM: AA1 Due Date: 07/02/18
CLIENT: BARR

Courier: Fed Ex UPS USPS Client
 Commercial Pace Speedee Other: _____

Tracking Number: _____

Custody Seal on Cooler/Box Present? Yes No Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags None Other: _____ Temp Blank? Yes No

Thermometer G87A9170600254 G87A9155100842
Used: _____ Type of Ice: Wet Blue None Dry Melted

Cooler Temp Read (°C): 2.7 Cooler Temp Corrected (°C): 2.8 Biological Tissue Frozen? Yes No N/A
Temp should be above freezing to 6°C Correction Factor: +0.1 Date and Initials of Person Examining Contents: rev 6/2/18

USDA Regulated Soil (N/A, water sample)
Did samples originate in a quarantine zone within the United States: AL, AR, 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 (F-MN-Q-338) and include with SCUR/COC paperwork.

	COMMENTS:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Filled Out? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Chain of Custody Relinquished? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.
Sampler Name and/or 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.
Short Hold Time Analysis (<72 hr)? <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 type="checkbox"/> No	8.
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	
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. Note if sediment is visible in the dissolved container
Is sufficient information available to reconcile the samples to the COC? Matrix: <u>WT SL</u> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12.
All containers needing acid/base preservation have been checked? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH Positive for Res. Chlorine? Y N
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ <2pH, NaOH >9 Sulfide, NaOH >12 Cyanide) Exceptions: <u>VOA</u> Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Sample #
Headspace in VOA Vials (>6mm)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	initial when completed: _____ Lot # of added preservative: _____
Trip Blank Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14. Trip Blank 2 1/2 headspace 5cm
Trip Blank Custody Seals Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.
Pace Trip Blank Lot # (if purchased): <u>HCL: 159185, MeOH: 040518-3</u>	

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: _____ Date/Time: _____ Field Data Required? Yes No


Comments/Resolution: _____

Project Manager Review:

Amanda J Albrecht

Date: 6/25/18


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).

 Pace Analytical™ 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 25Apr2018
	Document No.: F-GB-C-031-Rev.07	Issuing Authority: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Client Name: Pace, MN Project #: _____
 Courier: CS Logistics Fed Ex Speedee UPS Walto
 Client Pace Other: _____

WO#: 40171636



40171636

Tracking #: 1760825
 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 - 9 Type of Ice: Wet Blue Dry None Samples on ice, cooling process has begun
 Cooler Temperature: Uncorr: 5 /Corr: 5.5

Temp Blank Present: yes no **Biological Tissue is Frozen:** yes no
 Temp should be above freezing to 6°C.
 Biota Samples may be received at ≤ 0°C.

Person examining contents:
 Date: 6/28/18
 Initials: [Signature]

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 type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	4.	<u>IRWO</u>
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 checked="" type="checkbox"/> Yes <input 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.	<u>007 - 2wals, 008 - 1wial, 009 - 2wals</u> <u>covered for weight</u> <u>SSM 6/28/18</u>
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
-Pace IR Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	10.	
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input 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>W</u>			
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.	<u>MEDH</u>
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		<u>[Signature]</u>
Pace Trip Blank Lot # (if purchased):			<u>62818</u>

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

Project Manager Review: [Signature] Date: 6/28/18

Attachment B

Work plan

Soil Investigation Work Plan

To: John Sager, Wisconsin Department of Natural Resources
From: Lynette Carney and Ryan Erickson
Subject: Superior Water, Light & Power Nemadji Substation Investigation Work Plan
Date: December 18, 2019
Location: Superior Refining Company, Superior, WI
Cc: Mark Darby and Matt Turner, Superior Refining Company
Mike French, LHB Contract Project Manager for MN Power

Dear Mr. Sager:

The following Work Plan is for a soil investigation at the Superior Refining Company (SRC) property that is leased by Superior Water Light & Power (SWL&P) for construction and operation of a new electrical substation (Nemadji Substation). The property is located at 2407 Stinson Ave, Superior, Wisconsin (Property; Figure 1).

Project Background

In 2018, SWL&P leased the Property from SRC to construct and operate an electrical substation. Prior to the lease, Barr Engineering Co. (Barr) had conducted a Phase I Environmental Site Assessment (2018) and a Phase II Investigation (2018) to document the condition of the Property prior to construction. No evidence of contamination was identified during these activities.

During substation construction earthwork activities in November 2019, SWL&P contractors encountered contaminated soil in two separate locations (Figure 1). SWL&P directed the excavation of the identified contaminated soil during their project work. The contaminated soil was characterized and transported offsite for disposal at Shamrock Landfill. SWL&P subsequently indicated that the identified contaminated soil had been remediated through excavation; however, no field screening or analytical confirmation samples were collected from the excavation extents to document final site conditions. SWL&P did report the discovery of contaminated soil to the Wisconsin Department of Natural Resources (WDNR).

The purpose of this proposed investigation is to document the soil conditions at the site following remedial actions through:

- determining whether residual soil impacts remain beneath the locations where impacted soil was excavated by SWL&P
- evaluating soil conditions laterally around the areas where impacted soil was excavated by SWL&P, and
- evaluating soil conditions on portions of the Property that have not been sampled to date.

Proposed Scope of Work

Borings advanced with a push-probe rig are proposed to evaluate the soil conditions at the site. The proposed soil boring locations were selected based on site features and previous boring locations (Barr, 2018), and are depicted on Figure 1.

Barr will prepare a project-specific health and safety plan (PHASP) and coordinate the investigation field work with SRC, SWL&P, and WDNR. Twenty-four (24) soil push-probe borings will be advanced to a depth of approximately 10 feet below ground surface (bgs) with continuous soil sample collection. Final boring locations and depths may vary depending on utility locations, accessibility in the field, depth to groundwater, soil conditions encountered, and the depth of identified contamination (if any). If contamination is identified, soil borings will be advanced to a minimum depth of 5 feet below the deepest level of contamination, as measured through field headspace screening. Soil will be classified as contaminated if it has a headspace reading >10 parts per million (ppm) or if clear evidence of contamination (e.g., hydrocarbon odor, sheen, free-product) is identified. All borings will be abandoned by the driller per Wisconsin regulatory requirements.

A Barr geoscientist will be on site to direct the advancement of the borings and will perform the field tasks and documentation in accordance with Barr's standard operating procedures (SOPs) applicable to the project. Soil samples will be screened for organic vapors using a photoionization detector (PID) with a 10.6 eV lamp. Soil samples will be classified in accordance with the Unified Soil Classification System (USCS) - ASTM D-2488, Standard Practice for Description and Identification of Soils (Visual/Manual Method) and any additional geologic information will be documented.

At least one confirmation/characterization analytical soil sample will be collected from insitu native soils from each boring and will be submitted to an approved certified laboratory for analysis of diesel range organic compounds (DRO), petroleum volatile organic compounds (PVOCs) and naphthalene. Soil samples submitted for laboratory analysis will be collected from 2-3 feet bgs and/or 6-7 feet bgs. The upper sample interval will be adjusted as necessary to ensure that soil is collected from below any recently placed fill or road base material. The lower soil sample interval will be adjusted based on the highest PID reading and/or interval with the most significant discoloration, odor or staining. A proposed soil sampling matrix and rationale has been provided in the attached Table 1. A duplicate sample will not be collected. One trip blank and one equipment blank will be collected.

A letter report will be prepared that summarizes investigation activities, findings and results. Recommendations for potential further actions will be included in the event that residual impacted soils are discovered at the Property.

ATTACHMENTS

Table 1	Boring and Sample Matrix Summary
Figure 1	Proposed Soil Boring Locations

TABLE 1
BORING AND SAMPLE MATRIX SUMMARY
COMPLETED AND PROPOSED BORINGS / WELLS
Site Investigation Work Plan
Nemadji Substation Lease Property

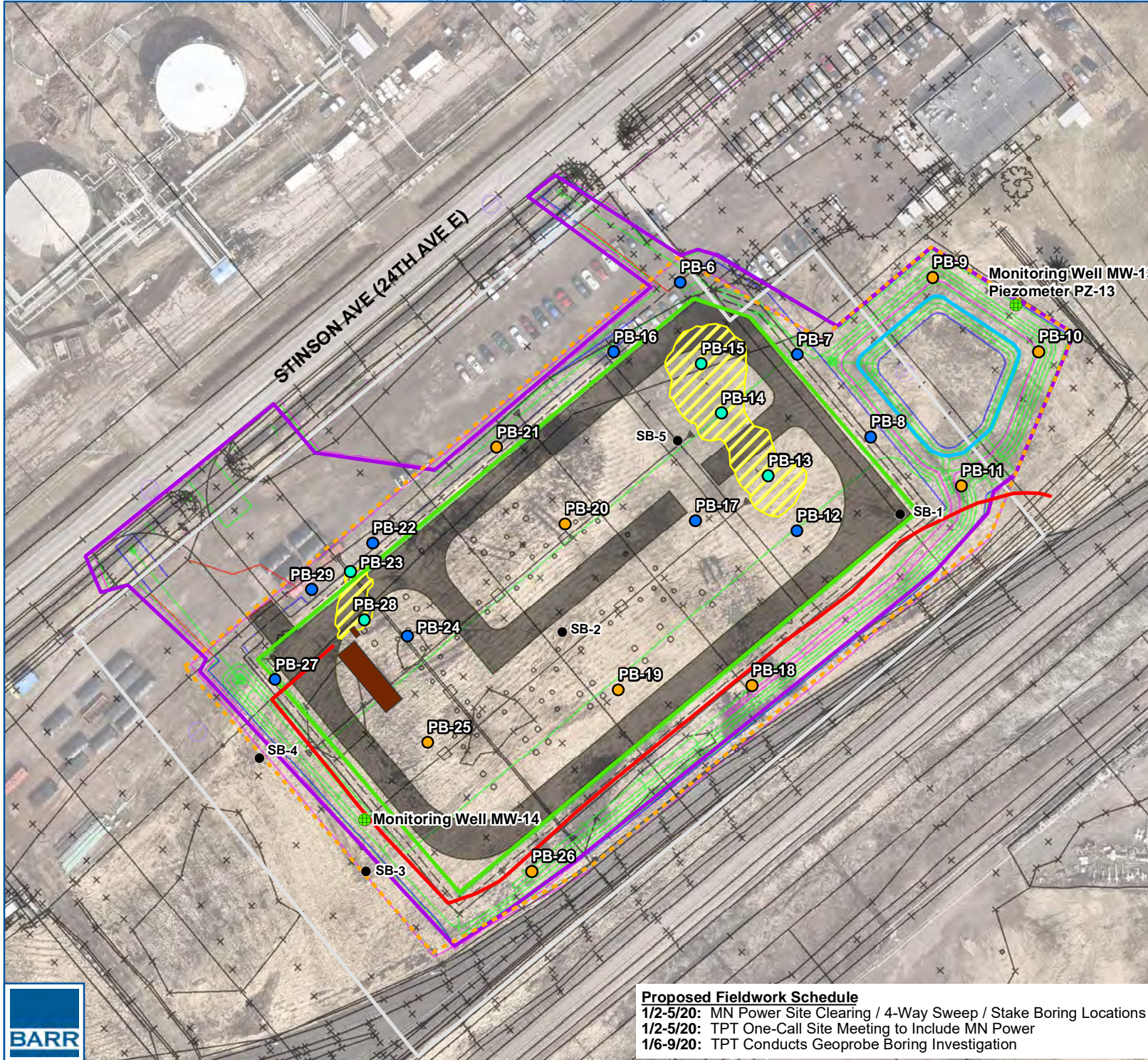
Boring or Well ID	Completed (C) or Proposed (P)	Rationale			Sample Target		Total Depth (ft)	Targeted Soil Sample Depths (ft bgs) ¹	Soil Sampling Parameters					Anticipated Groundwater Depth (ft bgs ⁺)	Groundwater Sampling Parameters		
		Characterization	Delineation	Combined	Excavation Sidewall	Below Engineered Fill			PVOC + Naphthalene	DRO	RCRA Metals ²	VOCs	PAHs		PVOC + Naph	VOCs	PAHs
MW-13	C	X					20	NA						5-10	1		
MW-14	C	X					20	NA						5-10	1		
SB-1	C	X			X	X	15	2-3 12-13			2	2	2	5-10			
SB-2	C	X				X	15	0-1 6-7			2	2	2	5-10			
SB-3	C	X			X	X	15	0-2 8-9			2	2	2	5-10		1	1
SB-4	C	X			X	X	15	0-2 6-7			2	2	2	5-10			
SB-5	C	X				X	15	0-1 8-9			2	2	2	5-10			
PB-6	P			X	X	X	10	2-3 6-7	2	2				5-10			
PB-7	P			X	X	X	10	2-3 6-7	2	2				5-10			
PB-8	P			X	X	X	10	2-3 6-7	2	2				5-10			
PB-9	P	X				X	10	6-7	1	1				5-10			
PB-10	P	X				X	10	6-7	1	1				5-10			
PB-11	P	X				X	10	6-7	1	1				5-10			
PB-12	P			X		X	10	6-7	1	1				5-10			
PB-13	P		X			X	10	6-7	1	1				5-10			
PB-14	P		X			X	10	6-7	1	1				5-10			
PB-15	P		X			X	10	6-7	1	1				5-10			
PB-16	P			X	X	X	10	2-3 6-7	2	2				5-10			
PB-17	P			X		X	10	6-7	1	1				5-10			
PB-18	P	X			X	X	10	2-3 6-7	2	2				5-10			
PB-19	P	X				X	10	6-7	1	1				5-10			
PB-20	P	X				X	10	6-7	1	1				5-10			
PB-21	P	X			X	X	10	2-3 6-7	2	2				5-10			
PB-22	P			X	X	X	10	2-3 6-7	2	2				5-10			
PB-23	P		X			X	10	6-7	1	1				5-10			
PB-24	P			X		X	10	6-7	1	1				5-10			
PB-25	P	X				X	10	6-7	1	1				5-10			
PB-26	P	X			X	X	10	2-3 6-7	2	2				5-10			
PB-27	P			X	X	X	10	2-3 6-7	2	2				5-10			
PB-28	P		X			X	10	6-7	1	1				5-10			
PB-29	P			X	X	X	10	2-3 6-7	2	2				5-10			
									34	34	10	10	10		2	1	1
									Analytical Methods						EPA 8260B	EPA 8260B	EPA 8270D

¹Actual soil sampling intervals will be adjusted based on observations of fill vs. native material and/or obvious signs of contamination.

²RCRA Metals will include arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver.

+ Below ground surface.

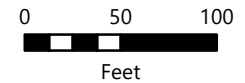
Shaded cells represent locations previously sampled.



- Characterization Boring (9)
- Remedial Action
- Delineation (Confirmation) Boring (5)
- Combined Delineation/ Characterization Boring (10)

Note: final boring locations may be modified due to field conditions but will continue to meet stated investigation objectives.

- Monitoring Well
- Previous Soil Boring Location, Barr 2018
- Property Line
- Underground Electrical
- Construction Limits
- Proposed Substation Fenceline
- SWL&P-Confirmed Remedial Excavation Area
- Gravel Surfacing
- Foundations
- Proposed Pond
- 2018 Phase II Property Boundary



1 inch = 100 feet

Imagery: Nearmap, 4/25/2019

Proposed Fieldwork Schedule
 1/2-5/20: MN Power Site Clearing / 4-Way Sweep / Stake Boring Locations
 1/2-5/20: TPT One-Call Site Meeting to Include MN Power
 1/6-9/20: TPT Conducts Geoprobe Boring Investigation

PROPOSED SOIL BORING LOCATIONS
 SWL&P Nemadji Substation
 Superior, WI
FIGURE 1



Attachment C

Representative Photographs



Photo 1: Preparing to drill at SB-10 on the edge of the pond.



Photo 2: Drilling at SB-20.



Photo 3: SB-18 offset 16 feet from original location. The original boring location is on the right side of the photo and the offset location is on the left.



Photo 4: Slag like material in the 0.6-2 foot interval of SB-10.

Attachment D

Soil Boring Logs

Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation		License/Permit/Monitoring Number 816009590		Boring Number SB-06	
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing		Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020	
WI Unique Well No.		DNR Well ID No.		Common Well Name	
Final Static Water Level		Surface Elevation 657.2 Feet		Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>		State Plane N, E S/C/N		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W		Lat 46° 41' 20.2" Long -92° 4' 10.8"			
Facility ID		County Douglas		County Code	
				Civil Town/City/ or Village Superior	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 40.8		0	Silty gravel; fine; gray; moist; angular; (fill).	GM			0.1						
				2	Fat clay; stiff; red-brown; moist; high plasticity; black discoloration; faint tar odor, trace wood chips and fibers. Fat clay; stiff; red-brown; moist; high plasticity.	CH			0.1					
EOPROBE	60 60		6		CH			0.1						
				8					0.2					
					10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-6_1.5-2 ft: PVOC + Naphthalene, DRO SB-6_5-6 ft: PVOC + Naphthalene, DRO Field blank collected: 1/6/2020, 1520				0.2				

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Sehart</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-07		
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing			Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020		
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level		
					Surface Elevation 657.6 Feet		
					Borehole Diameter 2.3 inches		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 19.8"		Local Grid Location		
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 9.6"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W		
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments								
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index									
EOPROBE	60 41.4		0	Silty gravel; fine; gray; moist; angular; (fill); 0.6 feet of ice/snow.	GM																	
				Poorly graded sand; dense; fine; red-tan; moist; rounded; (fill).	SP			0.4														
EOPROBE	60 60		2	Fat clay; stiff; red-brown; moist; high plasticity.	CH			0.4														
															4	0.4						
8	0.5																					
			10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-7_2-4 ft: PVOC + Naphthalene, DRO SB-7_6-8 ft: PVOC + Naphthalene, DRO				0.5														

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation		License/Permit/Monitoring Number 816009590		Boring Number SB-08	
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing		Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020	
WI Unique Well No.		DNR Well ID No.		Common Well Name	
Final Static Water Level		Surface Elevation 657.1 Feet		Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>		State Plane N, E S/C/N		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W		Lat 46° 41' 19.1"		Long -92° 4' 8.7"	
Facility ID		County Douglas		County Code	
				Civil Town/City/ or Village Superior	



Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 34.8		0	Poorly graded sand with silt; dark brown; moist; with wood fibers and trace organics; (fill); 0.5 feet of ice/snow.	SP-SM									
				Poorly graded sand with silt and gravel; coarse; dark brown; angular; (fill). Fat clay; stiff; red-brown; moist; high plasticity.	SP-SM									
EOPROBE	60 60		6		CH									
				End of Boring at 10 feet below ground surface. Analytical samples collected: SB-8_2-4 ft: PVOC + Naphthalene, DRO SB-8_6-8 ft: PVOC + Naphthalene, DRO										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-09	
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing			Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 656.9 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 20.3"		Local Grid Location	
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 8.1"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments	
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index		
EOPROBE	60		0	Poorly graded sand with silt; fine; dark brown; moist; trace organics; (fill); 0.4 feet of ice/snow.	SP-SM										
	42			Fat clay; stiff; red-brown; moist; high plasticity.					0.3						
EOPROBE	60		2												
	60									0.3					
	60									0.3					
	60									0.4					
			6		CH										
			8												
			10												
				End of Boring at 10 feet below ground surface. Analytical samples collected: SB-9_6-8 ft: PVOC + Naphthalene, DRO											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Sekrt</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-10	
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing			Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 657.1 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/> State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Lat 46° 41' 19.8" Long -92° 4' 6.9"		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 34.8		0	Poorly graded sand with silt; dark-brown; moist; trace organics; (fill); 0.1 feet of ice/snow.	SP-SM									
				Fat clay; stiff; red-brown; moist; high plasticity. Apparent slag, vesicular, gray, metallic luster at 0.6 feet. Apparent slag, vesicular, gray, metallic luster from 1.3-2 feet.				0.6						
EOPROBE	60 60		6		CH									
								0.6						
			10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-10_1-2 ft: PVOC + Naphthalene, DRO SB-10_5-6 ft: PVOC + Naphthalene, DRO SB-10_6-8 ft: PVOC + Naphthalene, DRO										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Sekrt</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation		License/Permit/Monitoring Number 816009590		Boring Number SB-11	
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing		Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020	
WI Unique Well No.		DNR Well ID No.		Common Well Name	
Final Static Water Level		Surface Elevation 656.3 Feet		Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>		State Plane N, E S/C/N		Local Grid Location	
SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W		Lat 46° 41' 18.8"		<input type="checkbox"/> N <input type="checkbox"/> E	
		Long -92° 4' 7.8"		<input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Douglas		County Code	
				Civil Town/City/ or Village Superior	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	Soil Properties						RQD/ Comments
								PID (ppm)	Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60		30	Poorly graded sand with silt; fine; dark brown; moist; (fill); 0.2 feet of ice/snow.	SP-SM									
	30			Fat clay; very stiff; red-brown; moist; high plasticity.	CH									
EOPROBE	60		60	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-11_2-4 ft: PVOC + Naphthalene, DRO SB-11_6-8 ft: PVOC + Naphthalene, DRO										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-12	
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing			Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 657.2 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 18.5"		Local Grid Location	
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 9.5"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 54		0-2	Silty gravel; fine; gray; moist; angular; (fill); 0.2 feet of ice/snow.	GM			0.1						
			2-4	Poorly graded sand; dense; fine; red-tan; moist; rounded; (fill).	SP			0.2						
EOPROBE	60 60		4-6	Fat clay; stiff; red-brown; moist; high plasticity.	CH			0.2						
			6-8					0.4						
			8-10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-12_6-8 ft: PVOC + Naphthalene, DRO				0.4						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation		License/Permit/Monitoring Number 816009590		Boring Number SB-13	
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing		Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020	
WI Unique Well No.		DNR Well ID No.		Common Well Name	
Final Static Water Level		Surface Elevation 657.7 Feet		Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>		State Plane N, E S/C/N		Local Grid Location	
SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W		Lat 46° 41' 18.9"		<input type="checkbox"/> N <input type="checkbox"/> E	
		Long -92° 4' 9.8"		<input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Douglas		County Code	
				Civil Town/City/ or Village Superior	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 40.8		0	Silty gravel; fine; gray; moist; angular; (fill); 0.8 feet of ice/snow.	GM			0.1						
				large gravel clast at 1.4 feet. Poorly graded sand; dense; fine; red-tan; moist; rounded; (fill)	SP			0.1						
EOPROBE	60 62.4		6	Fat clay; stiff; red-brown; moist; high plasticity.	CH			0.1						
			10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-13_6-8 ft: PVOC + Naphthalene, DRO				0.2						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Schrt</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-14	
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing			Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 658.4 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 19.3"		Local Grid Location	
State Plane N, E S/C/N			Long -92° 4' 10.3"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W						
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 49.2		0	Silty gravel; fine; gray; moist; angular; with sand; (fill).	GM			0.1						
			2	Poorly graded sand; medium dense; red-tan; moist; rounded; (fill).	SP			0.1						
EOPROBE	60 26.4		4	Fat clay; soft; red-brown; wet; high plasticity.	CH			0.1						
			6				0.2							
			8					0.3						
			10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-14_6-8 ft: PVOC + Naphthalene, DRO										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Secht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-15		
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing			Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020		
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level		
					Surface Elevation 658.2 Feet		
					Borehole Diameter 2.3 inches		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/> State Plane N, E S/C/N			Lat 46° 41' 19.6"		Local Grid Location		
SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 10.6"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W		
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 42		0-2	Silty gravel; fine; gray; moist; angular; (fill)	GM			0.1						
				Poorly graded sand; dense; fine; red-tan; moist; rounded; (fill)	SP			0.1						
EOPROBE	60 56.4		6-10	Fat clay; soft; red-brown; moist; high plasticity.	CH			0.1						
				End of Boring at 10 feet below ground surface. Analytical samples collected: SB-15_6-8 ft: PVOC + Naphthalene, DRO				0.2						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-16	
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing			Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 658.5 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/> State Plane N, E S/C/N			Lat 46° 41' 19.7"		Local Grid Location	
SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 11.5"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 42		0	Silty gravel; dense; fine; gray; moist; angular; (fill).	GM			0.4						
				2	Poorly graded sand; dense; fine; red-tan; moist; (fill).	SP			0.5					
EOPROBE	60 60		6	Fat clay; very stiff; red-brown; moist; high plasticity.	CH			1.2						
				8				1.7						
			10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-16_6-8 ft: PVOC + Naphthalene, DRO				1.8						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-17		
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020		
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level		
					Surface Elevation 657.9 Feet		
					Borehole Diameter 2.3 inches		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 18.5"		Local Grid Location		
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 10.6"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W		
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 48		0-2	Silty gravel; fine; gray; moist; angular; (fill).	GM			0.2						
				Poorly graded sand; fine; red-tan; rounded; (fill).	SP			0.3						
EOPROBE	60 60		4-6	Fat clay; medium stiff; red-brown; moist; high plasticity.	CH			0.2						
								0.4						
			8-10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-17_6-8 ft: PVOC + Naphthalene, DRO				0.3						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-18	
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 657.4 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 17.5"		Local Grid Location	
State Plane N, E S/C/N			Long -92° 4' 10.1"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			County Douglas		County Code	
Facility ID			Civil Town/City/ or Village Superior			

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 42		0-2	Silty gravel; fine to coarse; gray; dry to moist; angular; (fill).	GM			0.7						
				Poorly graded sand; dense; fine; red-tan; moist; rounded; (fill). Fat clay; stiff; red-brown; moist; high plasticity.	SP			1.0						
EOPROBE	60 60		2-6		CH			1.1						
								1.1						
								1.1						
				End of Boring at 10 feet below ground surface. Analytical samples collected: SB-18_2-4 ft: PVOC + Naphthalene, DRO SB-18_6-8 ft: PVOC + Naphthalene, DRO										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-19		
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020		
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level		
					Surface Elevation 657.2 Feet		
					Borehole Diameter 2.3 inches		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 17.3"		Local Grid Location		
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 11.3"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W		
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 45.6		0	Silty gravel; fine to coarse; gray; moist; angular; (fill).	GM									
				Poorly graded sand; dense; fine; red-tan; moist; rounded; (fill).	SP			0.6						
EOPROBE	60 60		4	Fat clay; very stiff; red-brown; moist; high plasticity.	CH									
				End of Boring at 10 feet below ground surface. Analytical samples collected: SB-19_6-8 ft: PVOC + Naphthalene, DRO										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-20		
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020		
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level		
					Surface Elevation 658.4 Feet		
					Borehole Diameter 2.3 inches		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/> State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Lat 46° 41' 18.5" Long -92° 4' 11.9"		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W		
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 50.4		0	Silty gravel; fine; gray; dry to moist; angular; (fill).	GM			0.3						
				Poorly graded sand; dense; fine; red-tan; moist; rounded; (fill).	SP									
EOPROBE	60 60		4	Fat clay; stiff; red-brown; moist; high plasticity.	CH			0.6						
			10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-20_6-8 ft: PVOC + Naphthalene, DRO				0.6						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature *Christina J. Seht* Firm **Barr Engineering CO** Tel:
Fax:

Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-21		
Boring Drilled By: Name of crew chief (first, last) and Firm Jim Johnson Twin Ports Testing			Date Drilling Started 1/6/2020		Date Drilling Completed 1/6/2020		
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level		
					Surface Elevation 658.4 Feet		
					Borehole Diameter 2.3 inches		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/> State Plane N, E S/C/N			Lat 46° 41' 19.0"		Local Grid Location		
SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 12.7"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W		
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 38.4		0 2 4 6 8 10	Silty gravel; dense; fine; gray; moist; angular; (fill).	GM									
				Poorly graded sand; dense; fine; red-brown; moist; (fill).	SP			0.4						
				Fat clay; stiff; red-brown; moist; high plasticity.	CH			0.3						
EOPROBE	60 60			End of Boring at 10 feet below ground surface. Analytical samples collected: SB-21_2-4 ft: PVOc + Naphthalene, DRO SB-21_6-8 ft: PVOc + Naphthalene, DRO					0.4					

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-22		
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020		
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level		
					Surface Elevation 658.4 Feet		
					Borehole Diameter 2.3 inches		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 18.3"		Local Grid Location		
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 14.0"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W		
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments	
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index		
EOPROBE	60 52.8		0	Silty gravel; fine to medium; gray; dry; angular; (fill).	GM										
				Poorly graded sand with silt; dark brown; dry to moist; angular; (fill).	SP-SM			0.4							
EOPROBE	60 60		2	Fat clay; stiff; red-brown; moist; high plasticity.	CH										
															0.4
															0.4
			4												
			6												
			8												
			10												
				End of Boring at 10 feet below ground surface. Analytical samples collected: SB-22_2-4 ft: PVOC + Naphthalene, DRO SB-22_6-8 ft: PVOC + Naphthalene, DRO											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-23		
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020		
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level		
					Surface Elevation 659.0 Feet		
					Borehole Diameter 2.3 inches		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 18.1"		Local Grid Location		
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 14.2"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W		
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 45.6		0 2	Silty gravel; fine to medium; gray; dry to moist; angular; (fill).	GM			0.1						
				Poorly graded sand; dense; red-tan; dry to moist; rounded (fill).	SP			0.1						
EOPROBE	60 60		6 10	Fat clay; medium stiff; red-brown; dry to moist; high plasticity.	CH			0.2 0.2 0.3						
				End of Boring at 10 feet below ground surface. Analytical samples collected: SB-23_6-8 ft: PVOC + Naphthalene, DRO										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-24		
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020		
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level		
					Surface Elevation 657.7 Feet		
					Borehole Diameter 2.3 inches		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 17.6"		Local Grid Location		
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 13.6"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W		
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 50.4		0	Silty gravel; fine; gray; moist; angular; (fill).	GM			0.6						
			2	Poorly graded sand with silt; fine; red-brown; moist; subrounded to rounded; (fill).	SP-SM			0.7						
EOPROBE	60 48		4	Fat clay; very stiff; red-brown; moist to wet; high plasticity.	CH			0.9						
			6					0.9						
			8					1.0						
			10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-24_6-8 ft: PVOC + Naphthalene, DRO										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-25	
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 657.9 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 16.9"		Local Grid Location	
State Plane N, E S/C/N			Long -92° 4' 13.3"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Facility ID		County Code	
			County Douglas		Civil Town/City/ or Village Superior	


Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 54		0	Silty gravel; fine; gray; dry to moist; angular; (fill)	GM			0.9						
			2	Poorly graded sand with silt; fine; red-brown; dry to moist (fill).	SP-SM			1.1						
EOPROBE	60 60		4	Fat clay, stiff, red-brown, moist, high plasticity.	CH			1.2						
			6					1.1						
			8					1.2						
			10	End of Boring at 10 feet below ground surface.<<CR>> Analytical samples collected: Analytical samples collected: SB-25_6-8 ft: PVOC + Naphthalene, DRO										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-26	
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 656.9 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 16.1"		Local Grid Location	
State Plane N, E S/C/N			Long -92° 4' 12.4"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			County Douglas		County Code	
Facility ID			Civil Town/City/ or Village Superior			

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 40.8		0	Silty gravel; fine; gray; dry to moist; angular; (fill); 0.5 feet of ice/snow.	GM			1.0						
				Fat clay; stiff; red-brown; dry to moist; high plasticity.	CH			1.0						
EOPROBE	60 60		6					1.1						
								1.0						
			10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-26_2-4 ft: PVOC + Naphthalene, DRO SB-26_6-8 ft: PVOC + Naphthalene, DRO				1.1						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Sehn</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-27		
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020		
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level		
					Surface Elevation 658.7 Feet		
					Borehole Diameter 2.3 inches		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 17.3"		Local Grid Location		
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 14.9"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W		
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 48		0-2	Silty gravel; fine; gray; moist; angular; (fill).	GM			1.2						
				Poorly graded sand; fine; red-tan; moist; rounded; (fill).	SP									
EOPROBE	60 60		2-6	Fat clay; very stiff; red-brown; moist; high plasticity.	CH			1.2						
				1.5										
				1.5										
			6-8	Wet from 9-10 feet.				1.4						
			8-10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-27_2-4 ft: PVOc + Naphthalene, DRO SB-27_6-8 ft: PVOc + Naphthalene, DRO										

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Seht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-28	
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 658.5 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 17.7"		Local Grid Location	
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 14.0"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60	51.6	0	Silty gravel; fine; gray; moist; angular; (fill).	GM			0.6						
	51.6			Poorly graded sand with silt; fine; red-brown; wet; rounded; (fill).	SP-SM									
EOPROBE	60	60	6	Fat clay; soft; red-brown; moist; high plasticity.	CH			1.1						
			10	End of Boring at 10 feet below ground surface. Analytical samples collected: SB-28_6-8 ft: PVOC + Naphthalene, DRO				1.2						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature <i>Christina J. Secht</i>	Firm Barr Engineering CO	Tel: Fax:
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Nemadji Substation Phase III Investigation			License/Permit/Monitoring Number 816009590		Boring Number SB-29	
Boring Drilled By: Name of crew chief (first, last) and Firm Brett Carlson Twin Ports Testing			Date Drilling Started 1/7/2020		Date Drilling Completed 1/7/2020	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Final Static Water Level	
					Surface Elevation 658.8 Feet	
					Borehole Diameter 2.3 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>			Lat 46° 41' 17.9"		Local Grid Location	
State Plane SW 1/4 of NW 1/4 of Section 36, T 49 N, R 14 W			Long -92° 4' 14.6"		<input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Douglas		County Code		Civil Town/City/ or Village Superior

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID (ppm)	Soil Properties					RQD/ Comments
									Compressive Strength	Moisture Content	G/S/F %	Color	Plasticity Index	
EOPROBE	60 49.2		0-2	Silty gravel with sand; fine; gray; dry; angular; (fill).	GM			0.9						
				2-6	Fat clay; stiff; red-brown; moist; high plasticity.	CH			0.8					
EOPROBE	60 60		6-10	End of Boring at 10 feet below ground surface. SB-29_2-4 ft: PVOC + Naphthalene, DRO SB-29_6-8 ft: PVOC + Naphthalene, DRO				0.8 1.0 0.9						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature *Christina J. Seibt* Firm **Barr Engineering CO** Tel:
Fax:

Attachment E

Soil Laboratory Analytical Reports

January 24, 2020

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

RE: Project: 49161477.00 Nemadji PH II
Pace Project No.: 10504984

Dear Jim Taraldsen:

Enclosed are the analytical results for sample(s) received by the laboratory on January 10, 2020. 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,



Amanda Albrecht
amanda.albrecht@pacelabs.com
(612)607-6382
Project Manager

Enclosures

cc: BarrDM, Barr Engineering Company
Data Management, Barr Engineering
Accounts Payable, Barr Engineering



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Pace Analytical Services Minneapolis

A2LA Certification #: 2926.01	Minnesota Dept of Ag Certification #: via MN 027-053-137
Alabama Certification #: 40770	Minnesota Petrofund Certification #: 1240
Alaska Contaminated Sites Certification #: 17-009	Mississippi Certification #: MN00064
Alaska DW Certification #: MN00064	Missouri Certification #: 10100
Arizona Certification #: AZ0014	Montana Certification #: CERT0092
Arkansas DW Certification #: MN00064	Nebraska Certification #: NE-OS-18-06
Arkansas WW Certification #: 88-0680	Nevada Certification #: MN00064
California Certification #: 2929	New Hampshire Certification #: 2081
CNMI Saipan Certification #: MP0003	New Jersey Certification #: MN002
Colorado Certification #: MN00064	New York Certification #: 11647
Connecticut Certification #: PH-0256	North Carolina DW Certification #: 27700
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137	North Carolina WW Certification #: 530
Florida Certification #: E87605	North Dakota Certification #: R-036
Georgia Certification #: 959	Ohio DW Certification #: 41244
Guam EPA Certification #: MN00064	Ohio VAP Certification #: CL101
Hawaii Certification #: MN00064	Oklahoma Certification #: 9507
Idaho Certification #: MN00064	Oregon Primary Certification #: MN300001
Illinois Certification #: 200011	Oregon Secondary Certification #: MN200001
Indiana Certification #: C-MN-01	Pennsylvania Certification #: 68-00563
Iowa Certification #: 368	Puerto Rico Certification #: MN00064
Kansas Certification #: E-10167	South Carolina Certification #: 74003001
Kentucky DW Certification #: 90062	Tennessee Certification #: TN02818
Kentucky WW Certification #: 90062	Texas Certification #: T104704192
Louisiana DEQ Certification #: 03086	Utah Certification #: MN00064
Louisiana DW Certification #: MN00064	Vermont Certification #: VT-027053137
Maine Certification #: MN00064	Virginia Certification #: 460163
Maryland Certification #: 322	Washington Certification #: C486
Massachusetts Certification #: M-MN064	West Virginia DEP Certification #: 382
Massachusetts DWP Certification #: via MN 027-053-137	West Virginia DW Certification #: 9952 C
Michigan Certification #: 9909	Wisconsin Certification #: 999407970
Minnesota Certification #: 027-053-137	Wyoming UST Certification #: via A2LA 2926.01

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10504984001	SB-14_6-8	Solid	01/06/20 10:50	01/10/20 08:50
10504984002	SB-15_6-8	Solid	01/06/20 11:10	01/10/20 08:50
10504984003	SB-13_6-8	Solid	01/06/20 11:40	01/10/20 08:50
10504984004	SB-12_6-8	Solid	01/06/20 12:10	01/10/20 08:50
10504984005	SB-8_2-4	Solid	01/06/20 12:20	01/10/20 08:50
10504984006	SB-8_6-8	Solid	01/06/20 12:40	01/10/20 08:50
10504984007	SB-11_2-4	Solid	01/06/20 13:05	01/10/20 08:50
10504984008	SB-11_6-8	Solid	01/06/20 13:10	01/10/20 08:50
10504984009	SB-10_6-8	Solid	01/06/20 13:20	01/10/20 08:50
10504984010	SB-10_5-6	Solid	01/06/20 13:40	01/10/20 08:50
10504984011	SB-10_1-2	Solid	01/06/20 13:45	01/10/20 08:50
10504984012	SB-9_6-8	Solid	01/06/20 14:00	01/10/20 08:50
10504984013	SB-7_2-4	Solid	01/06/20 14:30	01/10/20 08:50
10504984014	SB-7_6-8	Solid	01/06/20 14:40	01/10/20 08:50
10504984015	SB-16_6-8	Solid	01/06/20 14:55	01/10/20 08:50
10504984016	SB-6_1.5-2	Solid	01/06/20 15:10	01/10/20 08:50
10504984017	SB-6_5-6	Solid	01/06/20 15:15	01/10/20 08:50
10504984018	SB-21_2-4	Solid	01/06/20 15:40	01/10/20 08:50
10504984019	SB-21_6-8	Solid	01/06/20 15:50	01/10/20 08:50
10504984020	Field Blank	Solid	01/06/20 15:20	01/10/20 08:50
10504984021	SB-22_2-4	Solid	01/07/20 09:15	01/10/20 08:50
10504984022	SB-22_6-8	Solid	01/07/20 09:25	01/10/20 08:50
10504984023	SB-23_6-8	Solid	01/07/20 09:50	01/10/20 08:50
10504984024	SB-29_2-4	Solid	01/07/20 10:20	01/10/20 08:50
10504984025	SB-29_6-8	Solid	01/07/20 10:25	01/10/20 08:50
10504984026	SB-27_2-4	Solid	01/07/20 10:40	01/10/20 08:50
10504984027	SB-27_6-8	Solid	01/07/20 10:45	01/10/20 08:50
10504984028	SB-28_6-8	Solid	01/07/20 11:00	01/10/20 08:50
10504984029	SB-24_6-8	Solid	01/07/20 11:20	01/10/20 08:50
10504984030	SB-25_6-8	Solid	01/07/20 11:45	01/10/20 08:50
10504984031	SB-26_2-4	Solid	01/07/20 12:35	01/10/20 08:50
10504984032	SB-26_6-8	Solid	01/07/20 12:45	01/10/20 08:50
10504984033	SB-19_6-8	Solid	01/07/20 13:10	01/10/20 08:50
10504984034	SB-18_2-4	Solid	01/07/20 13:30	01/10/20 08:50
10504984035	SB-18_6-8	Solid	01/07/20 13:40	01/10/20 08:50
10504984036	SB-17_6-8	Solid	01/07/20 14:05	01/10/20 08:50
10504984037	SB-20_6-8	Solid	01/07/20 14:20	01/10/20 08:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10504984038	Trip Blank	Solid	01/07/20 00:00	01/10/20 08:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10504984001	SB-14_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984002	SB-15_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984003	SB-13_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984004	SB-12_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984005	SB-8_2-4	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984006	SB-8_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984007	SB-11_2-4	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984008	SB-11_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984009	SB-10_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984010	SB-10_5-6	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984011	SB-10_1-2	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984012	SB-9_6-8	WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
10504984013	SB-7_2-4	WI MOD DRO	JVM	2	PASI-M

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SAMPLE ANALYTE COUNT

Project: 49161477.00 Nemadji PH II
Pace Project No.: 10504984

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10504984014	SB-7_6-8	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
10504984015	SB-16_6-8	EPA 8260B	AB2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
10504984016	SB-6_1.5-2	EPA 8260B	AB2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
10504984017	SB-6_5-6	EPA 8260B	AB2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
10504984018	SB-21_2-4	EPA 8260B	AB2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
10504984019	SB-21_6-8	EPA 8260B	AB2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
10504984020	Field Blank	EPA 8260B	AB2	11	PASI-M
10504984021	SB-22_2-4	EPA 8260B	AB2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
10504984022	SB-22_6-8	EPA 8260B	CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
10504984023	SB-23_6-8	EPA 8260B	CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
10504984024	SB-29_2-4	EPA 8260B	CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
10504984025	SB-29_6-8	EPA 8260B	CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
		ASTM D2974	JDL	1	PASI-M
10504984026	SB-27_2-4	EPA 8260B	CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M

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SAMPLE ANALYTE COUNT

Project: 49161477.00 Nemadji PH II
Pace Project No.: 10504984

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10504984027	SB-27_6-8	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
10504984028	SB-28_6-8	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
10504984029	SB-24_6-8	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
10504984030	SB-25_6-8	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
10504984031	SB-26_2-4	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
10504984032	SB-26_6-8	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2, CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
10504984033	SB-19_6-8	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2, CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
10504984034	SB-18_2-4	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2, CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
10504984035	SB-18_6-8	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2, CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
10504984036	SB-17_6-8	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2, CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
10504984037	SB-20_6-8	ASTM D2974	JDL	1	PASI-M
		EPA 8260B	AB2, CD2	11	PASI-M
		WI MOD DRO	JVM	2	PASI-M
10504984038	Trip Blank	EPA 8260B	AB2, CD2	11	PASI-M
		EPA 8260B	CD2	11	PASI-M

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-14_6-8 **Lab ID: 10504984001** Collected: 01/06/20 10:50 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	6.0J	mg/kg	17.9	5.4	1	01/10/20 15:03	01/12/20 16:47		
Surrogates									
n-Triacontane (S)	86	%	50-150		1	01/10/20 15:03	01/12/20 16:47	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	33.9	%	0.10	0.10	1		01/14/20 12:27		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<4.9	ug/kg	16.3	4.9	1	01/10/20 19:00	01/14/20 06:46	71-43-2	
Ethylbenzene	<4.7	ug/kg	15.7	4.7	1	01/10/20 19:00	01/14/20 06:46	100-41-4	
Methyl-tert-butyl ether	<10.3	ug/kg	34.4	10.3	1	01/10/20 19:00	01/14/20 06:46	1634-04-4	
Naphthalene	<81.2	ug/kg	270	81.2	1	01/10/20 19:00	01/14/20 06:46	91-20-3	
Toluene	<21.2	ug/kg	70.5	21.2	1	01/10/20 19:00	01/14/20 06:46	108-88-3	
1,2,4-Trimethylbenzene	<17.4	ug/kg	57.8	17.4	1	01/10/20 19:00	01/14/20 06:46	95-63-6	
1,3,5-Trimethylbenzene	<13.8	ug/kg	46.0	13.8	1	01/10/20 19:00	01/14/20 06:46	108-67-8	
Xylene (Total)	<20.1	ug/kg	67.0	20.1	1	01/10/20 19:00	01/14/20 06:46	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	75-125		1	01/10/20 19:00	01/14/20 06:46	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/10/20 19:00	01/14/20 06:46	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/10/20 19:00	01/14/20 06:46	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-15_6-8 **Lab ID: 10504984002** Collected: 01/06/20 11:10 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.0	mg/kg	16.6	5.0	1	01/10/20 15:03	01/12/20 16:54		
Surrogates									
n-Triacontane (S)	85	%	50-150		1	01/10/20 15:03	01/12/20 16:54	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	35.5	%	0.10	0.10	1		01/14/20 12:28		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<4.4	ug/kg	14.6	4.4	1	01/10/20 19:00	01/14/20 07:05	71-43-2	
Ethylbenzene	<4.2	ug/kg	14.0	4.2	1	01/10/20 19:00	01/14/20 07:05	100-41-4	
Methyl-tert-butyl ether	<9.2	ug/kg	30.7	9.2	1	01/10/20 19:00	01/14/20 07:05	1634-04-4	
Naphthalene	<72.6	ug/kg	242	72.6	1	01/10/20 19:00	01/14/20 07:05	91-20-3	
Toluene	<18.9	ug/kg	63.0	18.9	1	01/10/20 19:00	01/14/20 07:05	108-88-3	
1,2,4-Trimethylbenzene	<15.5	ug/kg	51.6	15.5	1	01/10/20 19:00	01/14/20 07:05	95-63-6	
1,3,5-Trimethylbenzene	<12.4	ug/kg	41.2	12.4	1	01/10/20 19:00	01/14/20 07:05	108-67-8	
Xylene (Total)	<18.0	ug/kg	59.9	18.0	1	01/10/20 19:00	01/14/20 07:05	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%	75-125		1	01/10/20 19:00	01/14/20 07:05	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/10/20 19:00	01/14/20 07:05	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/10/20 19:00	01/14/20 07:05	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-13_6-8 **Lab ID: 10504984003** Collected: 01/06/20 11:40 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<4.8	mg/kg	15.8	4.8	1	01/10/20 15:03	01/12/20 17:01		
Surrogates									
n-Triacontane (S)	87	%	50-150		1	01/10/20 15:03	01/12/20 17:01	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	24.7	%	0.10	0.10	1		01/14/20 12:28		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.9	ug/kg	12.9	3.9	1	01/10/20 19:00	01/14/20 04:34	71-43-2	
Ethylbenzene	<3.7	ug/kg	12.4	3.7	1	01/10/20 19:00	01/14/20 04:34	100-41-4	
Methyl-tert-butyl ether	<8.1	ug/kg	27.1	8.1	1	01/10/20 19:00	01/14/20 04:34	1634-04-4	
Naphthalene	<64.0	ug/kg	213	64.0	1	01/10/20 19:00	01/14/20 04:34	91-20-3	
Toluene	<16.7	ug/kg	55.6	16.7	1	01/10/20 19:00	01/14/20 04:34	108-88-3	
1,2,4-Trimethylbenzene	<13.7	ug/kg	45.6	13.7	1	01/10/20 19:00	01/14/20 04:34	95-63-6	
1,3,5-Trimethylbenzene	<10.9	ug/kg	36.3	10.9	1	01/10/20 19:00	01/14/20 04:34	108-67-8	
Xylene (Total)	<15.9	ug/kg	52.9	15.9	1	01/10/20 19:00	01/14/20 04:34	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%	75-125		1	01/10/20 19:00	01/14/20 04:34	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/10/20 19:00	01/14/20 04:34	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	01/10/20 19:00	01/14/20 04:34	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-12_6-8 **Lab ID: 10504984004** Collected: 01/06/20 12:10 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<5.0	mg/kg	16.6	5.0	1	01/10/20 15:03	01/12/20 17:08		
Surrogates									
n-Triacontane (S)	85	%	50-150		1	01/10/20 15:03	01/12/20 17:08	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	23.9	%	0.10	0.10	1		01/14/20 12:28		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.9	ug/kg	12.8	3.9	1	01/13/20 10:56	01/14/20 08:40	71-43-2	
Ethylbenzene	<3.7	ug/kg	12.4	3.7	1	01/13/20 10:56	01/14/20 08:40	100-41-4	
Methyl-tert-butyl ether	<8.1	ug/kg	27.1	8.1	1	01/13/20 10:56	01/14/20 08:40	1634-04-4	
Naphthalene	<63.9	ug/kg	213	63.9	1	01/13/20 10:56	01/14/20 08:40	91-20-3	
Toluene	<16.7	ug/kg	55.5	16.7	1	01/13/20 10:56	01/14/20 08:40	108-88-3	
1,2,4-Trimethylbenzene	<13.7	ug/kg	45.5	13.7	1	01/13/20 10:56	01/14/20 08:40	95-63-6	
1,3,5-Trimethylbenzene	<10.9	ug/kg	36.2	10.9	1	01/13/20 10:56	01/14/20 08:40	108-67-8	
Xylene (Total)	<15.8	ug/kg	52.7	15.8	1	01/13/20 10:56	01/14/20 08:40	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	75-125		1	01/13/20 10:56	01/14/20 08:40	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/13/20 10:56	01/14/20 08:40	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1	01/13/20 10:56	01/14/20 08:40	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-8_2-4 **Lab ID: 10504984005** Collected: 01/06/20 12:20 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	8.2J	mg/kg	15.6	4.7	1	01/10/20 15:03	01/12/20 16:33		
Surrogates									
n-Triacontane (S)	86	%	50-150		1	01/10/20 15:03	01/12/20 16:33	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	26.6	%	0.10	0.10	1		01/14/20 12:28		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<4.0	ug/kg	13.3	4.0	1	01/13/20 10:56	01/14/20 08:59	71-43-2	
Ethylbenzene	<3.9	ug/kg	12.8	3.9	1	01/13/20 10:56	01/14/20 08:59	100-41-4	
Methyl-tert-butyl ether	<8.4	ug/kg	28.1	8.4	1	01/13/20 10:56	01/14/20 08:59	1634-04-4	
Naphthalene	<66.3	ug/kg	221	66.3	1	01/13/20 10:56	01/14/20 08:59	91-20-3	
Toluene	<17.3	ug/kg	57.6	17.3	1	01/13/20 10:56	01/14/20 08:59	108-88-3	
1,2,4-Trimethylbenzene	<14.2	ug/kg	47.2	14.2	1	01/13/20 10:56	01/14/20 08:59	95-63-6	
1,3,5-Trimethylbenzene	<11.3	ug/kg	37.6	11.3	1	01/13/20 10:56	01/14/20 08:59	108-67-8	
Xylene (Total)	<16.4	ug/kg	54.7	16.4	1	01/13/20 10:56	01/14/20 08:59	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	75-125		1	01/13/20 10:56	01/14/20 08:59	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/13/20 10:56	01/14/20 08:59	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1	01/13/20 10:56	01/14/20 08:59	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-8_6-8 **Lab ID: 10504984006** Collected: 01/06/20 12:40 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<4.8	mg/kg	15.9	4.8	1	01/10/20 15:03	01/12/20 17:15		
Surrogates									
n-Triacontane (S)	81	%	50-150		1	01/10/20 15:03	01/12/20 17:15	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	27.3	%	0.10	0.10	1		01/14/20 12:28		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.9	ug/kg	12.8	3.9	1	01/13/20 10:56	01/14/20 09:18	71-43-2	
Ethylbenzene	<3.7	ug/kg	12.4	3.7	1	01/13/20 10:56	01/14/20 09:18	100-41-4	
Methyl-tert-butyl ether	<8.1	ug/kg	27.1	8.1	1	01/13/20 10:56	01/14/20 09:18	1634-04-4	
Naphthalene	<63.9	ug/kg	213	63.9	1	01/13/20 10:56	01/14/20 09:18	91-20-3	
Toluene	<16.7	ug/kg	55.5	16.7	1	01/13/20 10:56	01/14/20 09:18	108-88-3	
1,2,4-Trimethylbenzene	<13.7	ug/kg	45.5	13.7	1	01/13/20 10:56	01/14/20 09:18	95-63-6	
1,3,5-Trimethylbenzene	<10.9	ug/kg	36.3	10.9	1	01/13/20 10:56	01/14/20 09:18	108-67-8	
Xylene (Total)	<15.8	ug/kg	52.8	15.8	1	01/13/20 10:56	01/14/20 09:18	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%	75-125		1	01/13/20 10:56	01/14/20 09:18	17060-07-0	
Toluene-d8 (S)	102	%	75-125		1	01/13/20 10:56	01/14/20 09:18	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1	01/13/20 10:56	01/14/20 09:18	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-11_2-4 **Lab ID: 10504984007** Collected: 01/06/20 13:05 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	19.5J	mg/kg	20.5	6.2	1	01/10/20 15:03	01/12/20 16:40		T6
Surrogates									
n-Triacontane (S)	101	%	50-150		1	01/10/20 15:03	01/12/20 16:40	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	36.3	%	0.10	0.10	1		01/14/20 12:28		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<5.3	ug/kg	17.7	5.3	1	01/13/20 10:56	01/14/20 14:23	71-43-2	
Ethylbenzene	<5.1	ug/kg	17.1	5.1	1	01/13/20 10:56	01/14/20 14:23	100-41-4	
Methyl-tert-butyl ether	<11.2	ug/kg	37.4	11.2	1	01/13/20 10:56	01/14/20 14:23	1634-04-4	
Naphthalene	<88.4	ug/kg	294	88.4	1	01/13/20 10:56	01/14/20 14:23	91-20-3	
Toluene	<23.0	ug/kg	76.7	23.0	1	01/13/20 10:56	01/14/20 14:23	108-88-3	
1,2,4-Trimethylbenzene	<18.9	ug/kg	62.9	18.9	1	01/13/20 10:56	01/14/20 14:23	95-63-6	
1,3,5-Trimethylbenzene	<15.0	ug/kg	50.1	15.0	1	01/13/20 10:56	01/14/20 14:23	108-67-8	
Xylene (Total)	<21.9	ug/kg	72.9	21.9	1	01/13/20 10:56	01/14/20 14:23	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	75-125		1	01/13/20 10:56	01/14/20 14:23	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1	01/13/20 10:56	01/14/20 14:23	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-125		1	01/13/20 10:56	01/14/20 14:23	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-11_6-8 **Lab ID: 10504984008** Collected: 01/06/20 13:10 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.3	mg/kg	17.8	5.3	1	01/10/20 15:03	01/12/20 17:22		
Surrogates									
n-Triacontane (S)	85	%	50-150		1	01/10/20 15:03	01/12/20 17:22	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	27.7	%	0.10	0.10	1		01/14/20 12:28		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.9	ug/kg	13.0	3.9	1	01/13/20 10:56	01/14/20 14:41	71-43-2	
Ethylbenzene	<3.8	ug/kg	12.5	3.8	1	01/13/20 10:56	01/14/20 14:41	100-41-4	
Methyl-tert-butyl ether	<8.2	ug/kg	27.3	8.2	1	01/13/20 10:56	01/14/20 14:41	1634-04-4	
Naphthalene	<64.6	ug/kg	215	64.6	1	01/13/20 10:56	01/14/20 14:41	91-20-3	
Toluene	<16.8	ug/kg	56.1	16.8	1	01/13/20 10:56	01/14/20 14:41	108-88-3	
1,2,4-Trimethylbenzene	<13.8	ug/kg	46.0	13.8	1	01/13/20 10:56	01/14/20 14:41	95-63-6	
1,3,5-Trimethylbenzene	<11.0	ug/kg	36.6	11.0	1	01/13/20 10:56	01/14/20 14:41	108-67-8	
Xylene (Total)	<16.0	ug/kg	53.3	16.0	1	01/13/20 10:56	01/14/20 14:41	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 14:41	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/13/20 10:56	01/14/20 14:41	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-125		1	01/13/20 10:56	01/14/20 14:41	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-10_6-8 **Lab ID: 10504984009** Collected: 01/06/20 13:20 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.3	mg/kg	17.7	5.3	1	01/10/20 15:03	01/12/20 17:29		
Surrogates									
n-Triacontane (S)	82	%	50-150		1	01/10/20 15:03	01/12/20 17:29	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	26.4	%	0.10	0.10	1		01/14/20 12:29		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.9	ug/kg	13.1	3.9	1	01/13/20 10:56	01/14/20 15:00	71-43-2	
Ethylbenzene	<3.8	ug/kg	12.7	3.8	1	01/13/20 10:56	01/14/20 15:00	100-41-4	
Methyl-tert-butyl ether	<8.3	ug/kg	27.7	8.3	1	01/13/20 10:56	01/14/20 15:00	1634-04-4	
Naphthalene	<65.5	ug/kg	218	65.5	1	01/13/20 10:56	01/14/20 15:00	91-20-3	
Toluene	<17.1	ug/kg	56.9	17.1	1	01/13/20 10:56	01/14/20 15:00	108-88-3	
1,2,4-Trimethylbenzene	<14.0	ug/kg	46.6	14.0	1	01/13/20 10:56	01/14/20 15:00	95-63-6	
1,3,5-Trimethylbenzene	<11.2	ug/kg	37.1	11.2	1	01/13/20 10:56	01/14/20 15:00	108-67-8	
Xylene (Total)	<16.2	ug/kg	54.1	16.2	1	01/13/20 10:56	01/14/20 15:00	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 15:00	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 15:00	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 15:00	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-10_5-6 **Lab ID: 10504984010** Collected: 01/06/20 13:40 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.4	mg/kg	18.1	5.4	1	01/10/20 15:03	01/12/20 17:36		
Surrogates									
n-Triacontane (S)	86	%	50-150		1	01/10/20 15:03	01/12/20 17:36	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	27.7	%	0.10	0.10	1		01/14/20 12:29		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<4.0	ug/kg	13.3	4.0	1	01/13/20 10:56	01/14/20 15:19	71-43-2	
Ethylbenzene	<3.9	ug/kg	12.9	3.9	1	01/13/20 10:56	01/14/20 15:19	100-41-4	
Methyl-tert-butyl ether	<8.5	ug/kg	28.1	8.5	1	01/13/20 10:56	01/14/20 15:19	1634-04-4	
Naphthalene	<66.5	ug/kg	221	66.5	1	01/13/20 10:56	01/14/20 15:19	91-20-3	
Toluene	<17.3	ug/kg	57.7	17.3	1	01/13/20 10:56	01/14/20 15:19	108-88-3	
1,2,4-Trimethylbenzene	<14.2	ug/kg	47.3	14.2	1	01/13/20 10:56	01/14/20 15:19	95-63-6	
1,3,5-Trimethylbenzene	<11.3	ug/kg	37.7	11.3	1	01/13/20 10:56	01/14/20 15:19	108-67-8	
Xylene (Total)	<16.5	ug/kg	54.9	16.5	1	01/13/20 10:56	01/14/20 15:19	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	75-125		1	01/13/20 10:56	01/14/20 15:19	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 15:19	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 15:19	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II
Pace Project No.: 10504984

Sample: SB-10_1-2 **Lab ID: 10504984011** Collected: 01/06/20 13:45 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	121J	mg/kg	149	44.8	10	01/10/20 15:03	01/12/20 16:12		T6
Surrogates									
n-Triacontane (S)	0	%	50-150		10	01/10/20 15:03	01/12/20 16:12	638-68-6	S4
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	23.1	%	0.10	0.10	1		01/14/20 12:29		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.7	ug/kg	12.3	3.7	1	01/13/20 10:56	01/14/20 15:38	71-43-2	
Ethylbenzene	<3.6	ug/kg	11.9	3.6	1	01/13/20 10:56	01/14/20 15:38	100-41-4	
Methyl-tert-butyl ether	<7.8	ug/kg	26.1	7.8	1	01/13/20 10:56	01/14/20 15:38	1634-04-4	
Naphthalene	<61.5	ug/kg	205	61.5	1	01/13/20 10:56	01/14/20 15:38	91-20-3	
Toluene	<16.0	ug/kg	53.4	16.0	1	01/13/20 10:56	01/14/20 15:38	108-88-3	
1,2,4-Trimethylbenzene	<13.2	ug/kg	43.8	13.2	1	01/13/20 10:56	01/14/20 15:38	95-63-6	
1,3,5-Trimethylbenzene	<10.5	ug/kg	34.9	10.5	1	01/13/20 10:56	01/14/20 15:38	108-67-8	
Xylene (Total)	<15.3	ug/kg	50.8	15.3	1	01/13/20 10:56	01/14/20 15:38	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	75-125		1	01/13/20 10:56	01/14/20 15:38	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/13/20 10:56	01/14/20 15:38	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 15:38	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-9_6-8 **Lab ID: 10504984012** Collected: 01/06/20 14:00 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.1	mg/kg	16.9	5.1	1	01/10/20 15:03	01/12/20 17:43		
Surrogates									
n-Triacontane (S)	95	%	50-150		1	01/10/20 15:03	01/12/20 17:43	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	27.3	%	0.10	0.10	1		01/14/20 12:29		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<4.0	ug/kg	13.4	4.0	1	01/13/20 10:56	01/14/20 16:17	71-43-2	
Ethylbenzene	<3.9	ug/kg	12.9	3.9	1	01/13/20 10:56	01/14/20 16:17	100-41-4	
Methyl-tert-butyl ether	<8.5	ug/kg	28.3	8.5	1	01/13/20 10:56	01/14/20 16:17	1634-04-4	
Naphthalene	<66.8	ug/kg	222	66.8	1	01/13/20 10:56	01/14/20 16:17	91-20-3	
Toluene	<17.4	ug/kg	58.0	17.4	1	01/13/20 10:56	01/14/20 16:17	108-88-3	
1,2,4-Trimethylbenzene	<14.3	ug/kg	47.5	14.3	1	01/13/20 10:56	01/14/20 16:17	95-63-6	
1,3,5-Trimethylbenzene	<11.4	ug/kg	37.9	11.4	1	01/13/20 10:56	01/14/20 16:17	108-67-8	
Xylene (Total)	<16.6	ug/kg	55.1	16.6	1	01/13/20 10:56	01/14/20 16:17	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	75-125		1	01/13/20 10:56	01/14/20 16:17	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 16:17	2037-26-5	
4-Bromofluorobenzene (S)	99	%	75-125		1	01/13/20 10:56	01/14/20 16:17	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-7_2-4 **Lab ID: 10504984013** Collected: 01/06/20 14:30 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<4.8	mg/kg	15.8	4.8	1	01/10/20 15:03	01/12/20 17:50		
Surrogates									
n-Triacontane (S)	84	%	50-150		1	01/10/20 15:03	01/12/20 17:50	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	23.0	%	0.10	0.10	1		01/14/20 12:29		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.7	ug/kg	12.3	3.7	1	01/13/20 10:56	01/14/20 15:58	71-43-2	
Ethylbenzene	<3.6	ug/kg	11.9	3.6	1	01/13/20 10:56	01/14/20 15:58	100-41-4	
Methyl-tert-butyl ether	<7.8	ug/kg	26.0	7.8	1	01/13/20 10:56	01/14/20 15:58	1634-04-4	
Naphthalene	<61.3	ug/kg	204	61.3	1	01/13/20 10:56	01/14/20 15:58	91-20-3	
Toluene	<16.0	ug/kg	53.2	16.0	1	01/13/20 10:56	01/14/20 15:58	108-88-3	
1,2,4-Trimethylbenzene	<13.1	ug/kg	43.6	13.1	1	01/13/20 10:56	01/14/20 15:58	95-63-6	
1,3,5-Trimethylbenzene	<10.4	ug/kg	34.8	10.4	1	01/13/20 10:56	01/14/20 15:58	108-67-8	
Xylene (Total)	<15.2	ug/kg	50.6	15.2	1	01/13/20 10:56	01/14/20 15:58	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	75-125		1	01/13/20 10:56	01/14/20 15:58	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 15:58	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-125		1	01/13/20 10:56	01/14/20 15:58	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-7_6-8 **Lab ID: 10504984014** Collected: 01/06/20 14:40 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.1	mg/kg	16.9	5.1	1	01/10/20 15:03	01/12/20 17:57		
Surrogates									
n-Triacontane (S)	84	%	50-150		1	01/10/20 15:03	01/12/20 17:57	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	27.2	%	0.10	0.10	1		01/14/20 12:30		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<4.0	ug/kg	13.4	4.0	1	01/13/20 10:56	01/14/20 16:35	71-43-2	
Ethylbenzene	<3.9	ug/kg	13.0	3.9	1	01/13/20 10:56	01/14/20 16:35	100-41-4	
Methyl-tert-butyl ether	<8.5	ug/kg	28.4	8.5	1	01/13/20 10:56	01/14/20 16:35	1634-04-4	
Naphthalene	<67.0	ug/kg	223	67.0	1	01/13/20 10:56	01/14/20 16:35	91-20-3	
Toluene	<17.5	ug/kg	58.2	17.5	1	01/13/20 10:56	01/14/20 16:35	108-88-3	
1,2,4-Trimethylbenzene	<14.3	ug/kg	47.7	14.3	1	01/13/20 10:56	01/14/20 16:35	95-63-6	
1,3,5-Trimethylbenzene	<11.4	ug/kg	38.0	11.4	1	01/13/20 10:56	01/14/20 16:35	108-67-8	
Xylene (Total)	<16.6	ug/kg	55.3	16.6	1	01/13/20 10:56	01/14/20 16:35	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%	75-125		1	01/13/20 10:56	01/14/20 16:35	17060-07-0	
Toluene-d8 (S)	102	%	75-125		1	01/13/20 10:56	01/14/20 16:35	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 16:35	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-16_6-8 **Lab ID: 10504984015** Collected: 01/06/20 14:55 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	26.5	mg/kg	16.9	5.1	1	01/10/20 15:03	01/12/20 16:26		T6
Surrogates									
n-Triacontane (S)	90	%	50-150		1	01/10/20 15:03	01/12/20 16:26	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	25.4	%	0.10	0.10	1		01/14/20 12:30		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.9	ug/kg	13.1	3.9	1	01/13/20 10:56	01/14/20 16:54	71-43-2	
Ethylbenzene	<3.8	ug/kg	12.6	3.8	1	01/13/20 10:56	01/14/20 16:54	100-41-4	
Methyl-tert-butyl ether	<8.3	ug/kg	27.6	8.3	1	01/13/20 10:56	01/14/20 16:54	1634-04-4	
Naphthalene	<65.2	ug/kg	217	65.2	1	01/13/20 10:56	01/14/20 16:54	91-20-3	
Toluene	<17.0	ug/kg	56.6	17.0	1	01/13/20 10:56	01/14/20 16:54	108-88-3	
1,2,4-Trimethylbenzene	<13.9	ug/kg	46.4	13.9	1	01/13/20 10:56	01/14/20 16:54	95-63-6	
1,3,5-Trimethylbenzene	<11.1	ug/kg	37.0	11.1	1	01/13/20 10:56	01/14/20 16:54	108-67-8	
Xylene (Total)	<16.2	ug/kg	53.8	16.2	1	01/13/20 10:56	01/14/20 16:54	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	75-125		1	01/13/20 10:56	01/14/20 16:54	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/13/20 10:56	01/14/20 16:54	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 16:54	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-6_1.5-2 **Lab ID: 10504984016** Collected: 01/06/20 15:10 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	23.6	mg/kg	17.9	5.4	1	01/10/20 15:03	01/12/20 16:19		T6
Surrogates									
n-Triacontane (S)	85	%	50-150		1	01/10/20 15:03	01/12/20 16:19	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	24.1	%	0.10	0.10	1		01/14/20 12:56		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	39.9	ug/kg	12.5	3.8	1	01/13/20 10:56	01/14/20 17:13	71-43-2	
Ethylbenzene	<3.6	ug/kg	12.1	3.6	1	01/13/20 10:56	01/14/20 17:13	100-41-4	
Methyl-tert-butyl ether	<7.9	ug/kg	26.4	7.9	1	01/13/20 10:56	01/14/20 17:13	1634-04-4	
Naphthalene	166J	ug/kg	208	62.4	1	01/13/20 10:56	01/14/20 17:13	91-20-3	
Toluene	51.2J	ug/kg	54.1	16.3	1	01/13/20 10:56	01/14/20 17:13	108-88-3	
1,2,4-Trimethylbenzene	<13.3	ug/kg	44.4	13.3	1	01/13/20 10:56	01/14/20 17:13	95-63-6	
1,3,5-Trimethylbenzene	<10.6	ug/kg	35.4	10.6	1	01/13/20 10:56	01/14/20 17:13	108-67-8	
Xylene (Total)	<15.5	ug/kg	51.5	15.5	1	01/13/20 10:56	01/14/20 17:13	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%	75-125		1	01/13/20 10:56	01/14/20 17:13	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/13/20 10:56	01/14/20 17:13	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/13/20 10:56	01/14/20 17:13	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-6_5-6 **Lab ID: 10504984017** Collected: 01/06/20 15:15 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<4.9	mg/kg	16.3	4.9	1	01/10/20 15:03	01/12/20 18:19		
Surrogates									
n-Triacontane (S)	83	%	50-150		1	01/10/20 15:03	01/12/20 18:19	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	26.4	%	0.10	0.10	1		01/14/20 12:57		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<4.0	ug/kg	13.2	4.0	1	01/14/20 10:02	01/15/20 14:30	71-43-2	
Ethylbenzene	<3.8	ug/kg	12.7	3.8	1	01/14/20 10:02	01/15/20 14:30	100-41-4	
Methyl-tert-butyl ether	<8.4	ug/kg	27.9	8.4	1	01/14/20 10:02	01/15/20 14:30	1634-04-4	
Naphthalene	<65.8	ug/kg	219	65.8	1	01/14/20 10:02	01/15/20 14:30	91-20-3	
Toluene	<17.2	ug/kg	57.2	17.2	1	01/14/20 10:02	01/15/20 14:30	108-88-3	
1,2,4-Trimethylbenzene	<14.1	ug/kg	46.9	14.1	1	01/14/20 10:02	01/15/20 14:30	95-63-6	
1,3,5-Trimethylbenzene	<11.2	ug/kg	37.3	11.2	1	01/14/20 10:02	01/15/20 14:30	108-67-8	
Xylene (Total)	<16.3	ug/kg	54.3	16.3	1	01/14/20 10:02	01/15/20 14:30	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%	75-125		1	01/14/20 10:02	01/15/20 14:30	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1	01/14/20 10:02	01/15/20 14:30	2037-26-5	
4-Bromofluorobenzene (S)	99	%	75-125		1	01/14/20 10:02	01/15/20 14:30	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-21_2-4 **Lab ID: 10504984018** Collected: 01/06/20 15:40 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<6.0	mg/kg	19.9	6.0	1	01/10/20 15:03	01/12/20 18:05		
Surrogates									
n-Triacontane (S)	86	%	50-150		1	01/10/20 15:03	01/12/20 18:05	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	24.8	%	0.10	0.10	1		01/14/20 12:57		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.6	ug/kg	12.1	3.6	1	01/14/20 10:02	01/17/20 04:57	71-43-2	
Ethylbenzene	<3.5	ug/kg	11.7	3.5	1	01/14/20 10:02	01/17/20 04:57	100-41-4	
Methyl-tert-butyl ether	<7.7	ug/kg	25.6	7.7	1	01/14/20 10:02	01/17/20 04:57	1634-04-4	
Naphthalene	<60.5	ug/kg	201	60.5	1	01/14/20 10:02	01/17/20 04:57	91-20-3	
Toluene	<15.8	ug/kg	52.5	15.8	1	01/14/20 10:02	01/17/20 04:57	108-88-3	
1,2,4-Trimethylbenzene	<12.9	ug/kg	43.0	12.9	1	01/14/20 10:02	01/17/20 04:57	95-63-6	
1,3,5-Trimethylbenzene	<10.3	ug/kg	34.3	10.3	1	01/14/20 10:02	01/17/20 04:57	108-67-8	
Xylene (Total)	<15.0	ug/kg	49.9	15.0	1	01/14/20 10:02	01/17/20 04:57	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%	75-125		1	01/14/20 10:02	01/17/20 04:57	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/14/20 10:02	01/17/20 04:57	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	01/14/20 10:02	01/17/20 04:57	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-21_6-8 **Lab ID: 10504984019** Collected: 01/06/20 15:50 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<4.9	mg/kg	16.2	4.9	1	01/10/20 15:03	01/12/20 18:12		
Surrogates									
n-Triacontane (S)	89	%	50-150		1	01/10/20 15:03	01/12/20 18:12	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	25.2	%	0.10	0.10	1		01/14/20 12:57		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.8	ug/kg	12.8	3.8	1	01/14/20 10:02	01/17/20 04:38	71-43-2	
Ethylbenzene	<3.7	ug/kg	12.3	3.7	1	01/14/20 10:02	01/17/20 04:38	100-41-4	
Methyl-tert-butyl ether	<8.1	ug/kg	26.9	8.1	1	01/14/20 10:02	01/17/20 04:38	1634-04-4	
Naphthalene	<63.6	ug/kg	212	63.6	1	01/14/20 10:02	01/17/20 04:38	91-20-3	
Toluene	<16.6	ug/kg	55.2	16.6	1	01/14/20 10:02	01/17/20 04:38	108-88-3	
1,2,4-Trimethylbenzene	<13.6	ug/kg	45.3	13.6	1	01/14/20 10:02	01/17/20 04:38	95-63-6	
1,3,5-Trimethylbenzene	<10.8	ug/kg	36.1	10.8	1	01/14/20 10:02	01/17/20 04:38	108-67-8	
Xylene (Total)	<15.8	ug/kg	52.5	15.8	1	01/14/20 10:02	01/17/20 04:38	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	75-125		1	01/14/20 10:02	01/17/20 04:38	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/14/20 10:02	01/17/20 04:38	2037-26-5	
4-Bromofluorobenzene (S)	101	%	75-125		1	01/14/20 10:02	01/17/20 04:38	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: Field Blank **Lab ID: 10504984020** Collected: 01/06/20 15:20 Received: 01/10/20 08:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<2.8	ug/kg	9.4	2.8	1	01/14/20 10:02	01/15/20 06:26	71-43-2	
Ethylbenzene	<2.7	ug/kg	9.1	2.7	1	01/14/20 10:02	01/15/20 06:26	100-41-4	
Methyl-tert-butyl ether	<6.0	ug/kg	19.8	6.0	1	01/14/20 10:02	01/15/20 06:26	1634-04-4	
Naphthalene	<46.8	ug/kg	156	46.8	1	01/14/20 10:02	01/15/20 06:26	91-20-3	
Toluene	<12.2	ug/kg	40.6	12.2	1	01/14/20 10:02	01/15/20 06:26	108-88-3	
1,2,4-Trimethylbenzene	<10.0	ug/kg	33.3	10.0	1	01/14/20 10:02	01/15/20 06:26	95-63-6	
1,3,5-Trimethylbenzene	<8.0	ug/kg	26.5	8.0	1	01/14/20 10:02	01/15/20 06:26	108-67-8	
Xylene (Total)	<11.6	ug/kg	38.6	11.6	1	01/14/20 10:02	01/15/20 06:26	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	75-125		1	01/14/20 10:02	01/15/20 06:26	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/14/20 10:02	01/15/20 06:26	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	01/14/20 10:02	01/15/20 06:26	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II
Pace Project No.: 10504984

Sample: SB-22_2-4 **Lab ID: 10504984021** Collected: 01/07/20 09:15 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<4.5	mg/kg	14.9	4.5	1	01/10/20 15:03	01/12/20 18:26		
Surrogates									
n-Triacontane (S)	88	%	50-150		1	01/10/20 15:03	01/12/20 18:26	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	24.3	%	0.10	0.10	1		01/14/20 12:57		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.7	ug/kg	12.2	3.7	1	01/15/20 11:36	01/18/20 02:41	71-43-2	
Ethylbenzene	<3.5	ug/kg	11.8	3.5	1	01/15/20 11:36	01/18/20 02:41	100-41-4	
Methyl-tert-butyl ether	<7.7	ug/kg	25.8	7.7	1	01/15/20 11:36	01/18/20 02:41	1634-04-4	
Naphthalene	<60.9	ug/kg	203	60.9	1	01/15/20 11:36	01/18/20 02:41	91-20-3	
Toluene	<15.9	ug/kg	52.9	15.9	1	01/15/20 11:36	01/18/20 02:41	108-88-3	
1,2,4-Trimethylbenzene	<13.0	ug/kg	43.3	13.0	1	01/15/20 11:36	01/16/20 02:08	95-63-6	
1,3,5-Trimethylbenzene	<10.4	ug/kg	34.5	10.4	1	01/15/20 11:36	01/18/20 02:41	108-67-8	
Xylene (Total)	<15.1	ug/kg	50.3	15.1	1	01/15/20 11:36	01/18/20 02:41	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 02:41	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 02:41	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/15/20 11:36	01/18/20 02:41	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-22_6-8 **Lab ID: 10504984022** Collected: 01/07/20 09:25 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.6	mg/kg	18.8	5.6	1	01/10/20 15:42	01/12/20 13:53		
Surrogates									
n-Triacontane (S)	83	%	50-150		1	01/10/20 15:42	01/12/20 13:53	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	25.2	%	0.10	0.10	1		01/14/20 12:57		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.7	ug/kg	12.4	3.7	1	01/15/20 11:36	01/18/20 03:00	71-43-2	
Ethylbenzene	<3.6	ug/kg	11.9	3.6	1	01/15/20 11:36	01/18/20 03:00	100-41-4	
Methyl-tert-butyl ether	<7.8	ug/kg	26.1	7.8	1	01/15/20 11:36	01/18/20 03:00	1634-04-4	
Naphthalene	<61.7	ug/kg	206	61.7	1	01/15/20 11:36	01/18/20 03:00	91-20-3	
Toluene	<16.1	ug/kg	53.6	16.1	1	01/15/20 11:36	01/18/20 03:00	108-88-3	
1,2,4-Trimethylbenzene	<13.2	ug/kg	43.9	13.2	1	01/15/20 11:36	01/16/20 02:27	95-63-6	
1,3,5-Trimethylbenzene	<10.5	ug/kg	35.0	10.5	1	01/15/20 11:36	01/18/20 03:00	108-67-8	
Xylene (Total)	<15.3	ug/kg	51.0	15.3	1	01/15/20 11:36	01/18/20 03:00	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	75-125		1	01/15/20 11:36	01/18/20 03:00	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 03:00	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/15/20 11:36	01/18/20 03:00	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-23_6-8 **Lab ID: 10504984023** Collected: 01/07/20 09:50 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<4.4	mg/kg	14.7	4.4	1	01/10/20 15:42	01/12/20 13:39		
Surrogates									
n-Triacontane (S)	85	%	50-150		1	01/10/20 15:42	01/12/20 13:39	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	23.4	%	0.10	0.10	1		01/14/20 12:57		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.7	ug/kg	12.5	3.7	1	01/15/20 11:36	01/18/20 03:19	71-43-2	
Ethylbenzene	<3.6	ug/kg	12.0	3.6	1	01/15/20 11:36	01/18/20 03:19	100-41-4	
Methyl-tert-butyl ether	<7.9	ug/kg	26.3	7.9	1	01/15/20 11:36	01/18/20 03:19	1634-04-4	
Naphthalene	<62.1	ug/kg	207	62.1	1	01/15/20 11:36	01/18/20 03:19	91-20-3	
Toluene	<16.2	ug/kg	53.9	16.2	1	01/15/20 11:36	01/18/20 03:19	108-88-3	
1,2,4-Trimethylbenzene	<13.3	ug/kg	44.2	13.3	1	01/15/20 11:36	01/16/20 02:46	95-63-6	
1,3,5-Trimethylbenzene	<10.6	ug/kg	35.2	10.6	1	01/15/20 11:36	01/18/20 03:19	108-67-8	
Xylene (Total)	<15.4	ug/kg	51.3	15.4	1	01/15/20 11:36	01/18/20 03:19	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	75-125		1	01/15/20 11:36	01/18/20 03:19	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 03:19	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/15/20 11:36	01/18/20 03:19	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-29_2-4 **Lab ID: 10504984024** Collected: 01/07/20 10:20 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	14.0J	mg/kg	15.4	4.6	1	01/10/20 15:42	01/12/20 13:46		
Surrogates									
n-Triacontane (S)	84	%	50-150		1	01/10/20 15:42	01/12/20 13:46	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	24.0	%	0.10	0.10	1		01/14/20 12:57		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.6	ug/kg	12.0	3.6	1	01/15/20 11:36	01/18/20 03:38	71-43-2	
Ethylbenzene	<3.5	ug/kg	11.6	3.5	1	01/15/20 11:36	01/18/20 03:38	100-41-4	
Methyl-tert-butyl ether	<7.6	ug/kg	25.4	7.6	1	01/15/20 11:36	01/18/20 03:38	1634-04-4	
Naphthalene	<60.0	ug/kg	200	60.0	1	01/15/20 11:36	01/18/20 03:38	91-20-3	
Toluene	<15.6	ug/kg	52.1	15.6	1	01/15/20 11:36	01/18/20 03:38	108-88-3	
1,2,4-Trimethylbenzene	<12.8	ug/kg	42.7	12.8	1	01/15/20 11:36	01/16/20 03:24	95-63-6	
1,3,5-Trimethylbenzene	<10.2	ug/kg	34.0	10.2	1	01/15/20 11:36	01/18/20 03:38	108-67-8	
Xylene (Total)	<14.9	ug/kg	49.5	14.9	1	01/15/20 11:36	01/18/20 03:38	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	75-125		1	01/15/20 11:36	01/18/20 03:38	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 03:38	2037-26-5	
4-Bromofluorobenzene (S)	99	%	75-125		1	01/15/20 11:36	01/18/20 03:38	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-29_6-8 **Lab ID: 10504984025** Collected: 01/07/20 10:25 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<5.3	mg/kg	17.7	5.3	1	01/10/20 15:42	01/12/20 14:00		
Surrogates									
n-Triacontane (S)	88	%	50-150		1	01/10/20 15:42	01/12/20 14:00	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	29.3	%	0.10	0.10	1		01/14/20 12:57		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.9	ug/kg	12.9	3.9	1	01/15/20 11:36	01/18/20 03:57	71-43-2	
Ethylbenzene	<3.7	ug/kg	12.4	3.7	1	01/15/20 11:36	01/18/20 03:57	100-41-4	
Methyl-tert-butyl ether	<8.2	ug/kg	27.1	8.2	1	01/15/20 11:36	01/18/20 03:57	1634-04-4	
Naphthalene	<64.1	ug/kg	213	64.1	1	01/15/20 11:36	01/18/20 03:57	91-20-3	
Toluene	<16.7	ug/kg	55.7	16.7	1	01/15/20 11:36	01/18/20 03:57	108-88-3	
1,2,4-Trimethylbenzene	<13.7	ug/kg	45.6	13.7	1	01/15/20 11:36	01/16/20 03:05	95-63-6	
1,3,5-Trimethylbenzene	<10.9	ug/kg	36.4	10.9	1	01/15/20 11:36	01/18/20 03:57	108-67-8	
Xylene (Total)	<15.9	ug/kg	52.9	15.9	1	01/15/20 11:36	01/18/20 03:57	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	75-125		1	01/15/20 11:36	01/18/20 03:57	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 03:57	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1	01/15/20 11:36	01/18/20 03:57	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-27_2-4 **Lab ID: 10504984026** Collected: 01/07/20 10:40 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.0	mg/kg	16.8	5.0	1	01/10/20 15:42	01/12/20 14:07		
Surrogates									
n-Triacontane (S)	91	%	50-150		1	01/10/20 15:42	01/12/20 14:07	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	25.8	%	0.10	0.10	1		01/14/20 12:58		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.7	ug/kg	12.3	3.7	1	01/15/20 11:36	01/18/20 04:16	71-43-2	
Ethylbenzene	<3.6	ug/kg	11.9	3.6	1	01/15/20 11:36	01/18/20 04:16	100-41-4	
Methyl-tert-butyl ether	<7.8	ug/kg	26.0	7.8	1	01/15/20 11:36	01/18/20 04:16	1634-04-4	
Naphthalene	<61.3	ug/kg	204	61.3	1	01/15/20 11:36	01/18/20 04:16	91-20-3	
Toluene	<16.0	ug/kg	53.2	16.0	1	01/15/20 11:36	01/18/20 04:16	108-88-3	
1,2,4-Trimethylbenzene	<13.1	ug/kg	43.6	13.1	1	01/15/20 11:36	01/16/20 03:43	95-63-6	
1,3,5-Trimethylbenzene	<10.4	ug/kg	34.8	10.4	1	01/15/20 11:36	01/18/20 04:16	108-67-8	
Xylene (Total)	<15.2	ug/kg	50.6	15.2	1	01/15/20 11:36	01/18/20 04:16	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 04:16	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 04:16	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1	01/15/20 11:36	01/18/20 04:16	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-27_6-8 **Lab ID: 10504984027** Collected: 01/07/20 10:45 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<4.8	mg/kg	16.1	4.8	1	01/10/20 15:42	01/12/20 14:14		
Surrogates									
n-Triacontane (S)	85	%	50-150		1	01/10/20 15:42	01/12/20 14:14	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	26.4	%	0.10	0.10	1		01/14/20 12:58		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.8	ug/kg	12.5	3.8	1	01/15/20 11:36	01/18/20 04:35	71-43-2	
Ethylbenzene	<3.6	ug/kg	12.1	3.6	1	01/15/20 11:36	01/18/20 04:35	100-41-4	
Methyl-tert-butyl ether	<7.9	ug/kg	26.4	7.9	1	01/15/20 11:36	01/18/20 04:35	1634-04-4	
Naphthalene	<62.4	ug/kg	208	62.4	1	01/15/20 11:36	01/18/20 04:35	91-20-3	
Toluene	<16.3	ug/kg	54.2	16.3	1	01/15/20 11:36	01/18/20 04:35	108-88-3	
1,2,4-Trimethylbenzene	<13.3	ug/kg	44.4	13.3	1	01/15/20 11:36	01/16/20 04:02	95-63-6	
1,3,5-Trimethylbenzene	<10.6	ug/kg	35.4	10.6	1	01/15/20 11:36	01/18/20 04:35	108-67-8	
Xylene (Total)	<15.5	ug/kg	51.5	15.5	1	01/15/20 11:36	01/18/20 04:35	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	75-125		1	01/15/20 11:36	01/18/20 04:35	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 04:35	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/15/20 11:36	01/18/20 04:35	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-28_6-8 **Lab ID: 10504984028** Collected: 01/07/20 11:00 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.1	mg/kg	17.0	5.1	1	01/10/20 15:42	01/12/20 14:21		
Surrogates									
n-Triacontane (S)	84	%	50-150		1	01/10/20 15:42	01/12/20 14:21	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	27.1	%	0.10	0.10	1		01/14/20 12:58		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.7	ug/kg	12.3	3.7	1	01/15/20 11:36	01/18/20 04:54	71-43-2	
Ethylbenzene	<3.6	ug/kg	11.8	3.6	1	01/15/20 11:36	01/18/20 04:54	100-41-4	
Methyl-tert-butyl ether	<7.8	ug/kg	25.9	7.8	1	01/15/20 11:36	01/18/20 04:54	1634-04-4	
Naphthalene	<61.2	ug/kg	204	61.2	1	01/15/20 11:36	01/18/20 04:54	91-20-3	
Toluene	<16.0	ug/kg	53.1	16.0	1	01/15/20 11:36	01/18/20 04:54	108-88-3	
1,2,4-Trimethylbenzene	<13.1	ug/kg	43.5	13.1	1	01/15/20 11:36	01/16/20 04:21	95-63-6	
1,3,5-Trimethylbenzene	<10.4	ug/kg	34.7	10.4	1	01/15/20 11:36	01/18/20 04:54	108-67-8	
Xylene (Total)	<15.2	ug/kg	50.5	15.2	1	01/15/20 11:36	01/18/20 04:54	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 04:54	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 04:54	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/15/20 11:36	01/18/20 04:54	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-24_6-8 **Lab ID: 10504984029** Collected: 01/07/20 11:20 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<4.9	mg/kg	16.4	4.9	1	01/10/20 15:42	01/12/20 13:10		
Surrogates									
n-Triacontane (S)	84	%	50-150		1	01/10/20 15:42	01/12/20 13:10	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	23.6	%	0.10	0.10	1		01/14/20 12:58		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.7	ug/kg	12.4	3.7	1	01/15/20 11:36	01/18/20 05:13	71-43-2	
Ethylbenzene	<3.6	ug/kg	12.0	3.6	1	01/15/20 11:36	01/18/20 05:13	100-41-4	
Methyl-tert-butyl ether	<7.9	ug/kg	26.2	7.9	1	01/15/20 11:36	01/18/20 05:13	1634-04-4	
Naphthalene	<62.0	ug/kg	206	62.0	1	01/15/20 11:36	01/18/20 05:13	91-20-3	
Toluene	<16.2	ug/kg	53.8	16.2	1	01/15/20 11:36	01/18/20 05:13	108-88-3	
1,2,4-Trimethylbenzene	<13.2	ug/kg	44.1	13.2	1	01/15/20 11:36	01/16/20 04:39	95-63-6	
1,3,5-Trimethylbenzene	<10.6	ug/kg	35.1	10.6	1	01/15/20 11:36	01/18/20 05:13	108-67-8	
Xylene (Total)	<15.4	ug/kg	51.1	15.4	1	01/15/20 11:36	01/18/20 05:13	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	75-125		1	01/15/20 11:36	01/18/20 05:13	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 05:13	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1	01/15/20 11:36	01/18/20 05:13	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-25_6-8 **Lab ID: 10504984030** Collected: 01/07/20 11:45 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	15.5J	mg/kg	18.4	5.5	1	01/10/20 15:42	01/12/20 13:32		
Surrogates									
n-Triacontane (S)	79	%	50-150		1	01/10/20 15:42	01/12/20 13:32	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	34.5	%	0.10	0.10	1		01/14/20 12:58		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<4.6	ug/kg	15.2	4.6	1	01/17/20 09:57	01/18/20 05:32	71-43-2	
Ethylbenzene	<4.4	ug/kg	14.7	4.4	1	01/17/20 09:57	01/18/20 05:32	100-41-4	
Methyl-tert-butyl ether	<9.7	ug/kg	32.1	9.7	1	01/17/20 09:57	01/18/20 05:32	1634-04-4	
Naphthalene	<75.9	ug/kg	253	75.9	1	01/17/20 09:57	01/18/20 05:32	91-20-3	
Toluene	<19.8	ug/kg	65.9	19.8	1	01/17/20 09:57	01/18/20 05:32	108-88-3	
1,2,4-Trimethylbenzene	<16.2	ug/kg	54.0	16.2	1	01/17/20 09:57	01/18/20 05:32	95-63-6	
1,3,5-Trimethylbenzene	<12.9	ug/kg	43.1	12.9	1	01/17/20 09:57	01/18/20 05:32	108-67-8	
Xylene (Total)	<18.8	ug/kg	62.7	18.8	1	01/17/20 09:57	01/18/20 05:32	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	75-125		1	01/17/20 09:57	01/18/20 05:32	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1	01/17/20 09:57	01/18/20 05:32	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1	01/17/20 09:57	01/18/20 05:32	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-26_2-4 **Lab ID: 10504984031** Collected: 01/07/20 12:35 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<4.8	mg/kg	16.1	4.8	1	01/10/20 15:42	01/12/20 14:28		
Surrogates									
n-Triacontane (S)	85	%	50-150		1	01/10/20 15:42	01/12/20 14:28	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	25.5	%	0.10	0.10	1		01/14/20 12:58		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.9	ug/kg	13.0	3.9	1	01/15/20 11:36	01/18/20 05:50	71-43-2	
Ethylbenzene	<3.8	ug/kg	12.6	3.8	1	01/15/20 11:36	01/18/20 05:50	100-41-4	
Methyl-tert-butyl ether	<8.3	ug/kg	27.5	8.3	1	01/15/20 11:36	01/18/20 05:50	1634-04-4	
Naphthalene	<64.9	ug/kg	216	64.9	1	01/15/20 11:36	01/18/20 05:50	91-20-3	
Toluene	<16.9	ug/kg	56.4	16.9	1	01/15/20 11:36	01/18/20 05:50	108-88-3	
1,2,4-Trimethylbenzene	<13.9	ug/kg	46.2	13.9	1	01/15/20 11:36	01/16/20 05:17	95-63-6	
1,3,5-Trimethylbenzene	<11.1	ug/kg	36.8	11.1	1	01/15/20 11:36	01/18/20 05:50	108-67-8	
Xylene (Total)	<16.1	ug/kg	53.6	16.1	1	01/15/20 11:36	01/18/20 05:50	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 05:50	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 05:50	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/15/20 11:36	01/18/20 05:50	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-26_6-8 **Lab ID: 10504984032** Collected: 01/07/20 12:45 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.3	mg/kg	17.6	5.3	1	01/10/20 15:42	01/12/20 14:35		
Surrogates									
n-Triacontane (S)	89	%	50-150		1	01/10/20 15:42	01/12/20 14:35	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	29.5	%	0.10	0.10	1		01/14/20 12:59		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.9	ug/kg	13.0	3.9	1	01/15/20 11:36	01/18/20 06:09	71-43-2	
Ethylbenzene	<3.8	ug/kg	12.5	3.8	1	01/15/20 11:36	01/18/20 06:09	100-41-4	
Methyl-tert-butyl ether	<8.2	ug/kg	27.4	8.2	1	01/15/20 11:36	01/18/20 06:09	1634-04-4	
Naphthalene	<64.7	ug/kg	215	64.7	1	01/15/20 11:36	01/18/20 06:09	91-20-3	
Toluene	<16.9	ug/kg	56.2	16.9	1	01/15/20 11:36	01/18/20 06:09	108-88-3	
1,2,4-Trimethylbenzene	<13.8	ug/kg	46.0	13.8	1	01/15/20 11:36	01/16/20 05:36	95-63-6	
1,3,5-Trimethylbenzene	<11.0	ug/kg	36.7	11.0	1	01/15/20 11:36	01/18/20 06:09	108-67-8	
Xylene (Total)	<16.0	ug/kg	53.4	16.0	1	01/15/20 11:36	01/18/20 06:09	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 06:09	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1	01/15/20 11:36	01/18/20 06:09	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/15/20 11:36	01/18/20 06:09	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-19_6-8 **Lab ID: 10504984033** Collected: 01/07/20 13:10 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<5.0	mg/kg	16.7	5.0	1	01/10/20 15:42	01/12/20 14:56		
Surrogates									
n-Triacontane (S)	82	%	50-150		1	01/10/20 15:42	01/12/20 14:56	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	24.5	%	0.10	0.10	1		01/14/20 12:59		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.9	ug/kg	12.9	3.9	1	01/15/20 11:36	01/18/20 06:28	71-43-2	
Ethylbenzene	<3.7	ug/kg	12.5	3.7	1	01/15/20 11:36	01/18/20 06:28	100-41-4	
Methyl-tert-butyl ether	<8.2	ug/kg	27.3	8.2	1	01/15/20 11:36	01/18/20 06:28	1634-04-4	
Naphthalene	<64.4	ug/kg	214	64.4	1	01/15/20 11:36	01/18/20 06:28	91-20-3	
Toluene	<16.8	ug/kg	55.9	16.8	1	01/15/20 11:36	01/18/20 06:28	108-88-3	
1,2,4-Trimethylbenzene	<13.8	ug/kg	45.8	13.8	1	01/15/20 11:36	01/16/20 05:55	95-63-6	
1,3,5-Trimethylbenzene	<11.0	ug/kg	36.5	11.0	1	01/15/20 11:36	01/18/20 06:28	108-67-8	
Xylene (Total)	<16.0	ug/kg	53.1	16.0	1	01/15/20 11:36	01/18/20 06:28	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 06:28	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 06:28	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1	01/15/20 11:36	01/18/20 06:28	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-18_2-4 **Lab ID: 10504984034** Collected: 01/07/20 13:30 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.1	mg/kg	16.9	5.1	1	01/10/20 15:42	01/12/20 15:03		
Surrogates									
n-Triacontane (S)	88	%	50-150		1	01/10/20 15:42	01/12/20 15:03	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	24.8	%	0.10	0.10	1		01/14/20 12:59		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.8	ug/kg	12.6	3.8	1	01/15/20 11:36	01/18/20 06:47	71-43-2	
Ethylbenzene	<3.6	ug/kg	12.2	3.6	1	01/15/20 11:36	01/18/20 06:47	100-41-4	
Methyl-tert-butyl ether	<8.0	ug/kg	26.6	8.0	1	01/15/20 11:36	01/18/20 06:47	1634-04-4	
Naphthalene	<62.8	ug/kg	209	62.8	1	01/15/20 11:36	01/18/20 06:47	91-20-3	
Toluene	<16.4	ug/kg	54.5	16.4	1	01/15/20 11:36	01/18/20 06:47	108-88-3	
1,2,4-Trimethylbenzene	<13.4	ug/kg	44.7	13.4	1	01/15/20 11:36	01/16/20 06:13	95-63-6	
1,3,5-Trimethylbenzene	<10.7	ug/kg	35.6	10.7	1	01/15/20 11:36	01/18/20 06:47	108-67-8	
Xylene (Total)	<15.6	ug/kg	51.8	15.6	1	01/15/20 11:36	01/18/20 06:47	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 06:47	17060-07-0	
Toluene-d8 (S)	99	%	75-125		1	01/15/20 11:36	01/18/20 06:47	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1	01/15/20 11:36	01/18/20 06:47	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-18_6-8 **Lab ID: 10504984035** Collected: 01/07/20 13:40 Received: 01/10/20 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
WIDRO GCS		Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO							
WDRO C10-C28	<5.1	mg/kg	17.1	5.1	1	01/10/20 15:42	01/12/20 15:10		
Surrogates									
n-Triacontane (S)	85	%	50-150		1	01/10/20 15:42	01/12/20 15:10	638-68-6	
Dry Weight / %M by ASTM D2974		Analytical Method: ASTM D2974							
Percent Moisture	27.2	%	0.10	0.10	1		01/14/20 12:59		N2
8260B MSV UST		Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B							
Benzene	<3.9	ug/kg	12.9	3.9	1	01/15/20 11:36	01/18/20 07:06	71-43-2	
Ethylbenzene	<3.7	ug/kg	12.5	3.7	1	01/15/20 11:36	01/18/20 07:06	100-41-4	
Methyl-tert-butyl ether	<8.2	ug/kg	27.3	8.2	1	01/15/20 11:36	01/18/20 07:06	1634-04-4	
Naphthalene	<64.4	ug/kg	214	64.4	1	01/15/20 11:36	01/18/20 07:06	91-20-3	
Toluene	<16.8	ug/kg	55.9	16.8	1	01/15/20 11:36	01/18/20 07:06	108-88-3	
1,2,4-Trimethylbenzene	<13.8	ug/kg	45.8	13.8	1	01/15/20 11:36	01/16/20 06:32	95-63-6	
1,3,5-Trimethylbenzene	<11.0	ug/kg	36.5	11.0	1	01/15/20 11:36	01/18/20 07:06	108-67-8	
Xylene (Total)	<16.0	ug/kg	53.2	16.0	1	01/15/20 11:36	01/18/20 07:06	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%	75-125		1	01/15/20 11:36	01/18/20 07:06	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 07:06	2037-26-5	
4-Bromofluorobenzene (S)	96	%	75-125		1	01/15/20 11:36	01/18/20 07:06	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: SB-17_6-8 **Lab ID: 10504984036** Collected: 01/07/20 14:05 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<5.1	mg/kg	17.1	5.1	1	01/10/20 15:42	01/12/20 15:17		
Surrogates									
n-Triacontane (S)	88	%	50-150		1	01/10/20 15:42	01/12/20 15:17	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	26.2	%	0.10	0.10	1		01/15/20 10:12		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.8	ug/kg	12.8	3.8	1	01/15/20 11:36	01/18/20 07:25	71-43-2	
Ethylbenzene	<3.7	ug/kg	12.4	3.7	1	01/15/20 11:36	01/18/20 07:25	100-41-4	
Methyl-tert-butyl ether	<8.1	ug/kg	27.0	8.1	1	01/15/20 11:36	01/18/20 07:25	1634-04-4	
Naphthalene	<63.9	ug/kg	213	63.9	1	01/15/20 11:36	01/18/20 07:25	91-20-3	
Toluene	<16.7	ug/kg	55.5	16.7	1	01/15/20 11:36	01/18/20 07:25	108-88-3	
1,2,4-Trimethylbenzene	<13.6	ug/kg	45.5	13.6	1	01/15/20 11:36	01/16/20 06:51	95-63-6	
1,3,5-Trimethylbenzene	<10.9	ug/kg	36.2	10.9	1	01/15/20 11:36	01/18/20 07:25	108-67-8	
Xylene (Total)	<15.8	ug/kg	52.7	15.8	1	01/15/20 11:36	01/18/20 07:25	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 07:25	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 07:25	2037-26-5	
4-Bromofluorobenzene (S)	96	%	75-125		1	01/15/20 11:36	01/18/20 07:25	460-00-4	

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II
Pace Project No.: 10504984

Sample: SB-20_6-8 **Lab ID: 10504984037** Collected: 01/07/20 14:20 Received: 01/10/20 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
WIDRO GCS									
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO									
WDRO C10-C28	<4.9	mg/kg	16.4	4.9	1	01/10/20 15:42	01/12/20 14:42		
Surrogates									
n-Triacontane (S)	82	%	50-150		1	01/10/20 15:42	01/12/20 14:42	638-68-6	
Dry Weight / %M by ASTM D2974									
Analytical Method: ASTM D2974									
Percent Moisture	25.7	%	0.10	0.10	1		01/15/20 10:12		N2
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<3.7	ug/kg	12.4	3.7	1	01/15/20 11:36	01/18/20 07:44	71-43-2	
Ethylbenzene	<3.6	ug/kg	11.9	3.6	1	01/15/20 11:36	01/18/20 07:44	100-41-4	
Methyl-tert-butyl ether	<7.8	ug/kg	26.1	7.8	1	01/15/20 11:36	01/18/20 07:44	1634-04-4	
Naphthalene	<61.7	ug/kg	205	61.7	1	01/15/20 11:36	01/18/20 07:44	91-20-3	
Toluene	<16.1	ug/kg	53.5	16.1	1	01/15/20 11:36	01/18/20 07:44	108-88-3	
1,2,4-Trimethylbenzene	<13.2	ug/kg	43.9	13.2	1	01/15/20 11:36	01/16/20 07:10	95-63-6	
1,3,5-Trimethylbenzene	<10.5	ug/kg	35.0	10.5	1	01/15/20 11:36	01/18/20 07:44	108-67-8	
Xylene (Total)	<15.3	ug/kg	50.9	15.3	1	01/15/20 11:36	01/18/20 07:44	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 07:44	17060-07-0	
Toluene-d8 (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 07:44	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1	01/15/20 11:36	01/18/20 07:44	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Sample: Trip Blank **Lab ID: 10504984038** Collected: 01/07/20 00:00 Received: 01/10/20 08:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV UST									
Analytical Method: EPA 8260B Preparation Method: EPA 5035/5030B									
Benzene	<2.8	ug/kg	9.4	2.8	1	01/15/20 11:36	01/18/20 02:04	71-43-2	
Ethylbenzene	<2.7	ug/kg	9.1	2.7	1	01/15/20 11:36	01/18/20 02:04	100-41-4	
Methyl-tert-butyl ether	<6.0	ug/kg	19.8	6.0	1	01/15/20 11:36	01/18/20 02:04	1634-04-4	
Naphthalene	<46.8	ug/kg	156	46.8	1	01/15/20 11:36	01/18/20 02:04	91-20-3	
Toluene	<12.2	ug/kg	40.6	12.2	1	01/15/20 11:36	01/18/20 02:04	108-88-3	
1,2,4-Trimethylbenzene	<10.0	ug/kg	33.3	10.0	1	01/15/20 11:36	01/16/20 01:49	95-63-6	
1,3,5-Trimethylbenzene	<8.0	ug/kg	26.5	8.0	1	01/15/20 11:36	01/18/20 02:04	108-67-8	
Xylene (Total)	<11.6	ug/kg	38.6	11.6	1	01/15/20 11:36	01/18/20 02:04	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 02:04	17060-07-0	
Toluene-d8 (S)	101	%	75-125		1	01/15/20 11:36	01/18/20 02:04	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		1	01/15/20 11:36	01/18/20 02:04	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

QC Batch: 654419

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight / %M by ASTM D2974

Associated Lab Samples: 10504984001, 10504984002, 10504984003, 10504984004, 10504984005, 10504984006, 10504984007, 10504984008, 10504984009, 10504984010, 10504984011, 10504984012, 10504984013, 10504984014, 10504984015

SAMPLE DUPLICATE: 3518067

Parameter	Units	10504984015 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	25.4	25.0	2	30	N2

SAMPLE DUPLICATE: 3518350

Parameter	Units	10504967006 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.3	16.2	0	30	N2

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

QC Batch: 654420 Analysis Method: ASTM D2974
 QC Batch Method: ASTM D2974 Analysis Description: Dry Weight / %M by ASTM D2974
 Associated Lab Samples: 10504984016, 10504984017, 10504984018, 10504984019, 10504984021, 10504984022, 10504984023,
 10504984024, 10504984025, 10504984026, 10504984027, 10504984028, 10504984029, 10504984030,
 10504984031, 10504984032, 10504984033, 10504984034, 10504984035

SAMPLE DUPLICATE: 3518069

Parameter	Units	10504984016 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	24.1	26.0	7	30	N2

SAMPLE DUPLICATE: 3518070

Parameter	Units	10504984035 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	27.2	25.9	5	30	N2

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

QC Batch: 654665

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight / %M by ASTM D2974

Associated Lab Samples: 10504984036, 10504984037

SAMPLE DUPLICATE: 3519132

Parameter	Units	10505286001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.8	17.4	4	30	N2

SAMPLE DUPLICATE: 3519254

Parameter	Units	10504984037 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	25.7	27.4	7	30	N2

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

QC Batch: 654083 Analysis Method: EPA 8260B
QC Batch Method: EPA 5035/5030B Analysis Description: 8260B MSV UST
Associated Lab Samples: 10504984001, 10504984002, 10504984003

METHOD BLANK: 3516236 Matrix: Solid

Associated Lab Samples: 10504984001, 10504984002, 10504984003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<10.0	33.3	01/13/20 14:24	
1,3,5-Trimethylbenzene	ug/kg	<8.0	26.5	01/13/20 14:24	
Benzene	ug/kg	<2.8	9.4	01/13/20 14:24	
Ethylbenzene	ug/kg	<2.7	9.1	01/13/20 14:24	
Methyl-tert-butyl ether	ug/kg	<6.0	19.8	01/13/20 14:24	
Naphthalene	ug/kg	<46.8	156	01/13/20 14:24	
Toluene	ug/kg	<12.2	40.6	01/13/20 14:24	
Xylene (Total)	ug/kg	<11.6	38.6	01/13/20 14:24	
1,2-Dichloroethane-d4 (S)	%	103	75-125	01/13/20 14:24	
4-Bromofluorobenzene (S)	%	100	75-125	01/13/20 14:24	
Toluene-d8 (S)	%	101	75-125	01/13/20 14:24	

LABORATORY CONTROL SAMPLE: 3516237

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	652	65	63-126	
1,3,5-Trimethylbenzene	ug/kg	1000	652	65	64-125	
Benzene	ug/kg	1000	609	61	59-125	
Ethylbenzene	ug/kg	1000	670	67	62-125	
Methyl-tert-butyl ether	ug/kg	1000	651	65	58-125	
Naphthalene	ug/kg	1000	588	59	57-125	
Toluene	ug/kg	1000	629	63	59-125	
Xylene (Total)	ug/kg	3000	1950	65	65-125	
1,2-Dichloroethane-d4 (S)	%			98	75-125	
4-Bromofluorobenzene (S)	%			101	75-125	
Toluene-d8 (S)	%			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3516238 3516239

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10504908001 Result	Spike Conc.	Spike Conc.	Conc.								
1,2,4-Trimethylbenzene	ug/kg	ND	1080	1080	1080	969	996	90	92	53-150	3	30	
1,3,5-Trimethylbenzene	ug/kg	ND	1080	1080	1080	960	985	89	91	60-150	3	30	
Benzene	ug/kg	ND	1080	1080	1080	839	811	78	75	46-150	3	30	
Ethylbenzene	ug/kg	ND	1080	1080	1080	950	952	88	88	59-150	0	30	
Methyl-tert-butyl ether	ug/kg	ND	1080	1080	1080	937	921	87	85	50-150	2	30	
Naphthalene	ug/kg	ND	1080	1080	1080	982	1030	91	96	50-150	5	30	
Toluene	ug/kg	ND	1080	1080	1080	858	865	80	80	55-150	1	30	

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3516238		3516239		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10504908001 Result	MS Spike Conc.	MSD Spike Conc.									
Xylene (Total)	ug/kg	ND	3230	3240	2810	2840	87	88	60-150	1	30		
1,2-Dichloroethane-d4 (S)	%							100	98	75-125			
4-Bromofluorobenzene (S)	%							99	100	75-125			
Toluene-d8 (S)	%							100	100	75-125			

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

QC Batch: 654110 Analysis Method: EPA 8260B
 QC Batch Method: EPA 5035/5030B Analysis Description: 8260B MSV UST
 Associated Lab Samples: 10504984004, 10504984005, 10504984006, 10504984007, 10504984008, 10504984009, 10504984010, 10504984011, 10504984012, 10504984013, 10504984014, 10504984015, 10504984016

METHOD BLANK: 3516647 Matrix: Solid
 Associated Lab Samples: 10504984004, 10504984005, 10504984006, 10504984007, 10504984008, 10504984009, 10504984010, 10504984011, 10504984012, 10504984013, 10504984014, 10504984015, 10504984016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<10.0	33.3	01/14/20 00:29	
1,3,5-Trimethylbenzene	ug/kg	<8.0	26.5	01/14/20 00:29	
Benzene	ug/kg	<2.8	9.4	01/14/20 00:29	
Ethylbenzene	ug/kg	<2.7	9.1	01/14/20 00:29	
Methyl-tert-butyl ether	ug/kg	<6.0	19.8	01/14/20 00:29	
Naphthalene	ug/kg	<46.8	156	01/14/20 00:29	
Toluene	ug/kg	<12.2	40.6	01/14/20 00:29	
Xylene (Total)	ug/kg	<11.6	38.6	01/14/20 00:29	
1,2-Dichloroethane-d4 (S)	%	101	75-125	01/14/20 00:29	
4-Bromofluorobenzene (S)	%	100	75-125	01/14/20 00:29	
Toluene-d8 (S)	%	101	75-125	01/14/20 00:29	

LABORATORY CONTROL SAMPLE: 3516648

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	891	89	63-126	
1,3,5-Trimethylbenzene	ug/kg	1000	885	89	64-125	
Benzene	ug/kg	1000	752	75	59-125	
Ethylbenzene	ug/kg	1000	879	88	62-125	
Methyl-tert-butyl ether	ug/kg	1000	864	86	58-125	
Naphthalene	ug/kg	1000	915	92	57-125	
Toluene	ug/kg	1000	794	79	59-125	
Xylene (Total)	ug/kg	3000	2590	86	65-125	
1,2-Dichloroethane-d4 (S)	%			99	75-125	
4-Bromofluorobenzene (S)	%			97	75-125	
Toluene-d8 (S)	%			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3516649 3516650

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10505053007 Result	Spike Conc.	Spike Conc.	MS Result								
1,2,4-Trimethylbenzene	ug/kg	ND	1310	1320	1830	1440	140	110	53-150	24	30		
1,3,5-Trimethylbenzene	ug/kg	ND	1310	1320	1790	1430	137	108	60-150	23	30		
Benzene	ug/kg	ND	1310	1320	1440	1090	110	82	46-150	28	30		
Ethylbenzene	ug/kg	ND	1310	1320	1720	1320	132	100	59-150	27	30		
Methyl-tert-butyl ether	ug/kg	ND	1310	1320	1640	1290	125	98	50-150	24	30		
Naphthalene	ug/kg	ND	1310	1320	2010	1600	154	121	50-150	23	30	M1	

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3516649		3516650		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		10505053007 Result	MS Spike Conc.	MSD Spike Conc.									
Toluene	ug/kg	ND	1310	1320	1500	1150	115	87	55-150	26	30		
Xylene (Total)	ug/kg	ND	3910	3950	5080	3900	130	99	60-150	26	30		
1,2-Dichloroethane-d4 (S)	%						99	97	75-125				
4-Bromofluorobenzene (S)	%						99	100	75-125				
Toluene-d8 (S)	%						100	101	75-125				

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II
Pace Project No.: 10504984

QC Batch: 654411 Analysis Method: EPA 8260B
QC Batch Method: EPA 5035/5030B Analysis Description: 8260B MSV UST
Associated Lab Samples: 10504984017, 10504984018, 10504984019, 10504984020

METHOD BLANK: 3518038 Matrix: Solid
Associated Lab Samples: 10504984017, 10504984018, 10504984019, 10504984020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<10.0	33.3	01/15/20 02:01	
1,3,5-Trimethylbenzene	ug/kg	<8.0	26.5	01/15/20 02:01	
Benzene	ug/kg	<2.8	9.4	01/15/20 02:01	
Ethylbenzene	ug/kg	<2.7	9.1	01/15/20 02:01	
Methyl-tert-butyl ether	ug/kg	<6.0	19.8	01/15/20 02:01	
Naphthalene	ug/kg	<46.8	156	01/15/20 02:01	
Toluene	ug/kg	<12.2	40.6	01/15/20 02:01	
Xylene (Total)	ug/kg	<11.6	38.6	01/15/20 02:01	
1,2-Dichloroethane-d4 (S)	%	98	75-125	01/15/20 02:01	
4-Bromofluorobenzene (S)	%	99	75-125	01/15/20 02:01	
Toluene-d8 (S)	%	100	75-125	01/15/20 02:01	

LABORATORY CONTROL SAMPLE: 3518039

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	203	167	82	63-126	
1,3,5-Trimethylbenzene	ug/kg	203	164	80	64-125	
Benzene	ug/kg	203	161	79	59-125	
Ethylbenzene	ug/kg	203	167	82	62-125	
Methyl-tert-butyl ether	ug/kg	203	155	76	58-125	
Naphthalene	ug/kg	203	165	81	57-125	
Toluene	ug/kg	203	160	79	59-125	
Xylene (Total)	ug/kg	610	493	81	65-125	
1,2-Dichloroethane-d4 (S)	%			99	75-125	
4-Bromofluorobenzene (S)	%			100	75-125	
Toluene-d8 (S)	%			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3518040 3518041

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10504962001 Result	Spike Conc.	Spike Conc.	MS Result								
1,2,4-Trimethylbenzene	ug/kg	16000	1160	1150	17200	20700	102	410	53-150	18	30	E,M1	
1,3,5-Trimethylbenzene	ug/kg	4640	1160	1150	6380	7830	149	278	60-150	20	30	M1	
Benzene	ug/kg	ND	1160	1150	1190	1280	102	112	46-150	7	30		
Ethylbenzene	ug/kg	8320	1160	1150	10100	12500	158	365	59-150	21	30	M1	
Methyl-tert-butyl ether	ug/kg	ND	1160	1150	1140	1230	98	107	50-150	8	30		
Naphthalene	ug/kg	3970	1160	1150	5940	7330	170	293	50-150	21	30	M1	
Toluene	ug/kg	287	1160	1150	1480	1730	103	126	55-150	16	30		

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		3518040		3518041								
Parameter	Units	10504962001	MS	MSD	MS	MSD	MS	MSD	% Rec	Max		Qual
		Result	Spike	Spike	Result	Result	% Rec	% Rec	Limits	RPD	RPD	
Xylene (Total)	ug/kg	31100	3480	3430	36700	44600	162	395	60-150	19	30	ES,MS
1,2-Dichloroethane-d4 (S)	%						100	104	75-125			
4-Bromofluorobenzene (S)	%						99	100	75-125			
Toluene-d8 (S)	%						100	100	75-125			

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II
Pace Project No.: 10504984

QC Batch: 654717 Analysis Method: EPA 8260B
QC Batch Method: EPA 5035/5030B Analysis Description: 8260B MSV UST
Associated Lab Samples: 10504984021, 10504984022, 10504984023, 10504984024, 10504984025, 10504984026, 10504984027, 10504984028, 10504984029, 10504984030, 10504984031, 10504984032, 10504984033, 10504984034, 10504984035, 10504984036, 10504984037, 10504984038

METHOD BLANK: 3519456 Matrix: Solid
Associated Lab Samples: 10504984021, 10504984022, 10504984023, 10504984024, 10504984025, 10504984026, 10504984027, 10504984028, 10504984029, 10504984030, 10504984031, 10504984032, 10504984033, 10504984034, 10504984035, 10504984036, 10504984037, 10504984038

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<10.0	33.3	01/16/20 01:31	
1,3,5-Trimethylbenzene	ug/kg	<8.0	26.5	01/18/20 01:45	
Benzene	ug/kg	<2.8	9.4	01/18/20 01:45	
Ethylbenzene	ug/kg	<2.7	9.1	01/18/20 01:45	
Methyl-tert-butyl ether	ug/kg	<6.0	19.8	01/18/20 01:45	
Naphthalene	ug/kg	<46.8	156	01/18/20 01:45	
Toluene	ug/kg	<12.2	40.6	01/18/20 01:45	
Xylene (Total)	ug/kg	<11.6	38.6	01/18/20 01:45	
1,2-Dichloroethane-d4 (S)	%	100	75-125	01/18/20 01:45	
4-Bromofluorobenzene (S)	%	97	75-125	01/18/20 01:45	
Toluene-d8 (S)	%	101	75-125	01/18/20 01:45	

LABORATORY CONTROL SAMPLE: 3519457

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	1000	868	87	63-126	
1,3,5-Trimethylbenzene	ug/kg	1000	894	89	64-125	
Benzene	ug/kg	1000	587	59	59-125	
Ethylbenzene	ug/kg	1000	754	75	62-125	
Methyl-tert-butyl ether	ug/kg	1000	696	70	58-125	
Naphthalene	ug/kg	1000	939	94	57-125	
Toluene	ug/kg	1000	628	63	59-125	
Xylene (Total)	ug/kg	3000	2330	78	65-125	
1,2-Dichloroethane-d4 (S)	%			97	75-125	
4-Bromofluorobenzene (S)	%			101	75-125	
Toluene-d8 (S)	%			99	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3519458 3519459

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10504984021 Result	Spike Conc.	Spike Conc.	Conc.								
1,2,4-Trimethylbenzene	ug/kg	<13.0	1270	1270	1530	1430	120	112	53-150	7	30		
1,3,5-Trimethylbenzene	ug/kg	<10.4	1270	1270	1220	1240	96	97	60-150	2	30		
Benzene	ug/kg	<3.7	1270	1270	1100	1120	86	88	46-150	2	30		
Ethylbenzene	ug/kg	<3.5	1270	1270	1160	1170	91	92	59-150	2	30		

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Parameter	Units	3519458		3519459		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		10504984021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Methyl-tert-butyl ether	ug/kg	<7.7	1270	1270	1000	969	79	76	50-150	4	30	
Naphthalene	ug/kg	<60.9	1270	1270	1040	1060	82	83	50-150	2	30	
Toluene	ug/kg	<15.9	1270	1270	1090	1090	85	86	55-150	0	30	
Xylene (Total)	ug/kg	<15.1	3820	3820	3620	3650	95	96	60-150	1	30	
1,2-Dichloroethane-d4 (S)	%						98	98	75-125			
4-Bromofluorobenzene (S)	%						100	98	75-125			
Toluene-d8 (S)	%						99	99	75-125			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

QC Batch: 654058 Analysis Method: WI MOD DRO
 QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
 Associated Lab Samples: 10504984001, 10504984002, 10504984003, 10504984004, 10504984005, 10504984006, 10504984007, 10504984008, 10504984009, 10504984010, 10504984011, 10504984012, 10504984013, 10504984014, 10504984015, 10504984016, 10504984017, 10504984018, 10504984019, 10504984021

METHOD BLANK: 3515985 Matrix: Solid
 Associated Lab Samples: 10504984001, 10504984002, 10504984003, 10504984004, 10504984005, 10504984006, 10504984007, 10504984008, 10504984009, 10504984010, 10504984011, 10504984012, 10504984013, 10504984014, 10504984015, 10504984016, 10504984017, 10504984018, 10504984019, 10504984021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
WDRO C10-C28	mg/kg	<3.9	12.9	01/12/20 15:58	
n-Triacontane (S)	%	106	50-150	01/12/20 15:58	

LABORATORY CONTROL SAMPLE & LCSD: 3515986 3515987

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/kg	80	69.0	86.3	86	108	70-120	22	20	R1
n-Triacontane (S)	%				93	113	50-150			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

QC Batch: 654060

Analysis Method: WI MOD DRO

QC Batch Method: WI MOD DRO

Analysis Description: WIDRO GCS

Associated Lab Samples: 10504984022, 10504984023, 10504984024, 10504984025, 10504984026, 10504984027, 10504984028, 10504984029, 10504984030, 10504984031, 10504984032, 10504984033, 10504984034, 10504984035, 10504984036, 10504984037

METHOD BLANK: 3515988

Matrix: Solid

Associated Lab Samples: 10504984022, 10504984023, 10504984024, 10504984025, 10504984026, 10504984027, 10504984028, 10504984029, 10504984030, 10504984031, 10504984032, 10504984033, 10504984034, 10504984035, 10504984036, 10504984037

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
WDRO C10-C28	mg/kg	<3.9	12.9	01/12/20 12:49	
n-Triacontane (S)	%	85	50-150	01/12/20 12:49	

LABORATORY CONTROL SAMPLE & LCSD: 3515989

3515990

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/kg	80	67.0	62.9	84	79	70-120	6	20	
n-Triacontane (S)	%				89	83	50-150			

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: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

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.

LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

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.

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

MS Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.

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.

R1 RPD value was outside control limits.

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

T6 High boiling point hydrocarbons are present in the sample.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10504984001	SB-14_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984002	SB-15_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984003	SB-13_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984004	SB-12_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984005	SB-8_2-4	WI MOD DRO	654058	WI MOD DRO	654166
10504984006	SB-8_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984007	SB-11_2-4	WI MOD DRO	654058	WI MOD DRO	654166
10504984008	SB-11_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984009	SB-10_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984010	SB-10_5-6	WI MOD DRO	654058	WI MOD DRO	654166
10504984011	SB-10_1-2	WI MOD DRO	654058	WI MOD DRO	654166
10504984012	SB-9_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984013	SB-7_2-4	WI MOD DRO	654058	WI MOD DRO	654166
10504984014	SB-7_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984015	SB-16_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984016	SB-6_1.5-2	WI MOD DRO	654058	WI MOD DRO	654166
10504984017	SB-6_5-6	WI MOD DRO	654058	WI MOD DRO	654166
10504984018	SB-21_2-4	WI MOD DRO	654058	WI MOD DRO	654166
10504984019	SB-21_6-8	WI MOD DRO	654058	WI MOD DRO	654166
10504984021	SB-22_2-4	WI MOD DRO	654058	WI MOD DRO	654166
10504984022	SB-22_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984023	SB-23_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984024	SB-29_2-4	WI MOD DRO	654060	WI MOD DRO	654165
10504984025	SB-29_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984026	SB-27_2-4	WI MOD DRO	654060	WI MOD DRO	654165
10504984027	SB-27_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984028	SB-28_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984029	SB-24_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984030	SB-25_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984031	SB-26_2-4	WI MOD DRO	654060	WI MOD DRO	654165
10504984032	SB-26_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984033	SB-19_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984034	SB-18_2-4	WI MOD DRO	654060	WI MOD DRO	654165
10504984035	SB-18_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984036	SB-17_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984037	SB-20_6-8	WI MOD DRO	654060	WI MOD DRO	654165
10504984001	SB-14_6-8	ASTM D2974	654419		
10504984002	SB-15_6-8	ASTM D2974	654419		
10504984003	SB-13_6-8	ASTM D2974	654419		
10504984004	SB-12_6-8	ASTM D2974	654419		
10504984005	SB-8_2-4	ASTM D2974	654419		
10504984006	SB-8_6-8	ASTM D2974	654419		
10504984007	SB-11_2-4	ASTM D2974	654419		
10504984008	SB-11_6-8	ASTM D2974	654419		
10504984009	SB-10_6-8	ASTM D2974	654419		
10504984010	SB-10_5-6	ASTM D2974	654419		
10504984011	SB-10_1-2	ASTM D2974	654419		
10504984012	SB-9_6-8	ASTM D2974	654419		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 49161477.00 Nemadji PH II
Pace Project No.: 10504984

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10504984013	SB-7_2-4	ASTM D2974	654419		
10504984014	SB-7_6-8	ASTM D2974	654419		
10504984015	SB-16_6-8	ASTM D2974	654419		
10504984016	SB-6_1.5-2	ASTM D2974	654420		
10504984017	SB-6_5-6	ASTM D2974	654420		
10504984018	SB-21_2-4	ASTM D2974	654420		
10504984019	SB-21_6-8	ASTM D2974	654420		
10504984021	SB-22_2-4	ASTM D2974	654420		
10504984022	SB-22_6-8	ASTM D2974	654420		
10504984023	SB-23_6-8	ASTM D2974	654420		
10504984024	SB-29_2-4	ASTM D2974	654420		
10504984025	SB-29_6-8	ASTM D2974	654420		
10504984026	SB-27_2-4	ASTM D2974	654420		
10504984027	SB-27_6-8	ASTM D2974	654420		
10504984028	SB-28_6-8	ASTM D2974	654420		
10504984029	SB-24_6-8	ASTM D2974	654420		
10504984030	SB-25_6-8	ASTM D2974	654420		
10504984031	SB-26_2-4	ASTM D2974	654420		
10504984032	SB-26_6-8	ASTM D2974	654420		
10504984033	SB-19_6-8	ASTM D2974	654420		
10504984034	SB-18_2-4	ASTM D2974	654420		
10504984035	SB-18_6-8	ASTM D2974	654420		
10504984036	SB-17_6-8	ASTM D2974	654665		
10504984037	SB-20_6-8	ASTM D2974	654665		
10504984001	SB-14_6-8	EPA 5035/5030B	654083	EPA 8260B	654097
10504984002	SB-15_6-8	EPA 5035/5030B	654083	EPA 8260B	654097
10504984003	SB-13_6-8	EPA 5035/5030B	654083	EPA 8260B	654097
10504984004	SB-12_6-8	EPA 5035/5030B	654110	EPA 8260B	654264
10504984005	SB-8_2-4	EPA 5035/5030B	654110	EPA 8260B	654264
10504984006	SB-8_6-8	EPA 5035/5030B	654110	EPA 8260B	654264
10504984007	SB-11_2-4	EPA 5035/5030B	654110	EPA 8260B	654264
10504984008	SB-11_6-8	EPA 5035/5030B	654110	EPA 8260B	654264
10504984009	SB-10_6-8	EPA 5035/5030B	654110	EPA 8260B	654264
10504984010	SB-10_5-6	EPA 5035/5030B	654110	EPA 8260B	654264
10504984011	SB-10_1-2	EPA 5035/5030B	654110	EPA 8260B	654264
10504984012	SB-9_6-8	EPA 5035/5030B	654110	EPA 8260B	654264
10504984013	SB-7_2-4	EPA 5035/5030B	654110	EPA 8260B	654264
10504984014	SB-7_6-8	EPA 5035/5030B	654110	EPA 8260B	654264
10504984015	SB-16_6-8	EPA 5035/5030B	654110	EPA 8260B	654264
10504984016	SB-6_1.5-2	EPA 5035/5030B	654110	EPA 8260B	654264
10504984017	SB-6_5-6	EPA 5035/5030B	654411	EPA 8260B	654476
10504984018	SB-21_2-4	EPA 5035/5030B	654411	EPA 8260B	654476
10504984019	SB-21_6-8	EPA 5035/5030B	654411	EPA 8260B	654476
10504984020	Field Blank	EPA 5035/5030B	654411	EPA 8260B	654476
10504984021	SB-22_2-4	EPA 5035/5030B	654717	EPA 8260B	654743
10504984022	SB-22_6-8	EPA 5035/5030B	654717	EPA 8260B	654743

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 49161477.00 Nemadji PH II

Pace Project No.: 10504984

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10504984023	SB-23_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984024	SB-29_2-4	EPA 5035/5030B	654717	EPA 8260B	654743
10504984025	SB-29_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984026	SB-27_2-4	EPA 5035/5030B	654717	EPA 8260B	654743
10504984027	SB-27_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984028	SB-28_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984029	SB-24_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984030	SB-25_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984031	SB-26_2-4	EPA 5035/5030B	654717	EPA 8260B	654743
10504984032	SB-26_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984033	SB-19_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984034	SB-18_2-4	EPA 5035/5030B	654717	EPA 8260B	654743
10504984035	SB-18_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984036	SB-17_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984037	SB-20_6-8	EPA 5035/5030B	654717	EPA 8260B	654743
10504984038	Trip Blank	EPA 5035/5030B	654717	EPA 8260B	654743

REPORT OF LABORATORY ANALYSIS

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Barr Engineering Co. Chain of Custody

Sample Origination State:

- Ann Arbor Duluth Hibbing Minneapolis Bismarck Grand Rapids Jefferson City Salt Lake City

- KS MO UT MI ND WI MN SD Other: _____

REPORT TO	INVOICE TO
Company: <u>Barr Engineering</u>	Company: <u>same</u>
Address: <u>325 S Lake Ave Duluth, MN</u>	Address: <u>↓</u>
Name: <u>Lynette Carney</u>	Name: <u>↓</u>
email: <u>LCarney@barr.com</u>	email: <u>↓</u>
Copy to: <u>datamgt@barr.com</u>	P.O. <u>↓</u>
Project Name: <u>Nemadji Substation PH II</u>	Barr Project No: <u>49161477.00</u>

Location	Sample Depth			Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix Code	Perform MS/MSD Y/N	Total Number of Containers	Analysis Requested			
	Start	Stop	Unit (m./ft. or in.)						Water	Soil		
1. SB-10	1	2	ft	01/06/2020	1345	S	N	5				
2. SB-9	6	8			1400							
3. SB-7	2	4			1430							
4. SB-7	6	8			1440							
5. SB-16	6	8			1455							
6. SB-6	1.5	2			1510							
7. SB-6	5	6			1515							
8. SB-21	2	4			1540							
9. SB-21	6	8			1550							
10. Field Blank				01/06/2020	1520							

COC Number: **56980**
 COC 2 of 4

Matrix Code: PVOC + Naphthalene
 Preservative Code: 011

GW = Groundwater A = None
 SW = Surface Water B = HCl
 WW = Waste Water C = HNO₃
 DW = Drinking Water D = H₂SO₄
 S = Soil/Solid E = NaOH
 SD = Sediment F = MeOH
 O = Other G = NaHSO₄
 H = Na₂S₂O₃
 I = Ascorbic Acid
 J = NH₄Cl
 K = Zn Acetate
 O = Other

BARR USE ONLY		Relinquished by:	On Ice?	Date	Time	Received by:	Date	Time
Sampled by: <u>CSS3 / MAB</u>	Relinquished by: <u>Christina J. Scholt</u>	<input checked="" type="radio"/> N	<u>1/8/2020</u>	<u>1500</u>	<u>PA</u>	<u>1/8/2020</u>	<u>15:00</u>	
Barr Proj. Manager: <u>LMC</u>	Relinquished by:	<input type="radio"/> Y			<u>PA</u>	<u>1/10/20</u>	<u>8:50</u>	
Barr DQ Manager: <u>JET</u>	Samples Shipped VIA: <input type="checkbox"/> Courier <input type="checkbox"/> Federal Express <input checked="" type="checkbox"/> Sampler	Air Bill Number:		Requested Due Date: <input checked="" type="checkbox"/> Standard Turn Around Time				
Lab Name: <u>Pace</u>	<input type="checkbox"/> Other: _____	Temperature on Receipt (°C): <u>1</u>		Custody Seal Intact? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> None		<input type="checkbox"/> Rush (mm/dd/yyyy)		
Lab Location: <u>Minneapolis</u>	Lab WO:							

Barr Engineering Co. Chain of Custody

Sample Origination State:

- Ann Arbor Duluth Hibbing Minneapolis
 Bismarck Grand Rapids Jefferson City Salt Lake City

- KS MO UT
 MI ND WI
 MN SD Other: _____

REPORT TO	INVOICE TO
Company: <u>Barr Engineering</u>	Company: <u>same</u>
Address: <u>325 S Lake Ave Duluth, MN</u>	Address: <u>↓</u>
Name: <u>Lynette Carney</u>	Name: <u>↓</u>
email: <u>LCarney@barr.com</u>	email: <u>↓</u>
Copy to: <u>datamgt@barr.com</u>	PO: <u>↓</u>
Project Name: <u>Nemadji Substation PH II</u>	Barr Project No: <u>49161477.00</u>

Location	Sample Depth			Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix Code
	Start	Stop	Unit (m./ft. or in.)			
1. SB-22	2	4	ft	01/07/2020	0915	S
2. SB-22	6	8			0925	
3. SB-23	6	8			0950	
4. SB-29	2	4			1020	
5. SB-29	6	8			1025	
6. SB-27	2	4			1040	
7. SB-27	6	8			1045	
8. SB-28	6	8			1100	
9. SB-24	6	8			1120	
10. SB-25	6	8			1145	

Perform MS/MSD Y / N	Analysis Requested	
	Water	Soil
Total Number Of Containers		

COC Number: **56975**

COC 3 of 4

Matrix Code: PVOC + Naphthalene
 SW = Surface Water WW = Waste Water DW = Drinking Water
 S = Soil/Solid SD = Sediment O = Other

Preservative Code:
 A = None B = HCl C = HNO₃ D = H₂SO₄ E = NaOH
 F = MeOH G = NaHSO₄ H = Na₂S₂O₃ I = Ascorbic Acid
 J = NH₄Cl K = Zn Acetate O = Other

BARR USE ONLY		Relinquished by: <u>Christin J. Scholt</u>	On Ice? <input checked="" type="checkbox"/> N	Date: <u>1/8/2020</u>	Time: <u>1:50</u>	Received by: <u>JR Pace</u>	Date: <u>1/8/2020</u>	Time: <u>15:00</u>
Sampled by: <u>CJS3</u>		Relinquished by:	On Ice? <input type="checkbox"/> Y	Date:	Time:	Received by:	Date:	Time:
Barr Proj. Manager: <u>LMC</u>		Samples Shipped VIA: <input type="checkbox"/> Courier <input type="checkbox"/> Federal Express <input checked="" type="checkbox"/> Sampler		Air Bill Number:		Requested Due Date: <input checked="" type="checkbox"/> Standard Turn Around Time <input type="checkbox"/> Rush (mm/dd/yyyy)		
Barr DQ Manager: <u>JET</u>		Lab Name: <u>Pace</u>		Lab Location: <u>Minneapolis</u>		Lab WO: _____ Temperature on Receipt (°C): _____ Custody Seal Intact? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> None		

HRRGSTDFORMS(Chain of Custody Form 2015 - RLG Rev. 01/02/18)

05c, 2.6c, 4.4c, 32c T= 0.9, 2.0, 2.1, 0.5

Barr Engineering Co. Chain of Custody

Sample Origination State:

Ann Arbor Duluth Hibbing Minneapolis
 Bismarck Grand Rapids Jefferson City Salt Lake City

KS MO UT
 MI ND WI
 MN SD Other: _____

REPORT TO		INVOICE TO				
Company: <u>Barr Engineering</u>		Company: <u>Same</u>				
Address: <u>325 S Lake Ave Duluth MN</u>		Address: _____				
Name: <u>Lynette Carney</u>		Name: _____				
email: <u>LCasney@barr.com</u>		email: _____				
Copy to: <u>datamgt@barr.com</u>		P.O. _____				
Project Name: <u>Namadjji Substation PH II</u>		Barr Project No: <u>49161477.00</u>				

Location	Sample Depth			Collection Date (mm/dd/yyyy)	Collection Time (hh:mm)	Matrix Code	Perform MS/MSD	Y / N	Analysis Requested			Total Number Of Containers	Preservative Code	
	Start	Stop	Unit (m./ft. or in.)						Water	Soil	% Solids			
1. SB-26	2	4	ft	01/07/2020	1235	S	N	S						
2. SB-26	6	8			1245									
3. SB-19	6	8			1310									
4. SB-18	2	4			1330									
5. SB-18	6	8			1340									
6. SB-17	6	8			1405									
7. SB-20	6	8			1420									
8. Trip Blank				01/07/2020										
9.														
10.														

BARR USE ONLY		Relinquished by:	On Ice?	Date	Time	Received by:	Date	Time
Sampled by: <u>CSS3</u>		<u>Christian J. Selut</u>	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	<u>1/8/2020</u>	<u>1500</u>	<u>[Signature]</u>	<u>1/8/2020</u>	<u>15:01</u>
Barr Proj. Manager: <u>LMC</u>		Relinquished by:	On Ice?	Date	Time	Received by:	Date	Time
Barr DQ Manager: <u>JET</u>			<input type="checkbox"/> Y <input type="checkbox"/> N			<u>[Signature]</u>	<u>1/10/20</u>	<u>8:50</u>
Lab Name: <u>Pace</u>		Samples Shipped VIA: <input type="checkbox"/> Courier <input type="checkbox"/> Federal Express <input checked="" type="checkbox"/> Sampler			Air Bill Number:		Requested Due Date:	
Lab Location: <u>Minneapolis</u>		Lab WO:			Temperature on Receipt (°C):		<input checked="" type="checkbox"/> Standard Turn Around Time <input type="checkbox"/> Rush (mm/dd/yyyy)	
					Custody Seal Intact? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> None			

COC Number: **56982**

COC 4 of 4

Matrix Code:
 GW = Groundwater
 SW = Surface Water
 WW = Waste Water
 DW = Drinking Water
 S = Soil/Solid
 SD = Sediment
 O = Other

Preservative Code:
 A = None
 B = HCl
 C = HNO₃
 D = H₂SO₄
 E = NaOH
 F = MeOH
 G = NaHSO₄
 H = Na₂S₂O₃
 I = Ascorbic Acid
 J = NH₄Cl
 K = Zn Acetate
 O = Other

VOC + Naphthalene
 DRO
 % Solids

Preservative Code
 Field Filtered Y/N

PVOC + Naphthalene by method EPA 8260B 031

DRO by method WI MOD DRO 801SD (C10-C28) 032

033


034

035

036

037

038

	Document Name: Sample Condition Upon Receipt Form	Document Revised: 14Nov2019 Page 1 of 1
	Document No.: F-MN-L-213-rev.30	Pace Analytical Services - Minneapolis

Sample Condition Upon Receipt **Client Name:** Barr Engineering **Project #:** **WO#: 10504984**

Courier: Fed Ex UPS USPS Client
 Pace Speedee Commercial See Exceptions

Tracking Number: 6279 8897 9362/9340/9351/9330

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) **Type of Ice:** Wet Blue None Dry Melted
 T4(0254) T5(0489)

Note: Each West Virginia Sample must have temp taken (no temp blanks)

Temp should be above freezing to 6°C	Cooler Temp Read w/temp blank: <u>0.7, 1.8, 1.9, 0.3</u> °C	Average Corrected Temp (no temp blank only): <input type="checkbox"/> See Exceptions
Correction Factor: <u>+0.2</u>	Cooler Temp Corrected w/temp blank: <u>0.9, 2.0, 2.1, 0.5</u> °C	<input type="checkbox"/> 1 Container

USDA Regulated Soil: (N/A, water sample/Other: _____) **Date/Initials of Person Examining Contents:** 1/10/20 JS

Did samples originate in a quarantine zone within the United States: AL, AR, 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 (F-MN-Q-338) and include with SCUR/COC paperwork.

	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.
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 Chrome <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 Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 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 on Container Below: See Exception <input type="checkbox"/>
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"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> Zinc Acetate
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , <2pH, NaOH >9 Sulfide, NaOH >12 Cyanide) <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Positive for Res. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No See Exception <input type="checkbox"/> Chlorine? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No pH Paper Lot# _____
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Res. Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Extra labels present on soil VOA or WIDRO containers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. See Exception <input type="checkbox"/>
Headspace in VOA Vials (greater than 6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Trip Blank Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14. Pace Trip Blank Lot # (if purchased): <u>102819-3</u>
Trip Blank Custody Seals Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** Yes No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Amanda J. Albrecht **Date:** 1/10/20

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: JS

Date : 12-JAN-2020 16:47

Client ID: SB-14_6-8

Sample Info: 10504984001

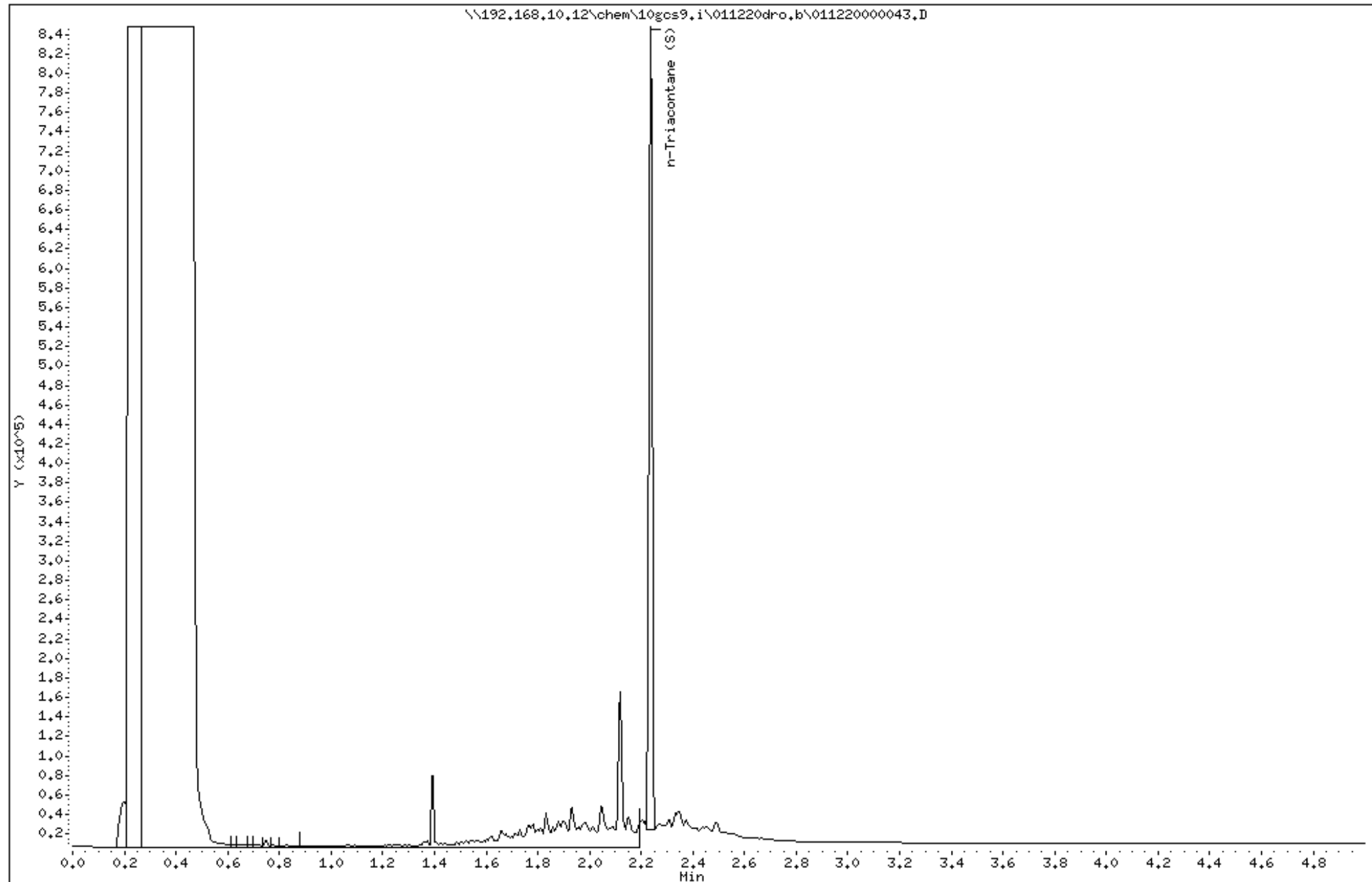
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 16:54

Client ID: SB-15_6-8

Sample Info: 10504984002

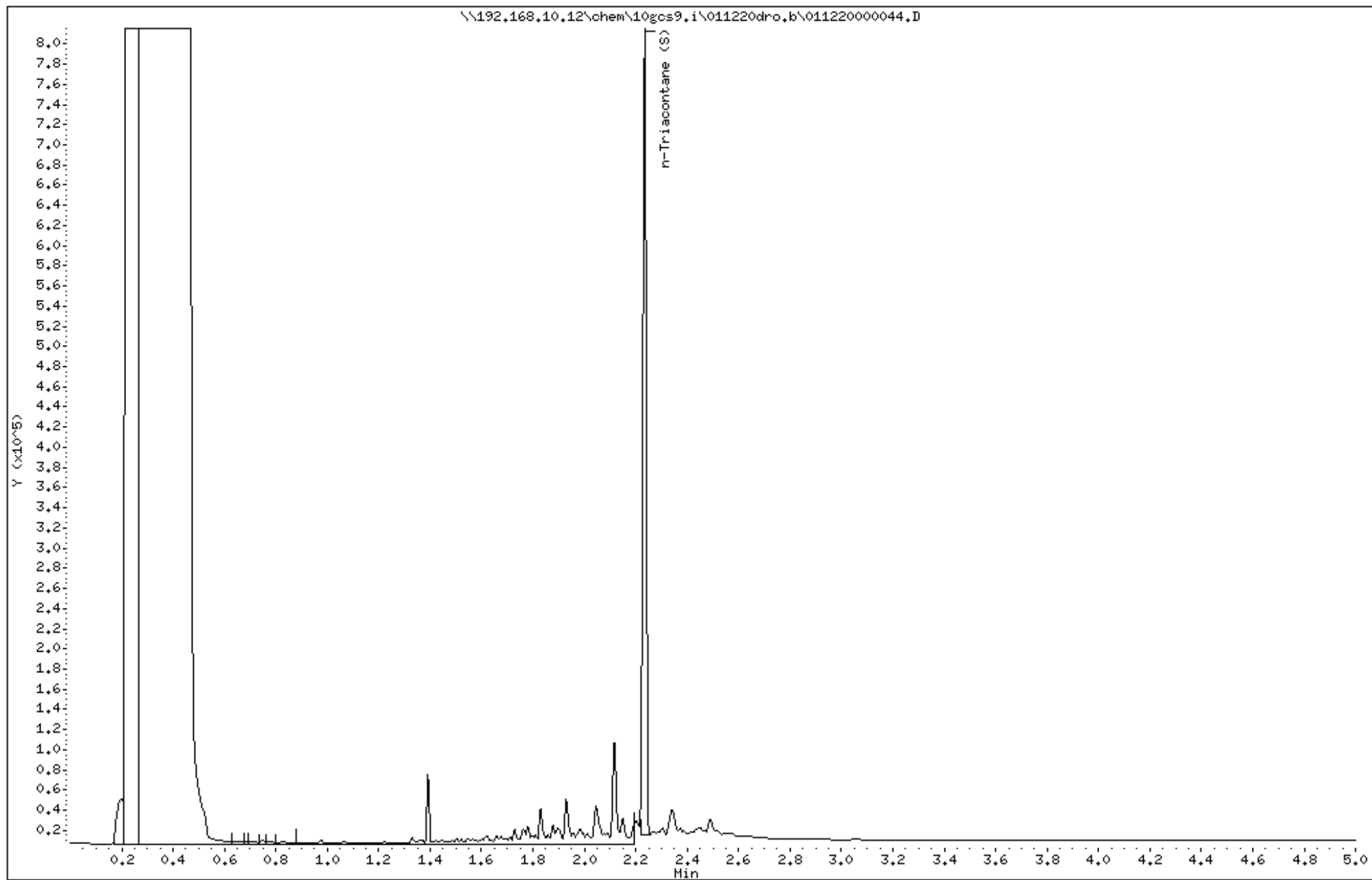
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 17:01

Client ID: SB-13_6-8

Sample Info: 10504984003

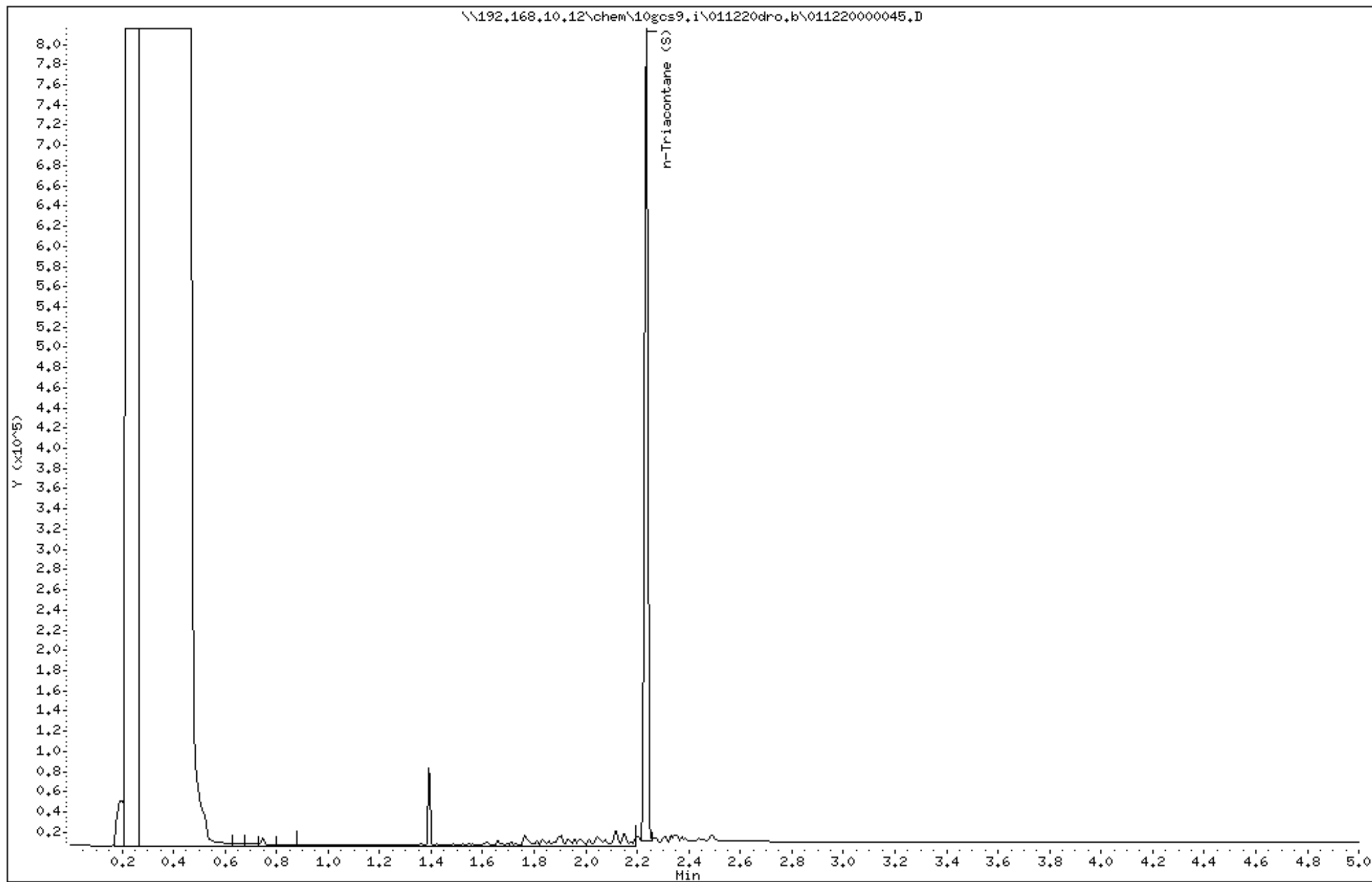
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 17:08

Client ID: SB-12_6-8

Sample Info: 10504984004

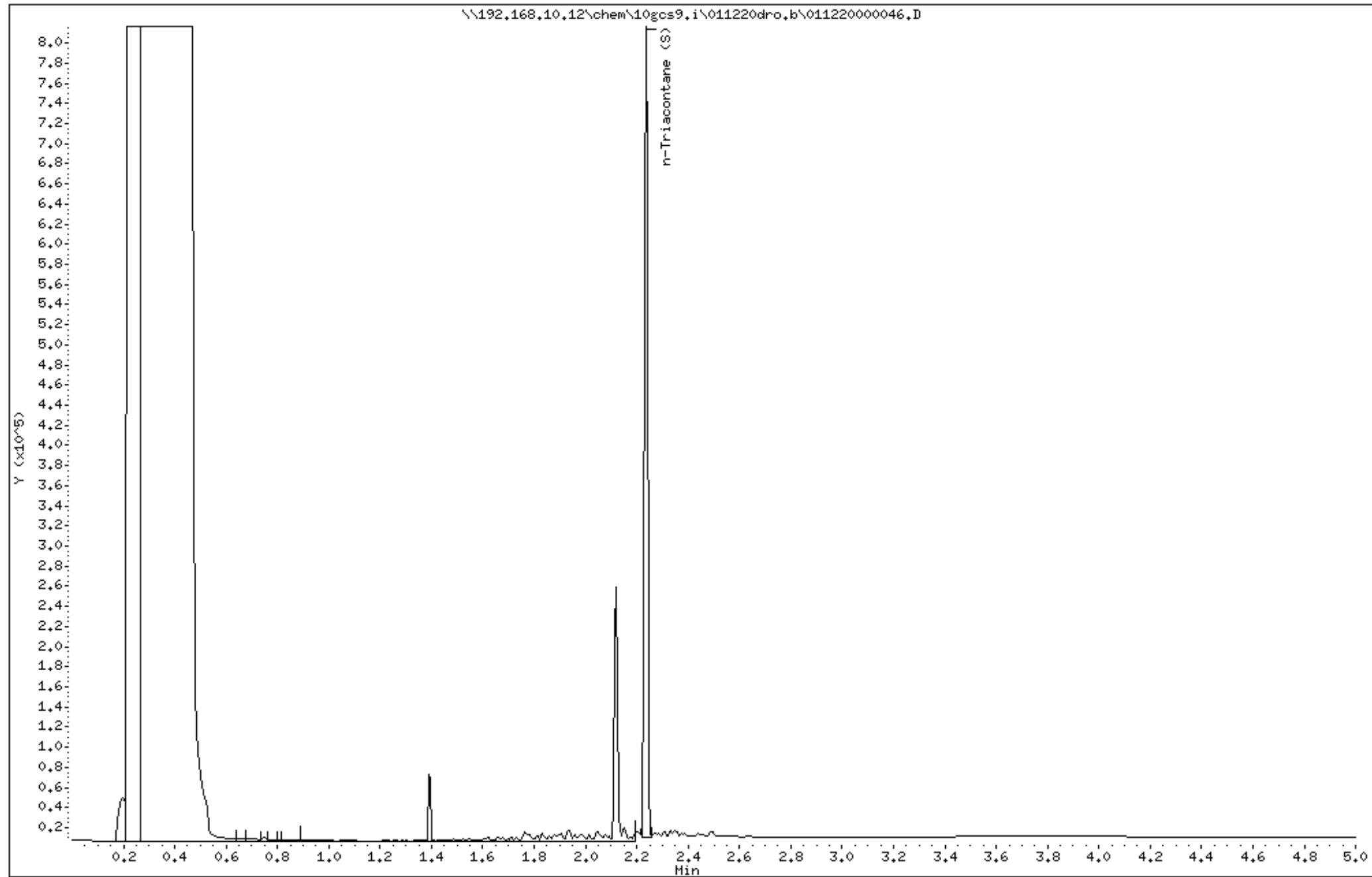
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 16:33

Client ID: SB-8_2-4

Sample Info: 10504984005

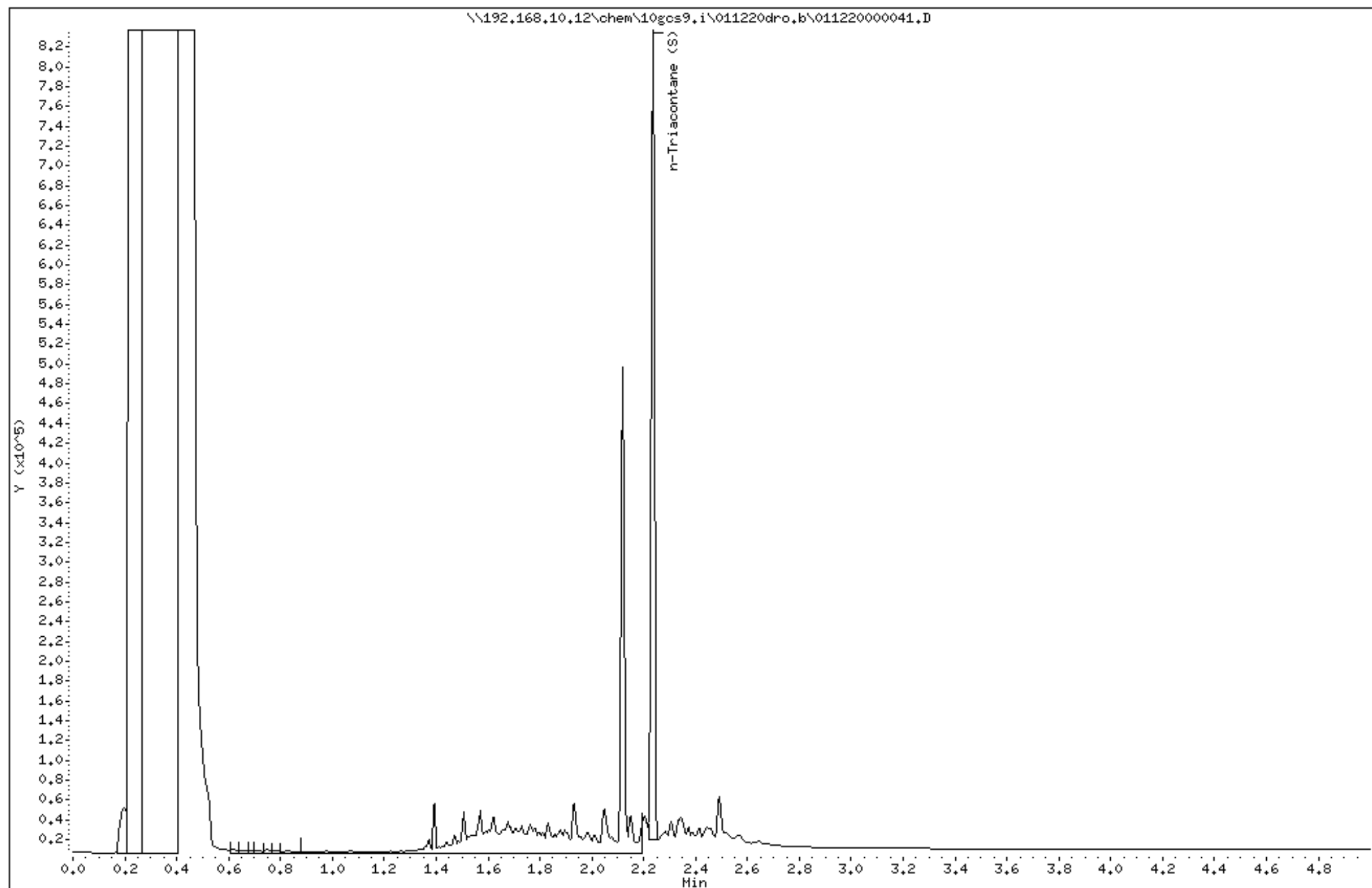
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 17:15

Client ID: SB-8_6-8

Sample Info: 10504984006

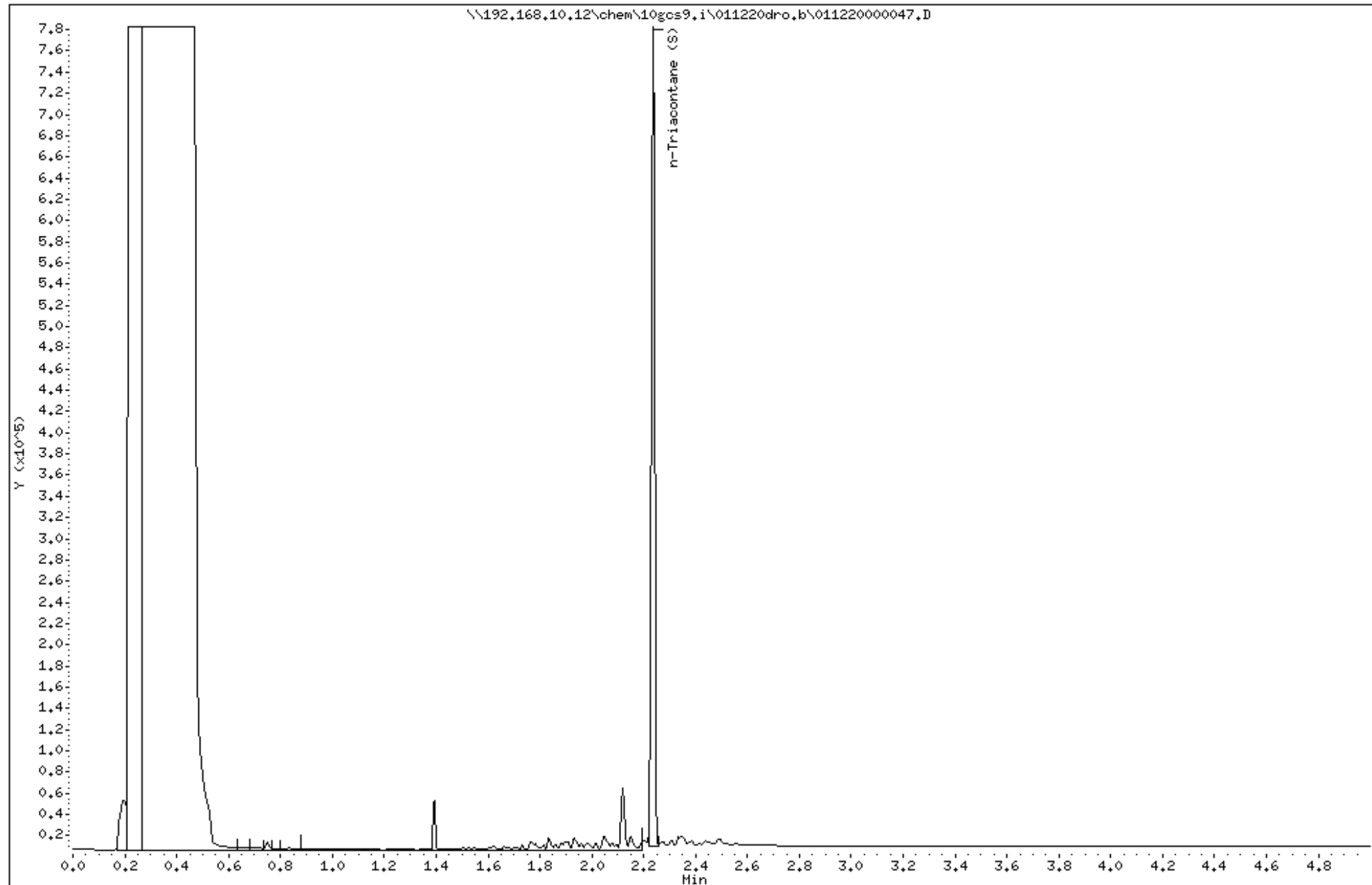
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 16:40

Client ID: SB-11_2-4

Sample Info: 10504984007

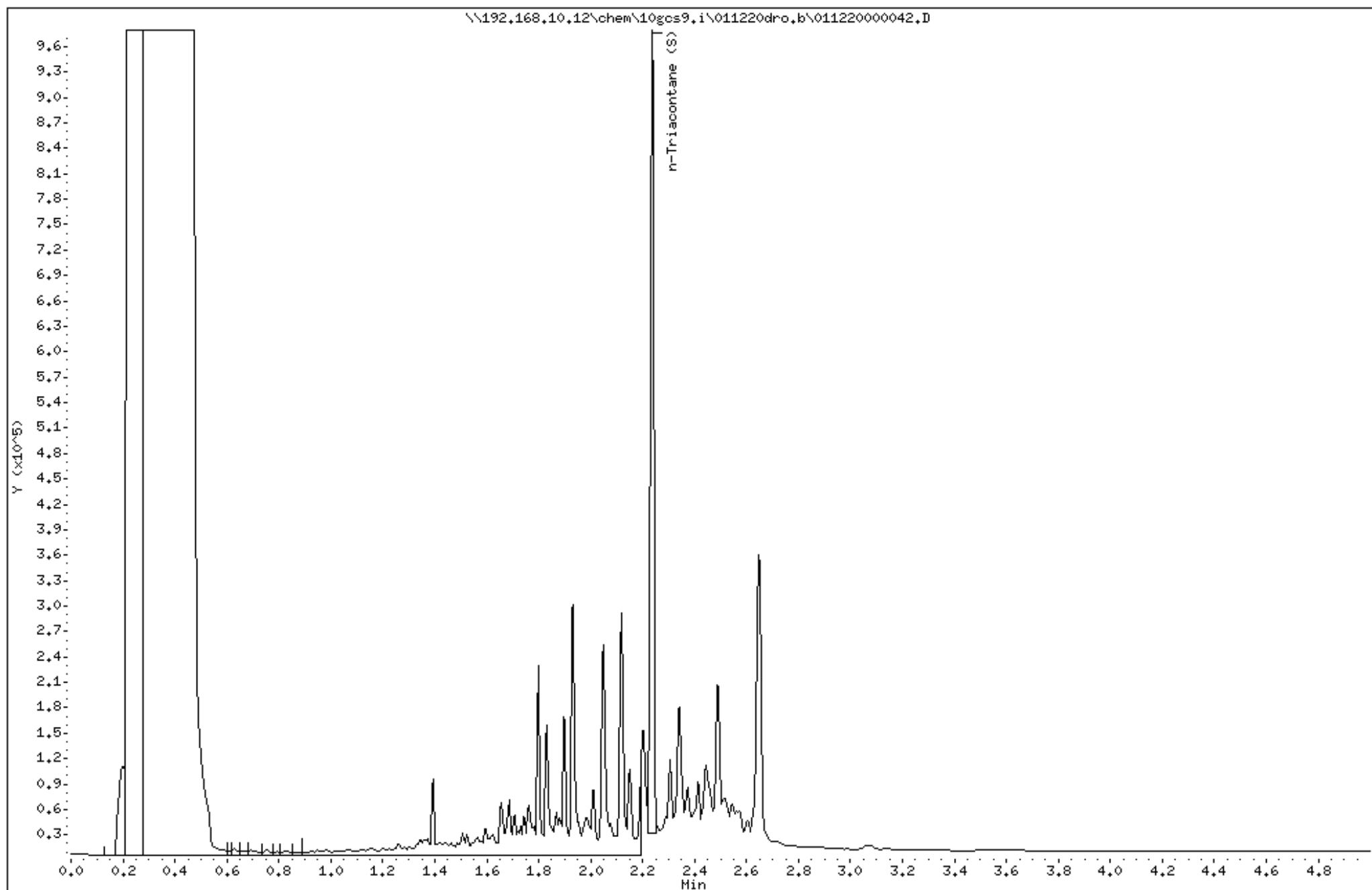
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 17:22

Client ID: SB-11_6-8

Sample Info: 10504984008

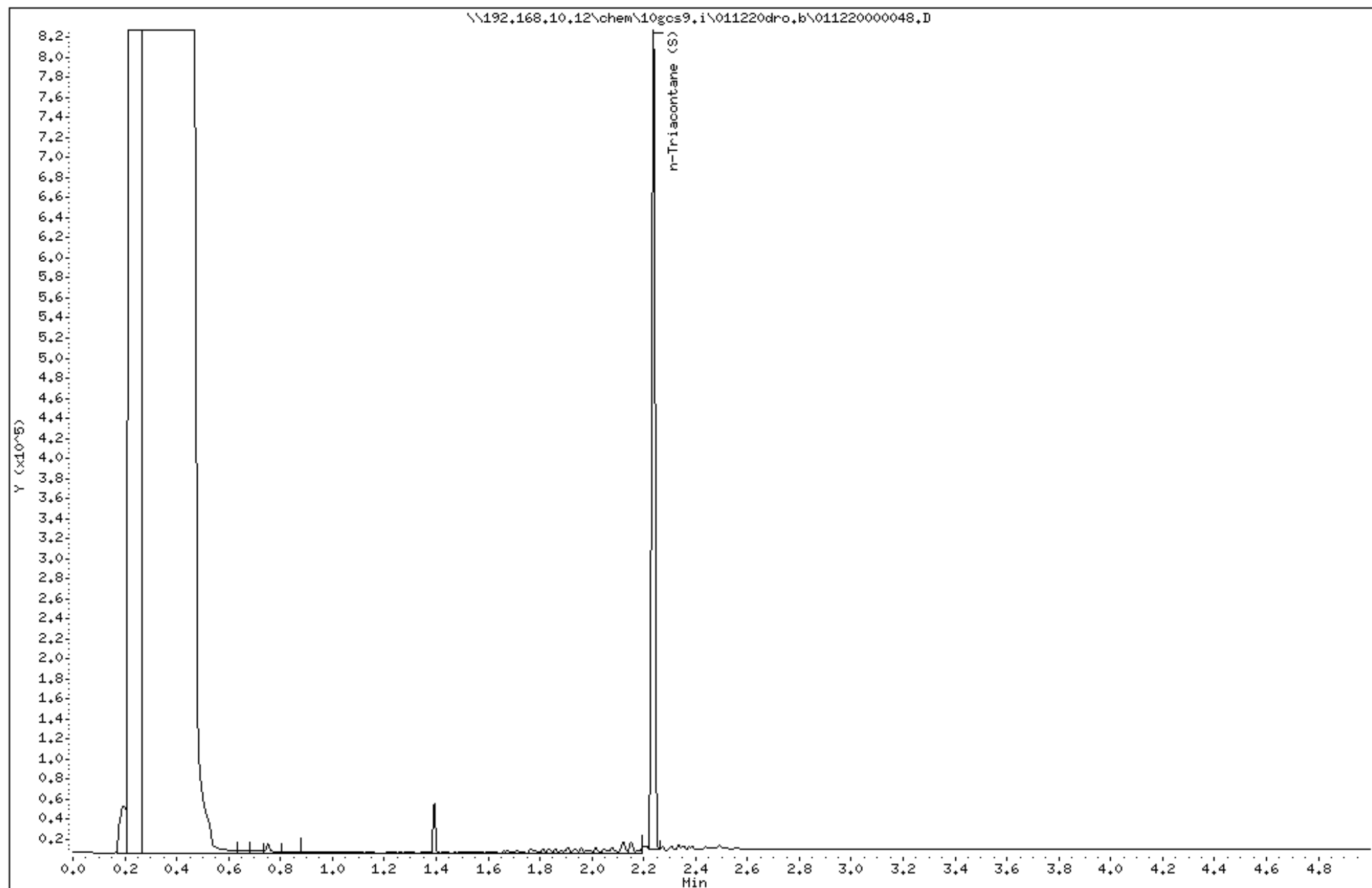
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 17:29

Client ID: SB-10_6-8

Sample Info: 10504984009

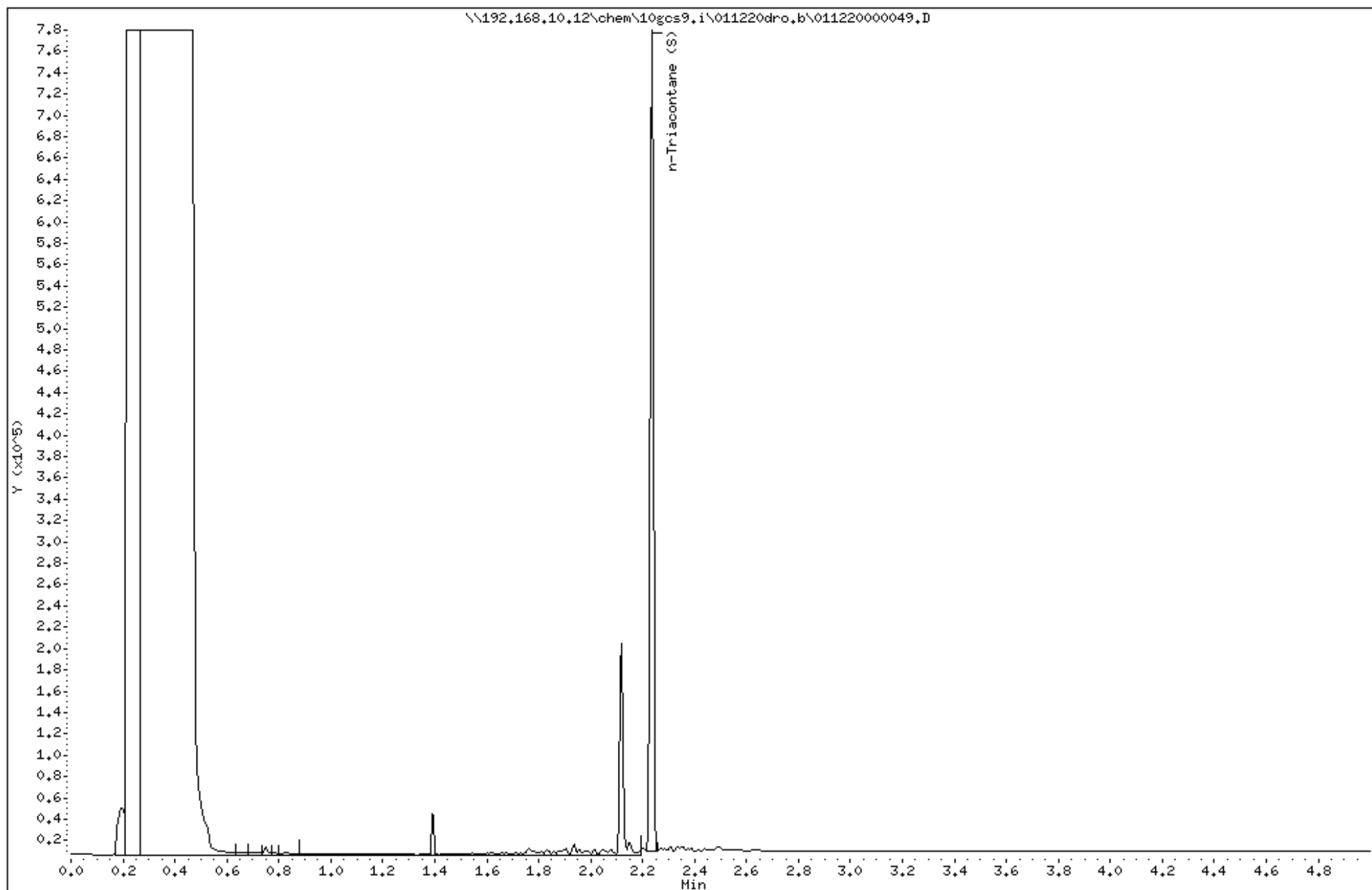
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9.i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 17:36

Client ID: SB-10_5-6

Sample Info: 10504984010

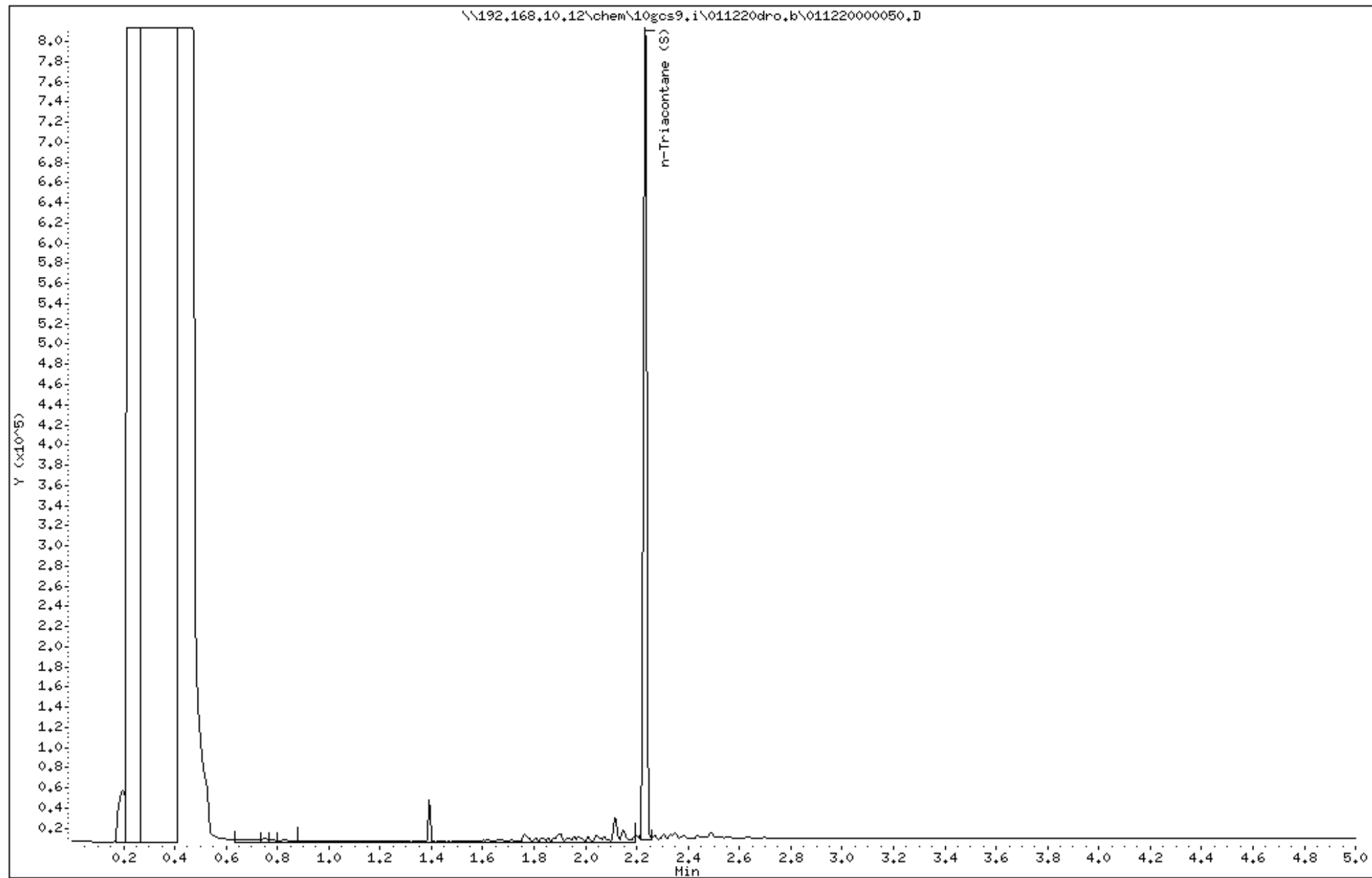
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 16:12

Client ID: SB-10_1-2

Sample Info: 10504984011X10

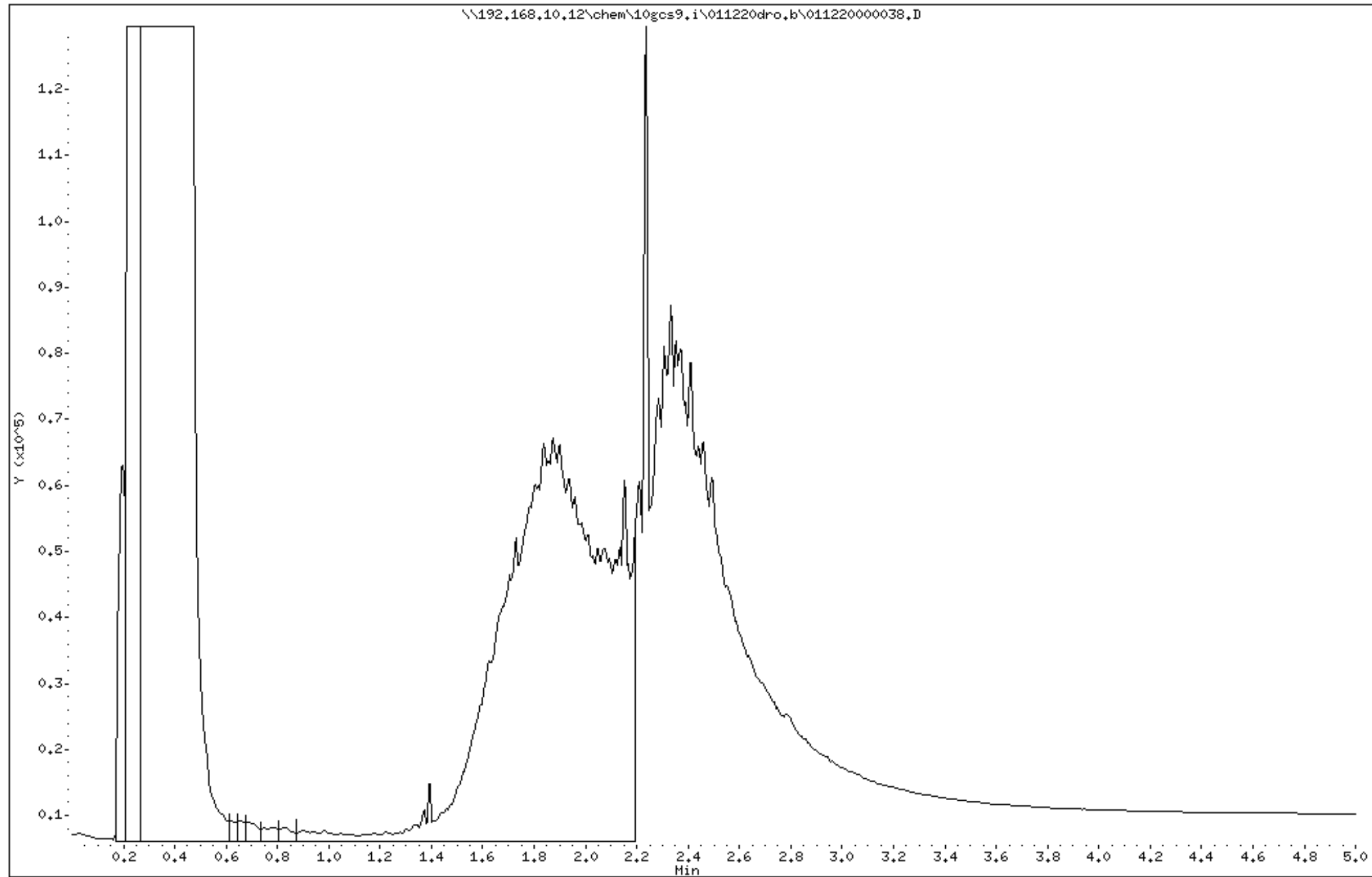
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JVM

Column diameter: 0.32



Date : 12-JAN-2020 17:43

Client ID: SB-9_6-8

Sample Info: 10504984012

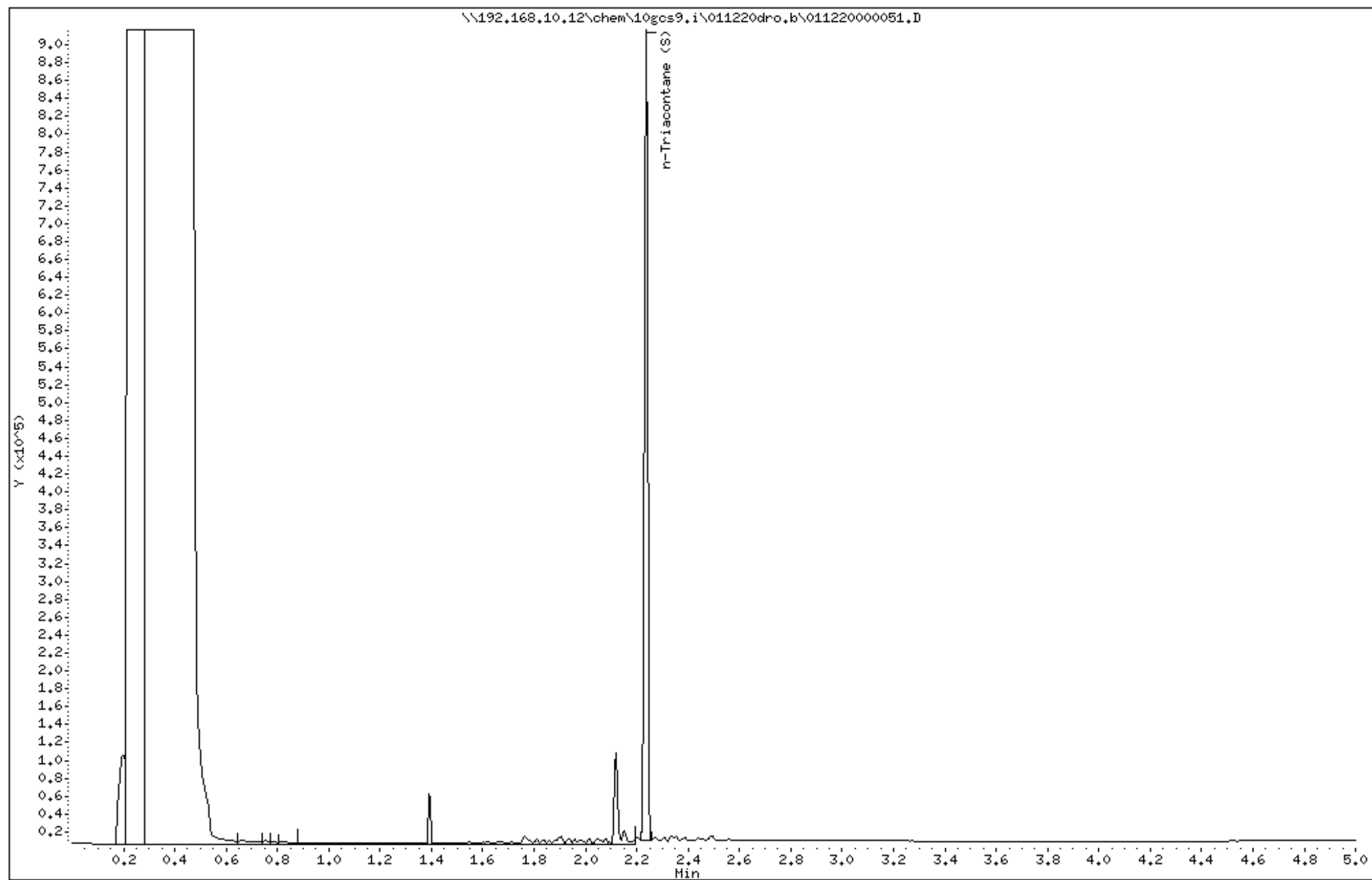
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 17:50

Client ID: SB-7_2-4

Sample Info: 10504984013

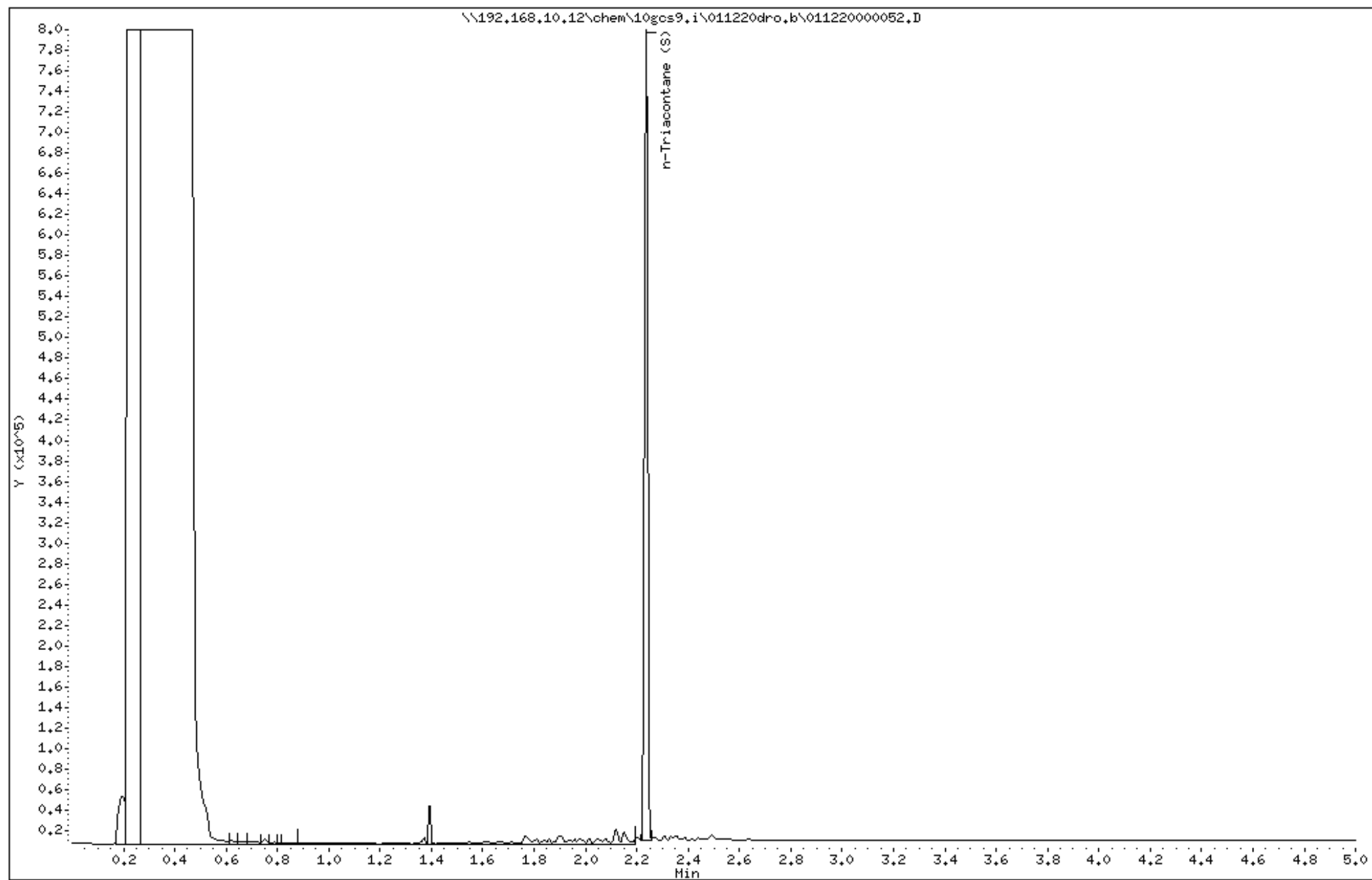
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 17:57

Client ID: SB-7_6-8

Sample Info: 10504984014

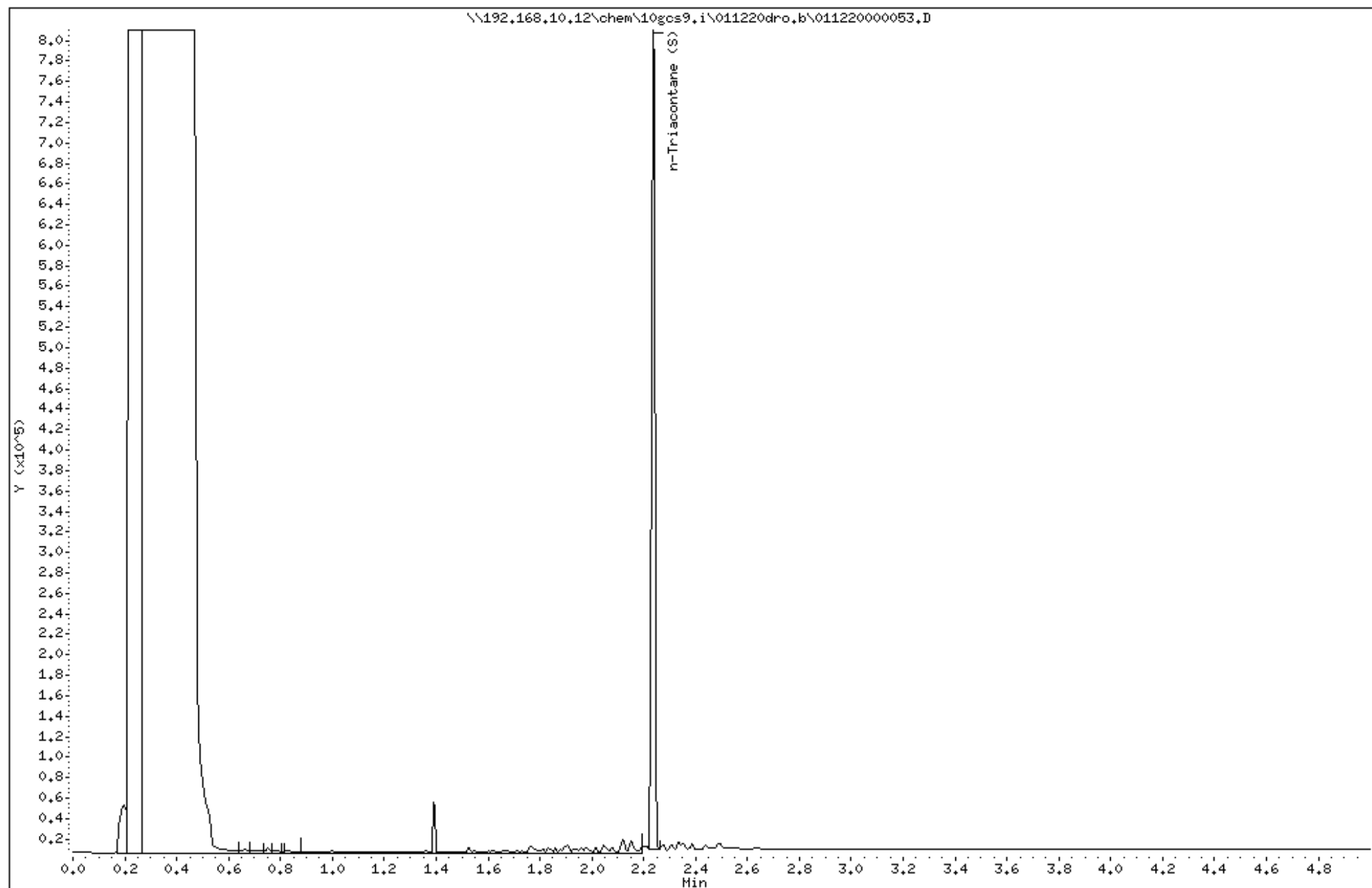
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9.i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 16:26

Client ID: SB-16_6-8

Sample Info: 10504984015

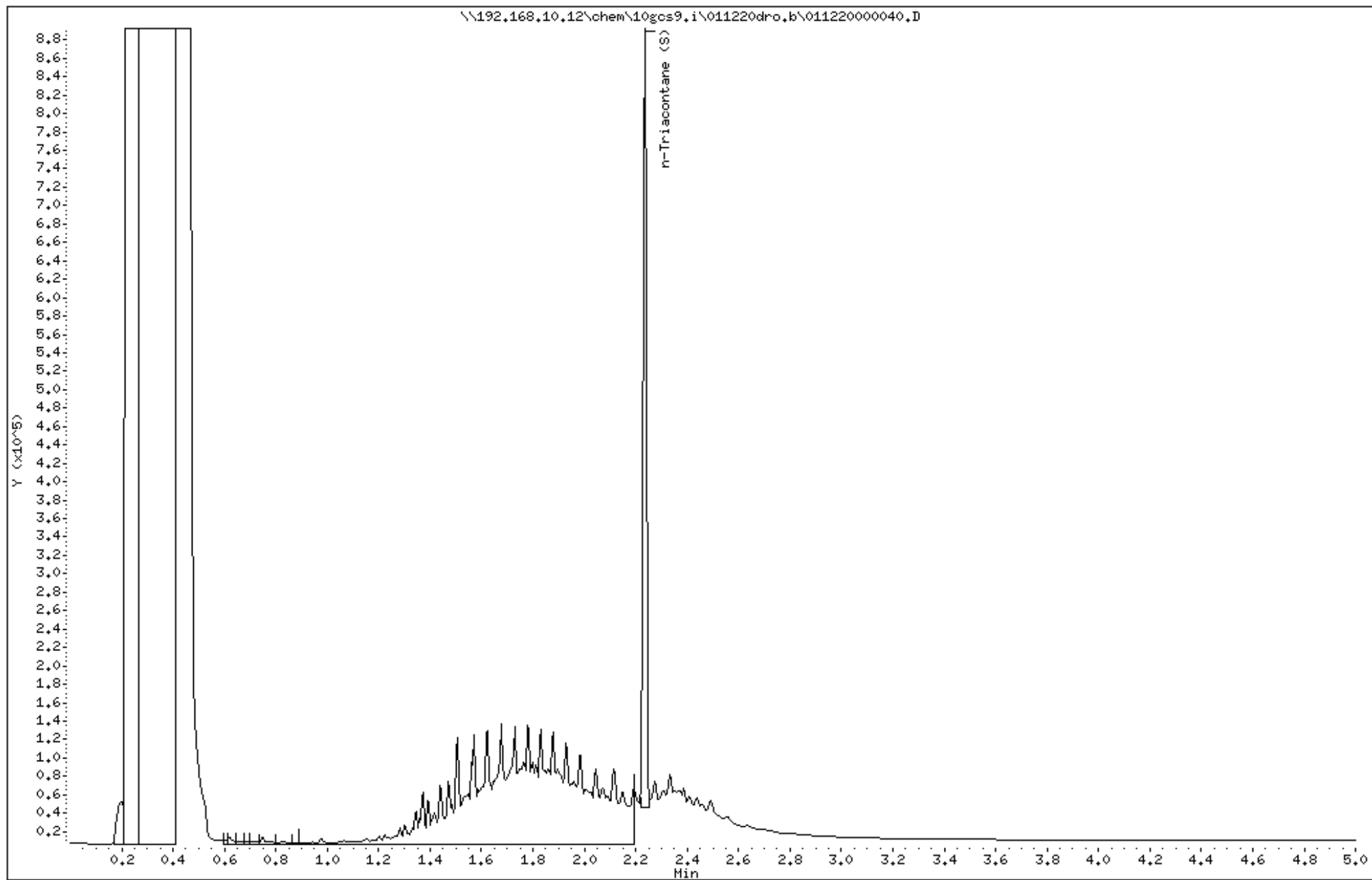
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 16:19

Client ID: SB-6_1,5-2

Sample Info: 10504984016

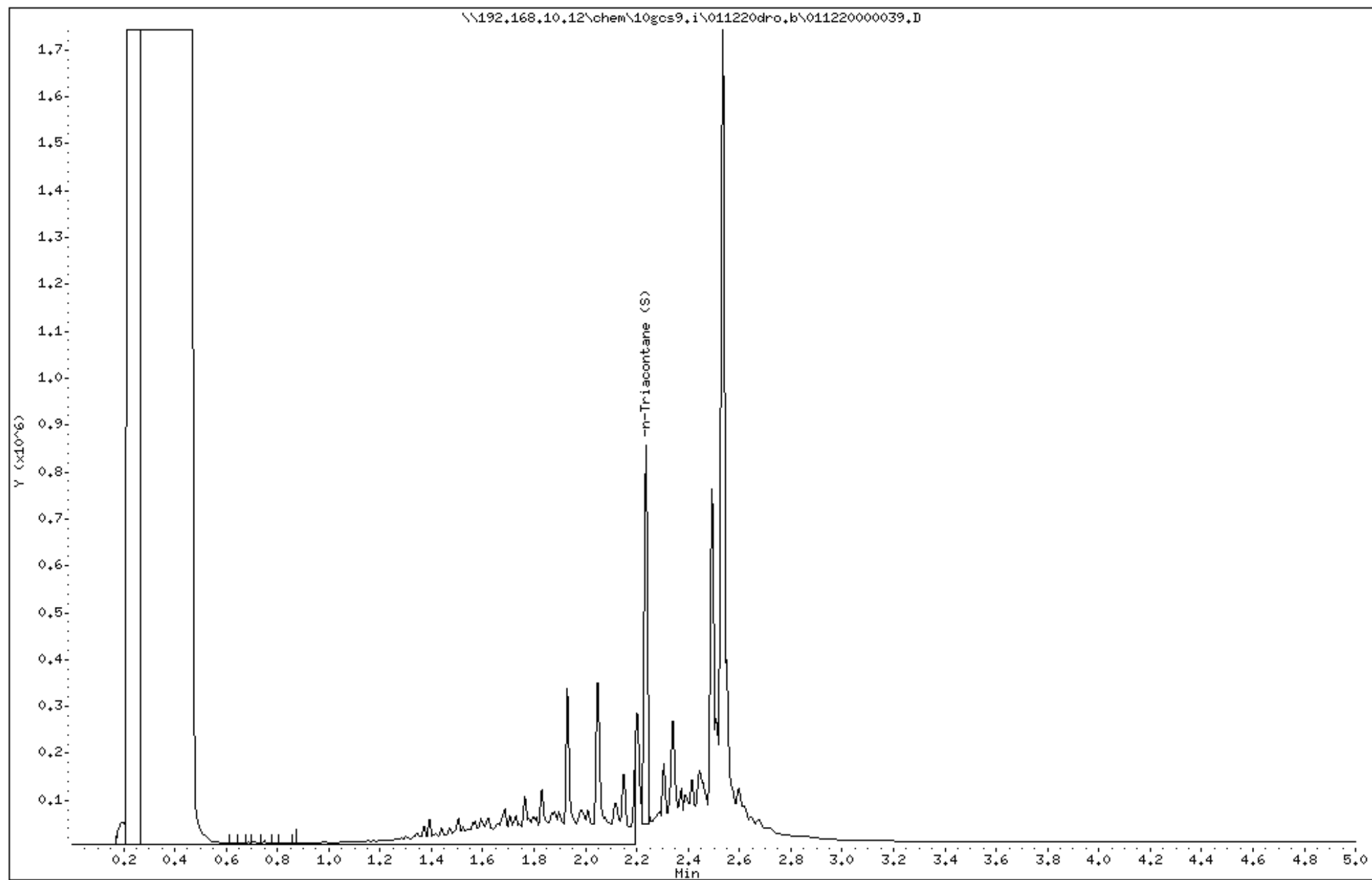
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 18:19

Client ID: SB-6_5-6

Sample Info: 10504984017

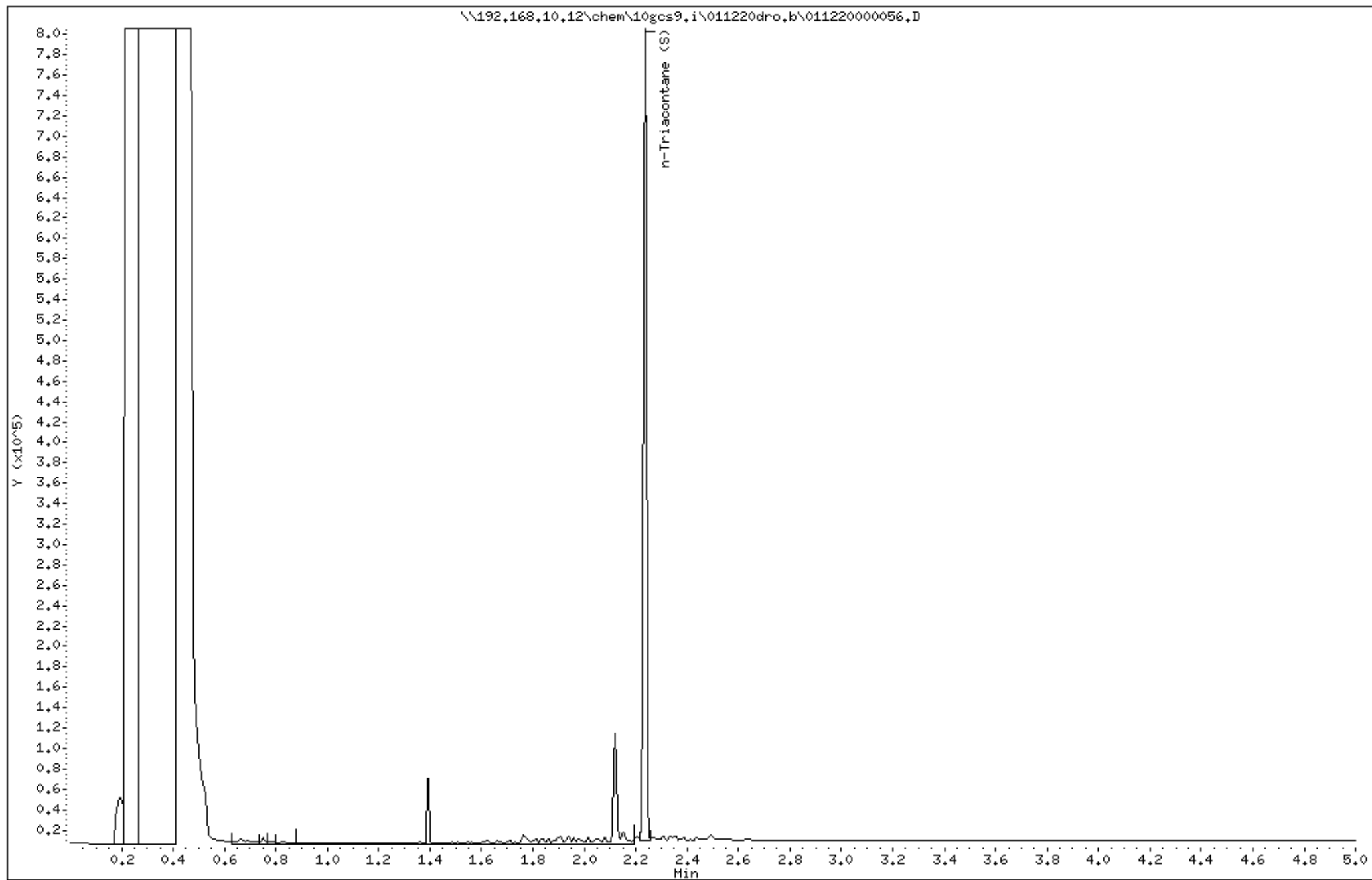
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9.i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 18:05

Client ID: SB-21_2-4

Sample Info: 10504984018

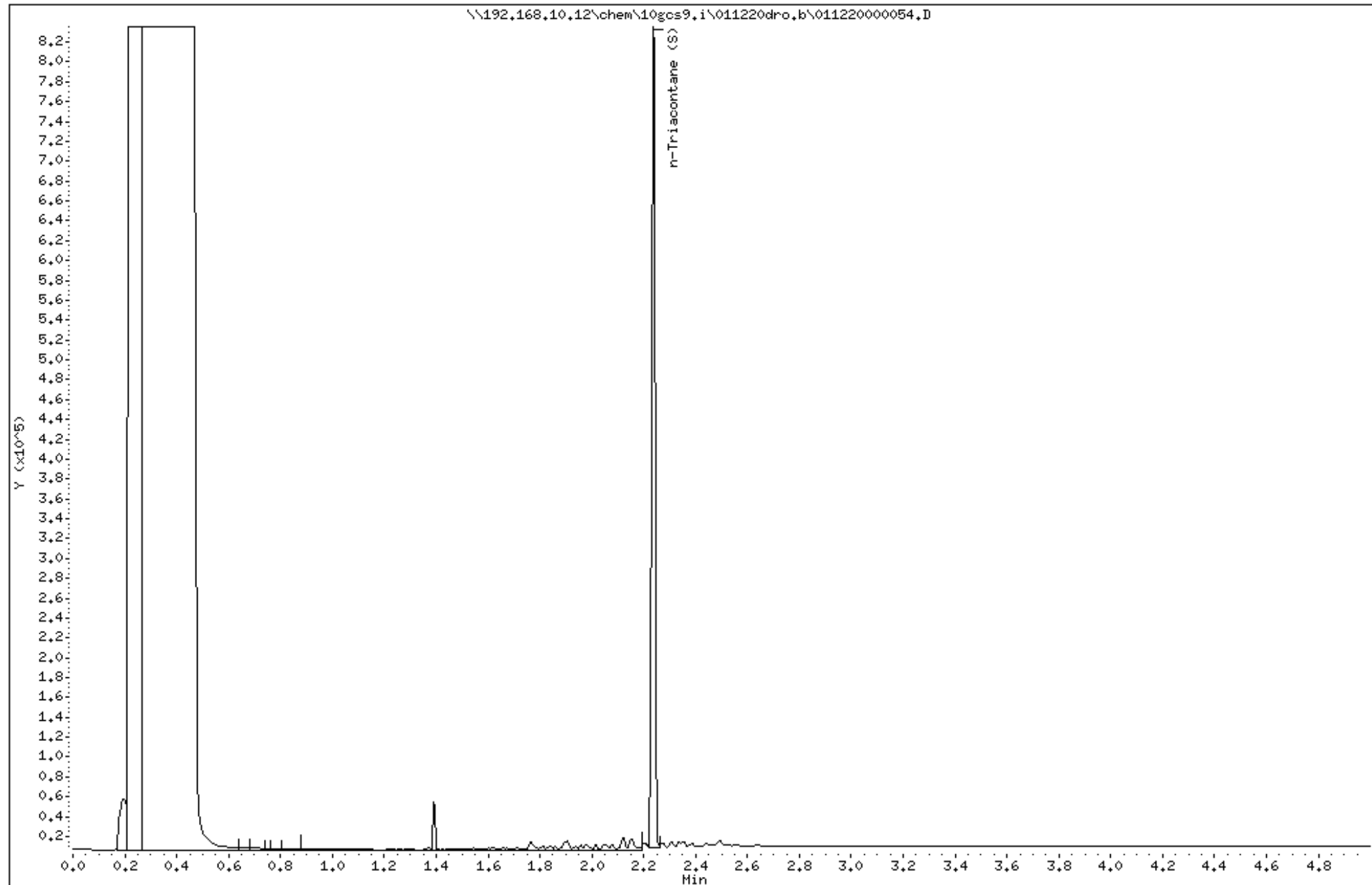
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 18:12

Client ID: SB-21_6-8

Sample Info: 10504984019

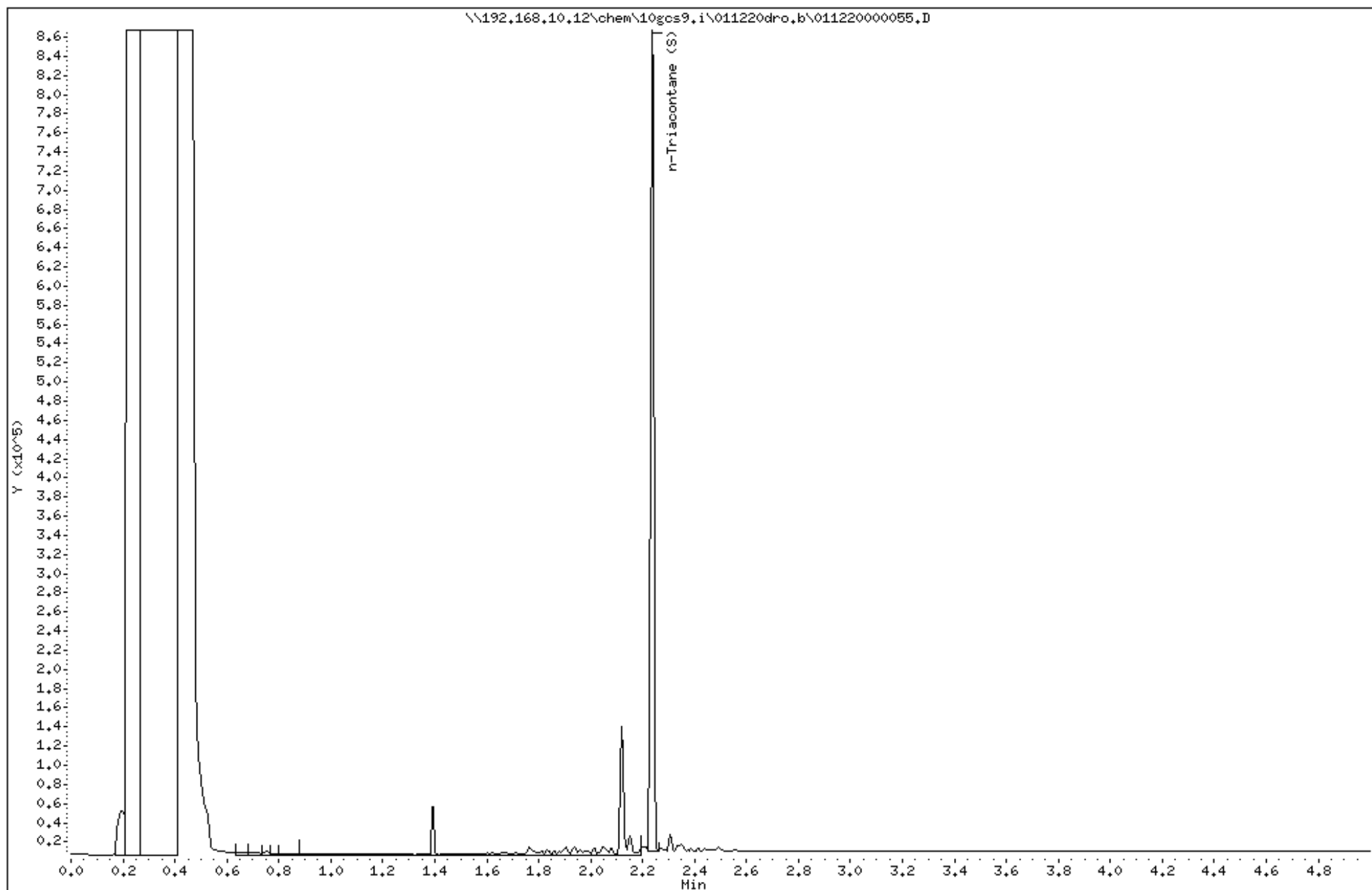
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 18:26

Client ID: SB-22_2-4

Sample Info: 10504984021

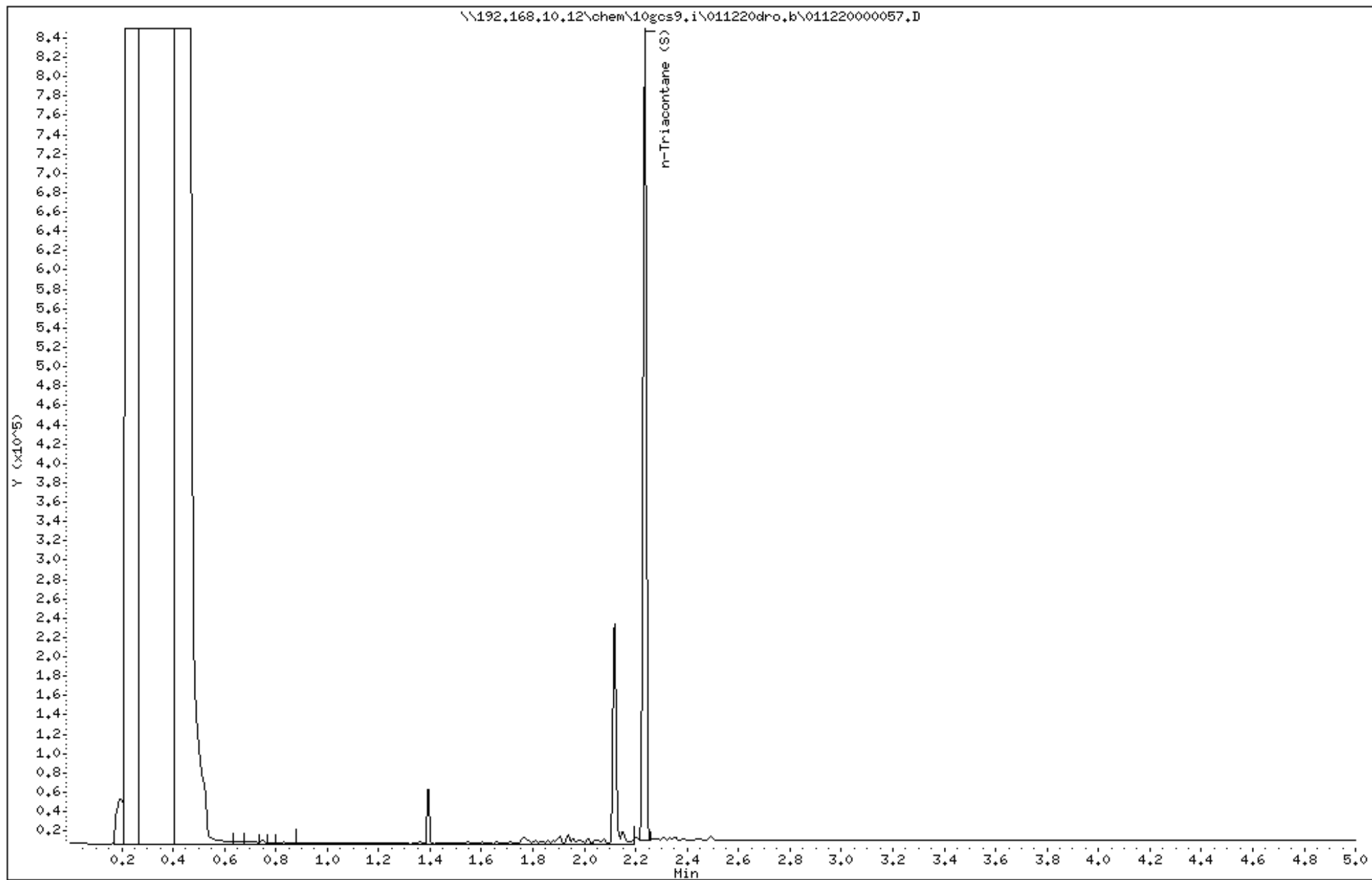
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 13:53

Client ID: SB-22_6-8

Sample Info: 10504984022

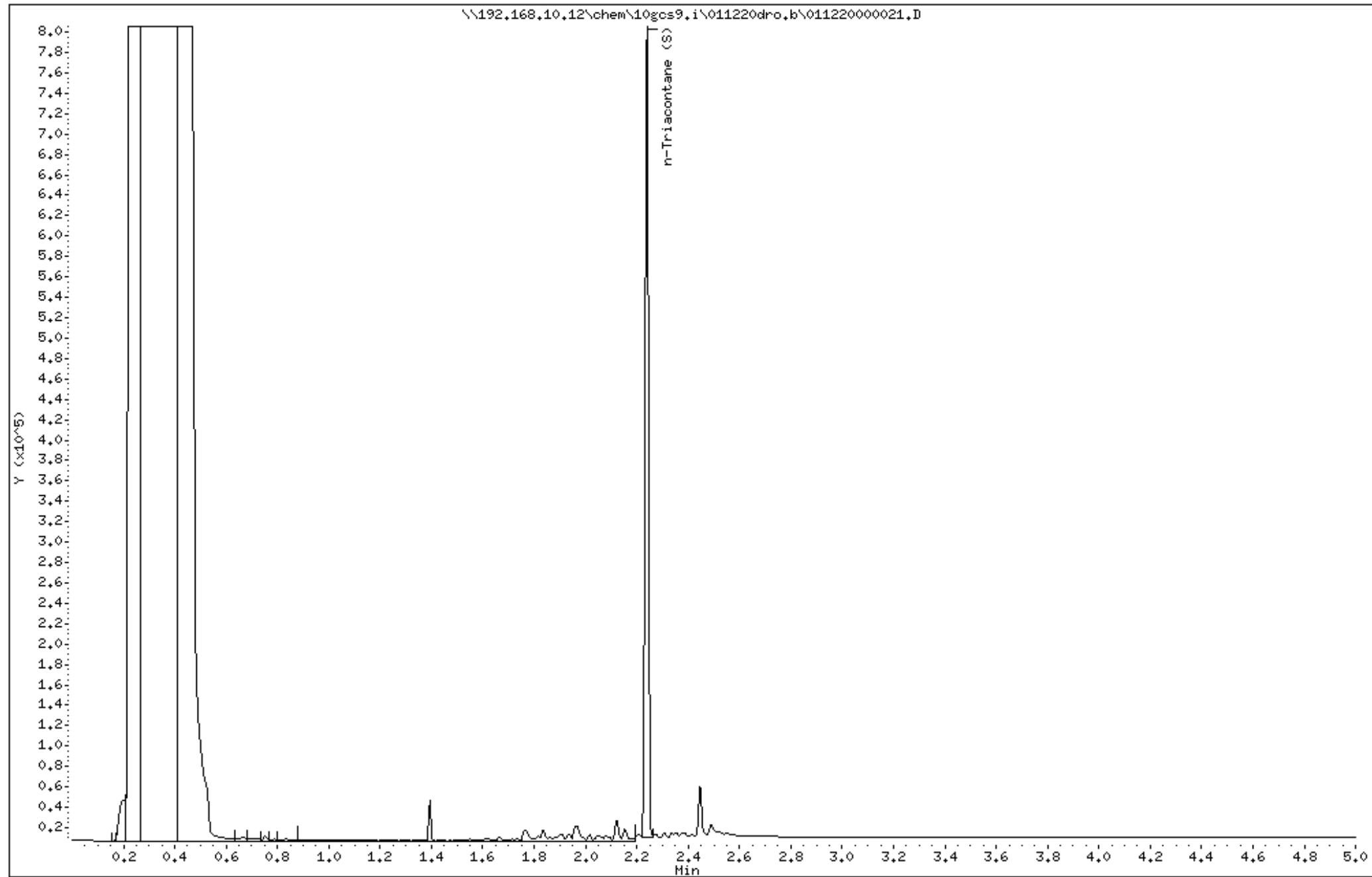
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9.i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 13:39

Client ID: SB-23_6-8

Sample Info: 10504984023

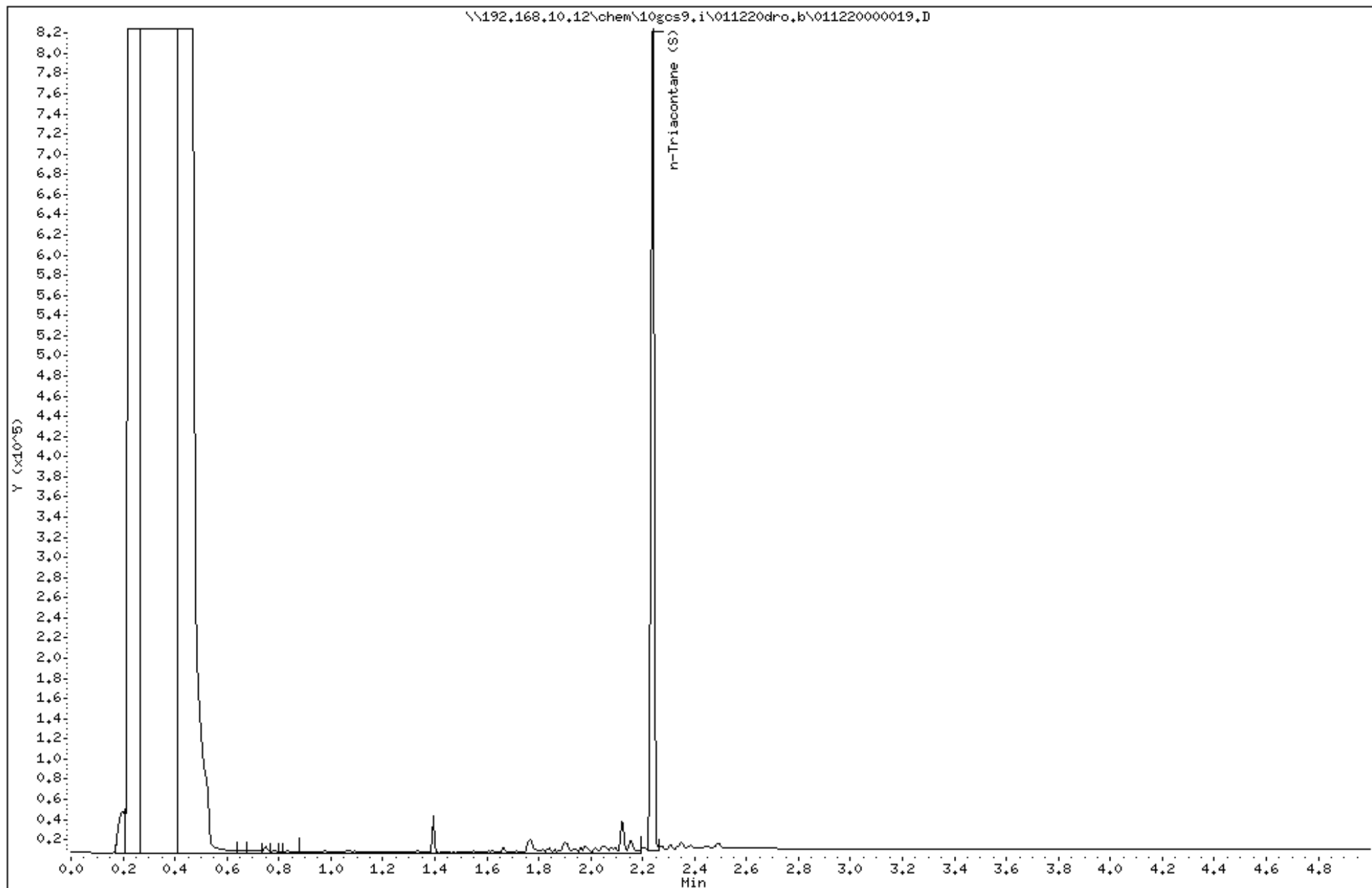
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 13:46

Client ID: SB-29_2-4

Sample Info: 10504984024

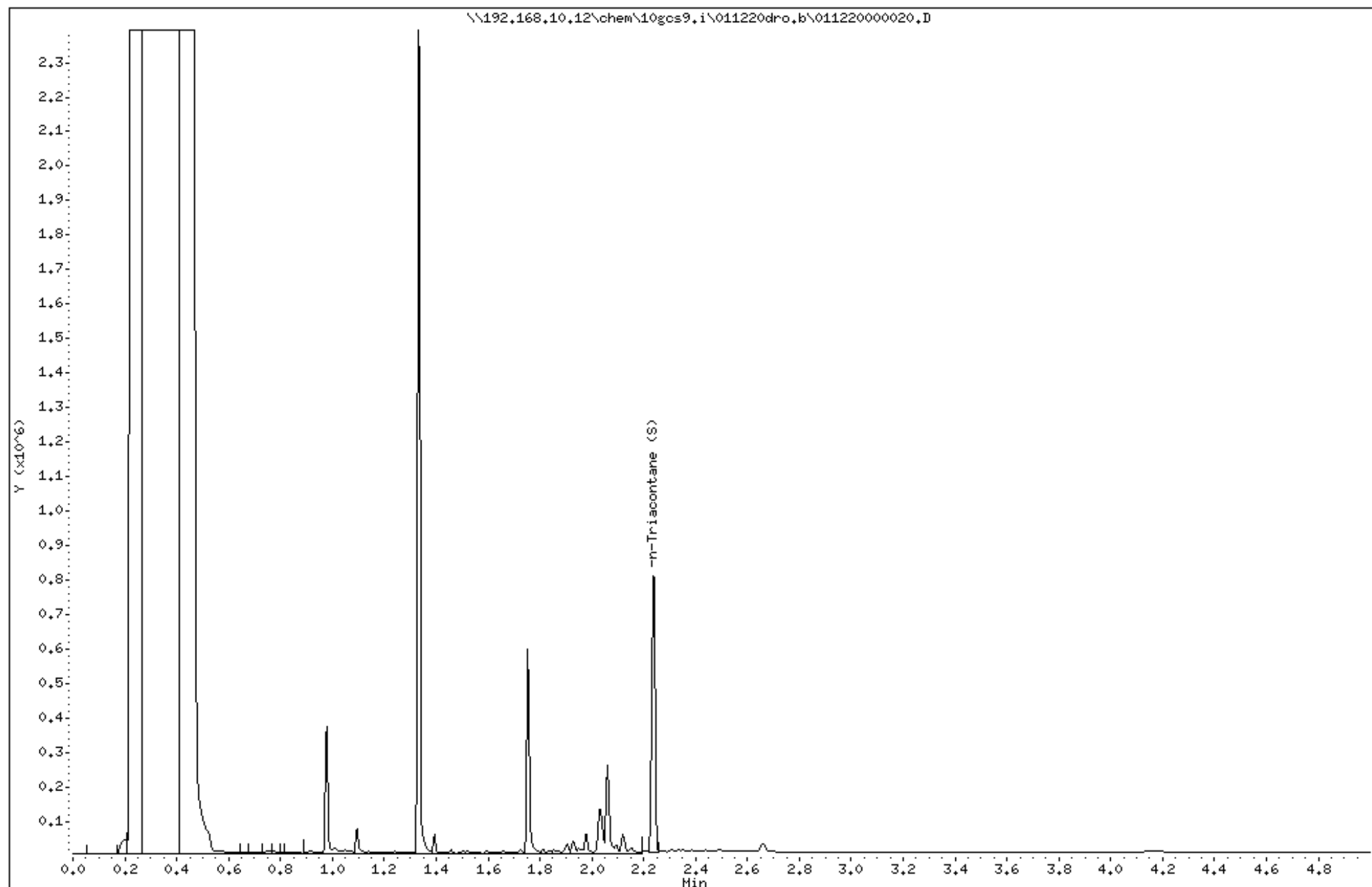
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9.i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 14:00

Client ID: SB-29_6-8

Sample Info: 10504984025

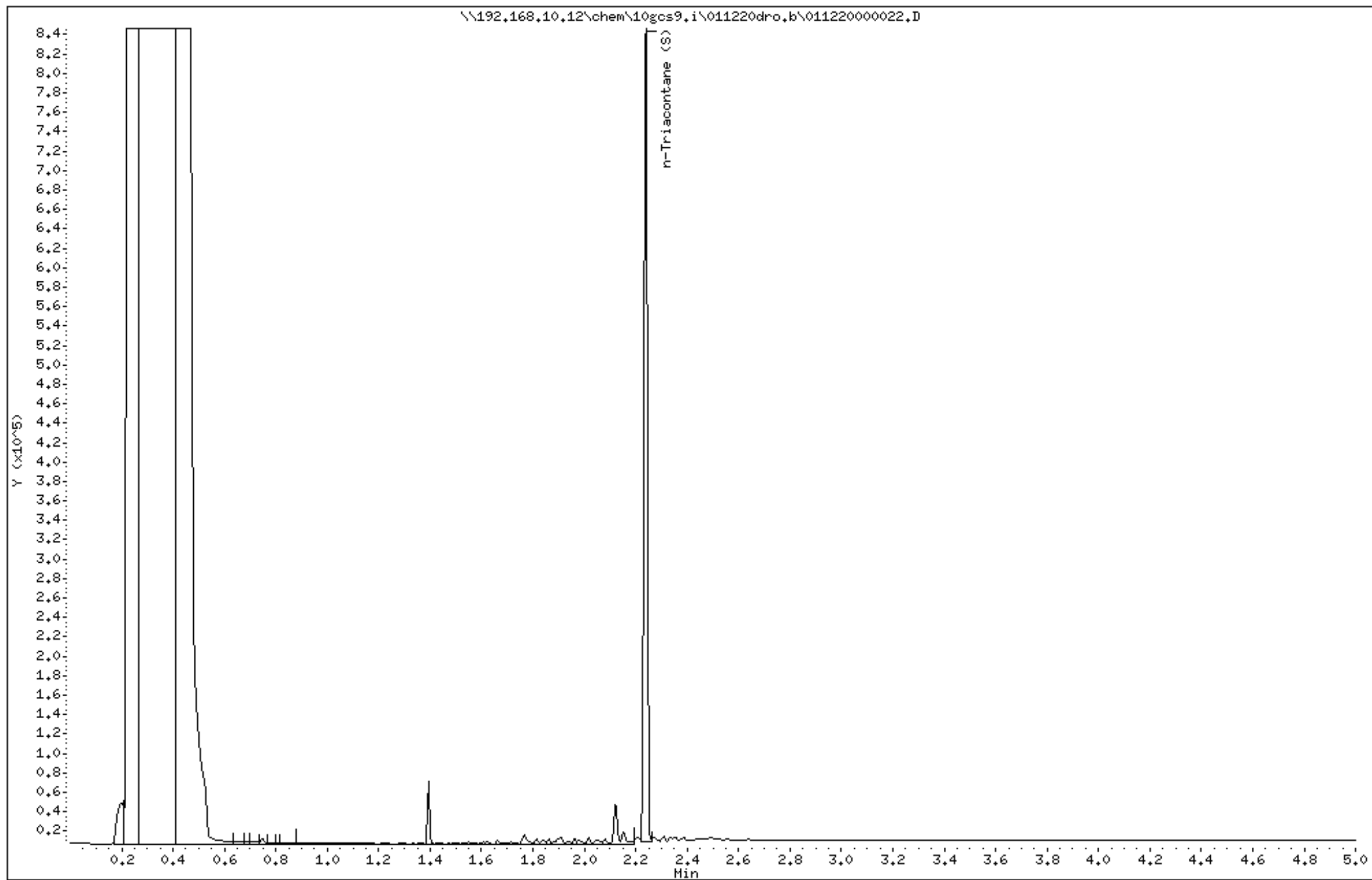
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 14:07

Client ID: SB-27_2-4

Sample Info: 10504984026

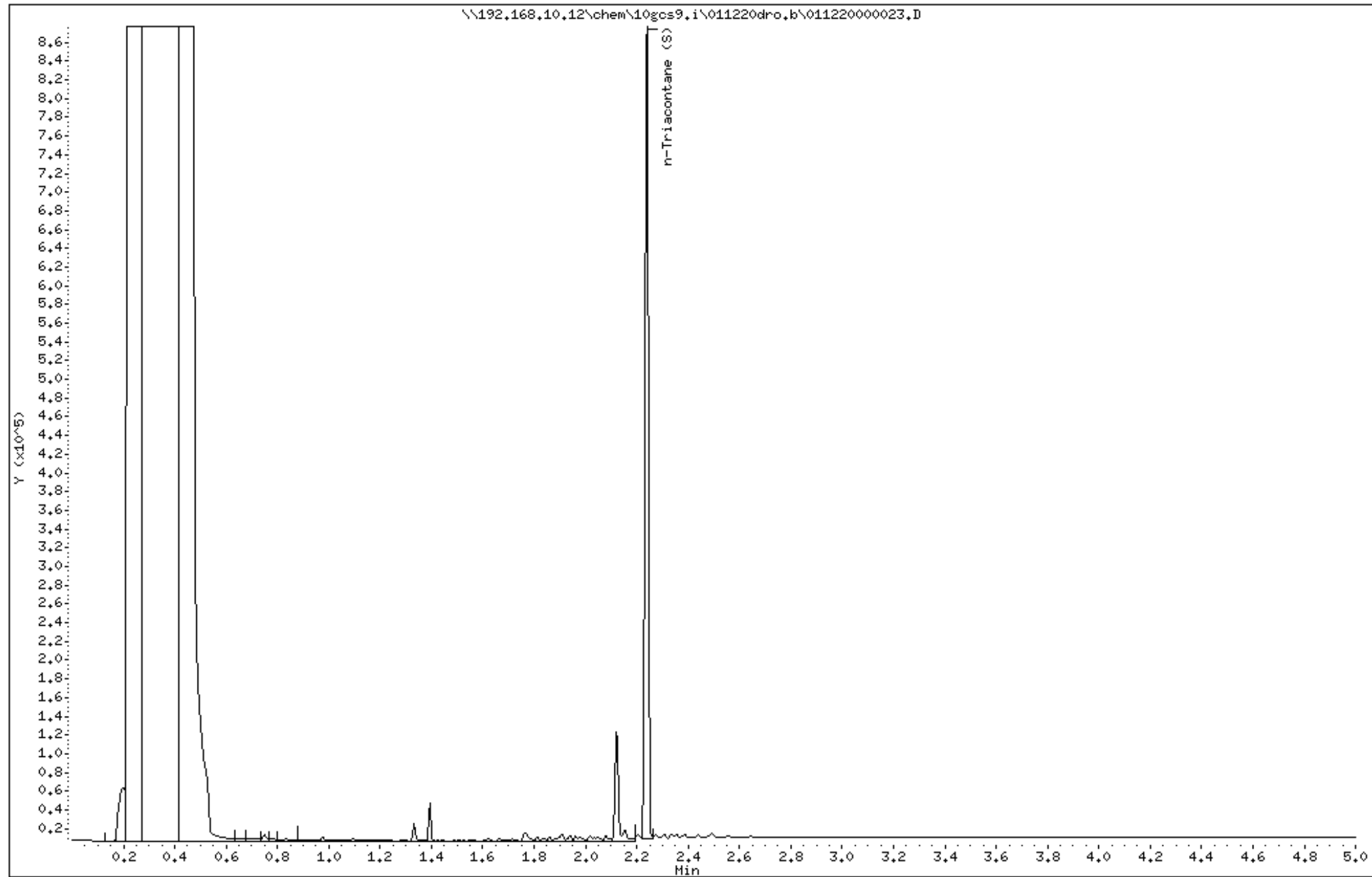
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 14:14

Client ID: SB-27_6-8

Sample Info: 10504984027

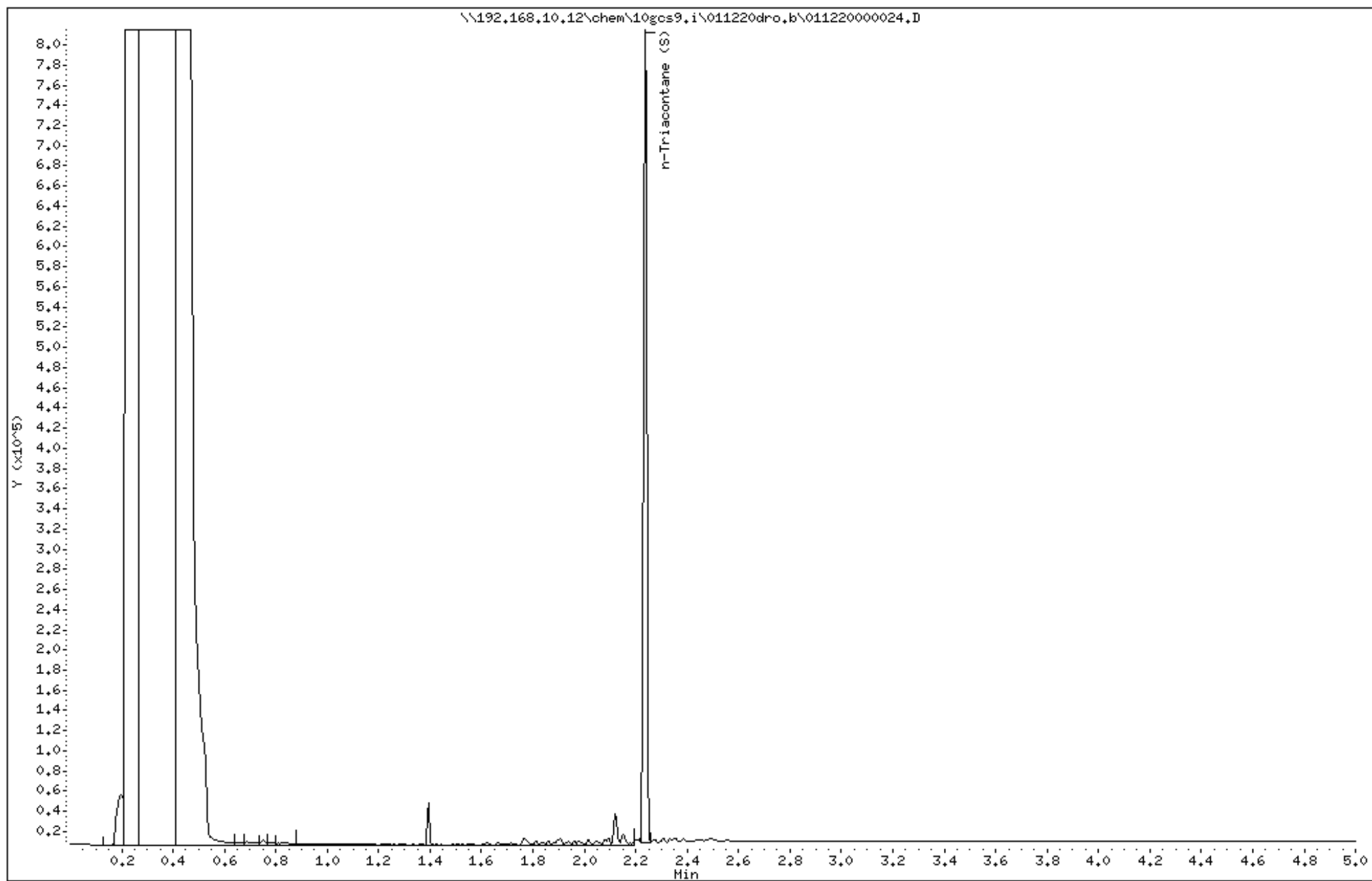
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 14:21

Client ID: SB-28_6-8

Sample Info: 10504984028

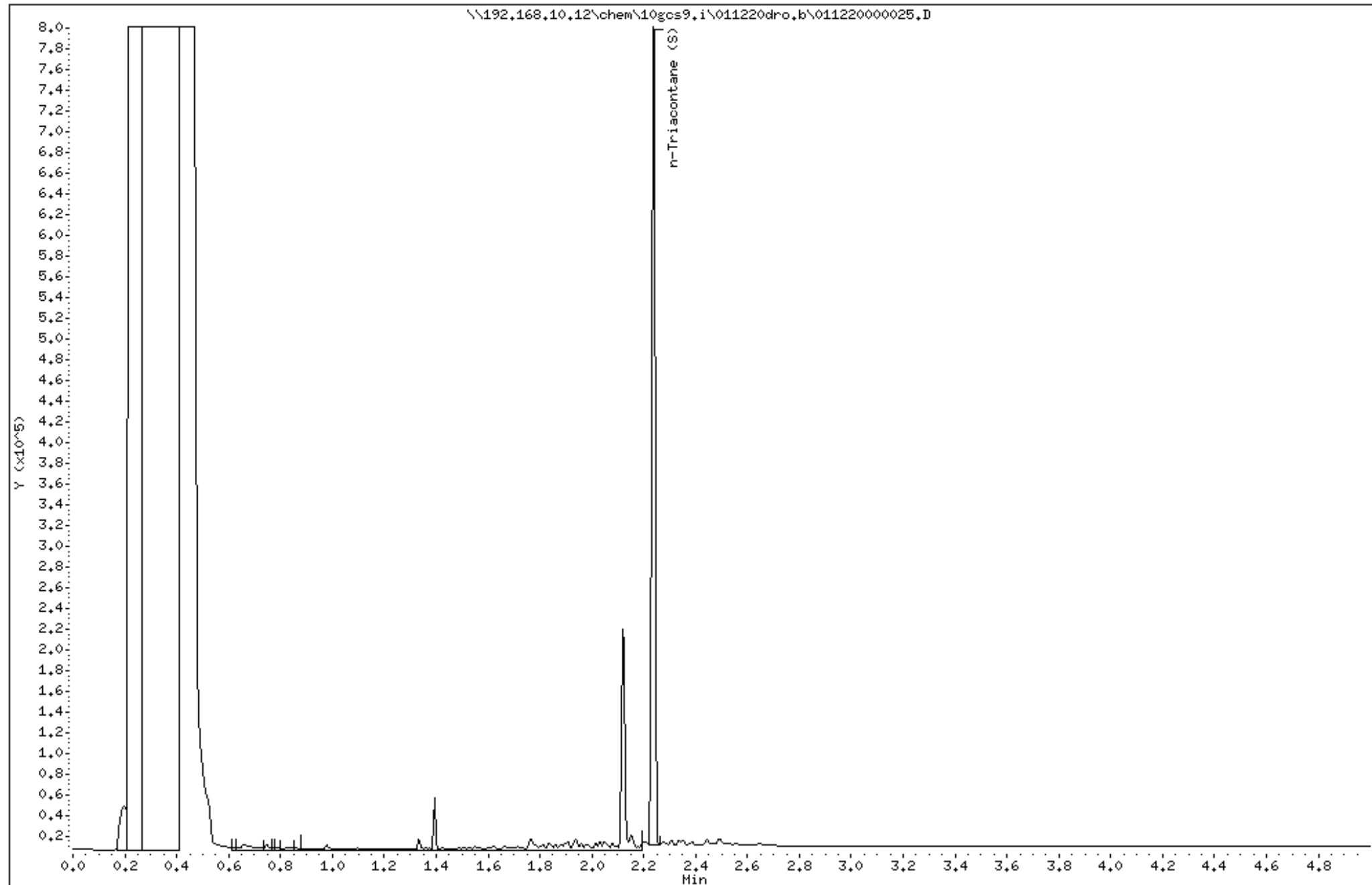
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 13:10

Client ID: SB-24_6-8

Sample Info: 10504984029

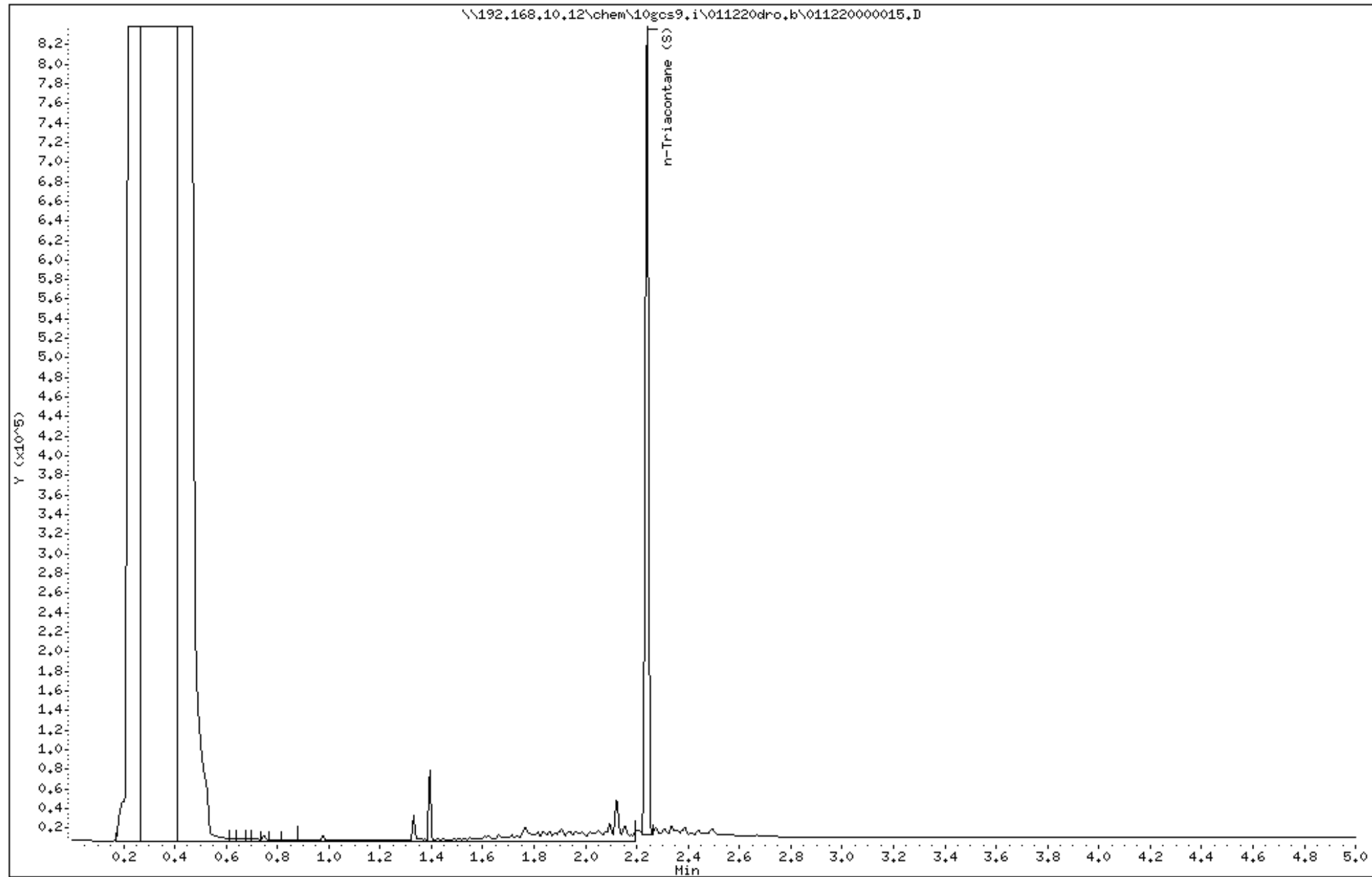
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 13:32

Client ID: SB-25_6-8

Sample Info: 10504984030

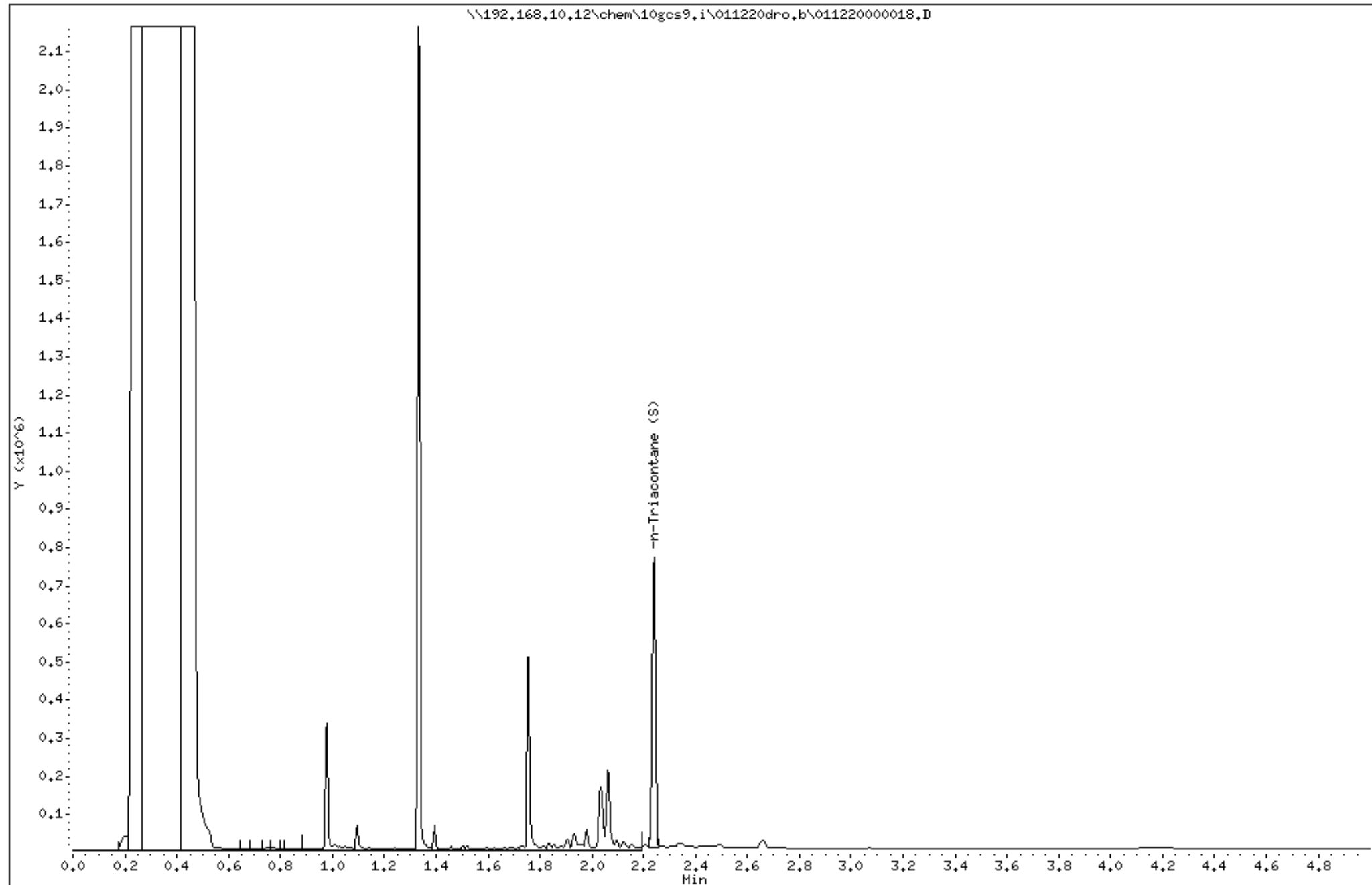
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JVM

Column diameter: 0.32



Date : 12-JAN-2020 14:28

Client ID: SB-26_2-4

Sample Info: 10504984031

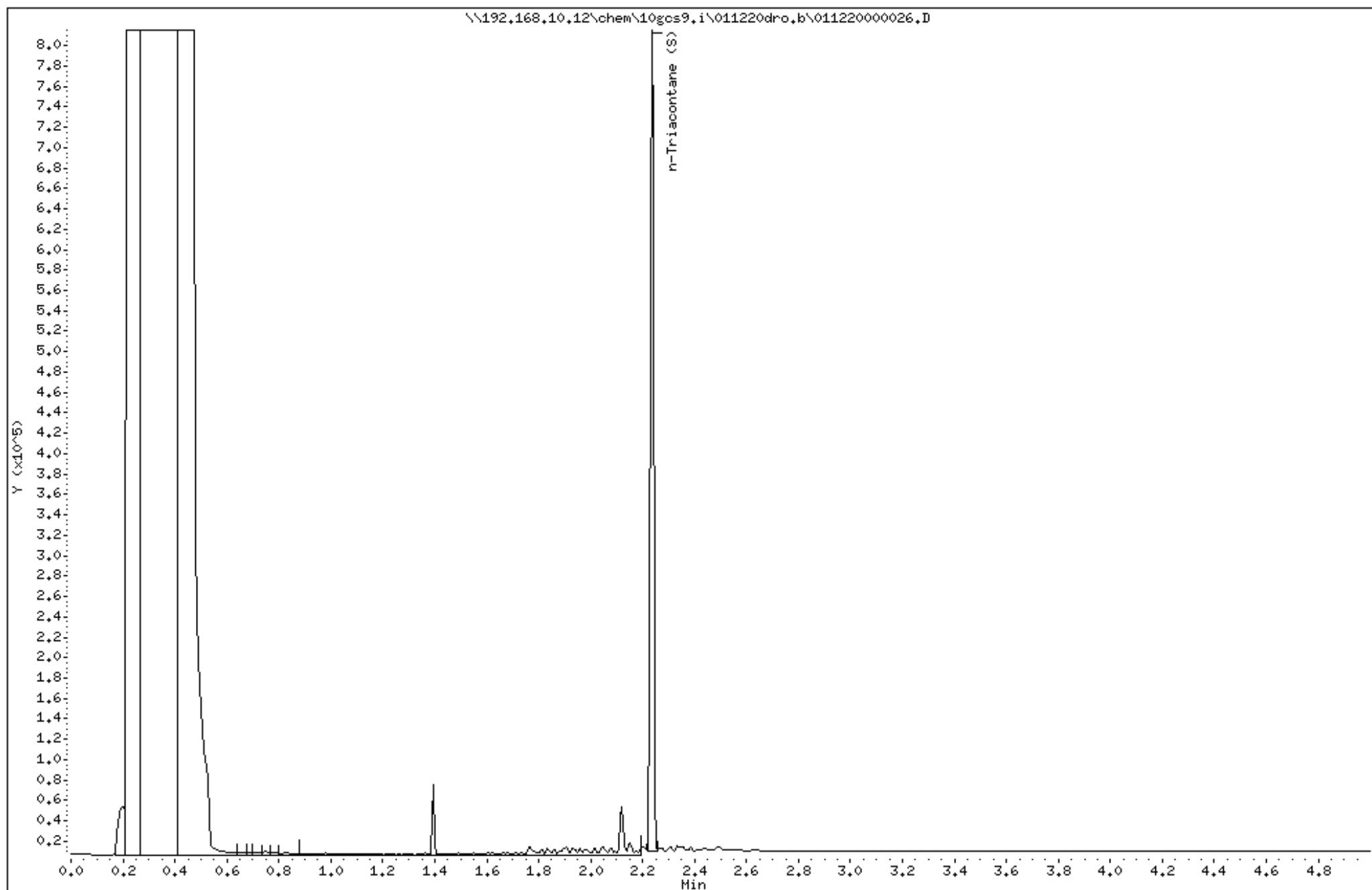
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 14:35

Client ID: SB-26_6-8

Sample Info: 10504984032

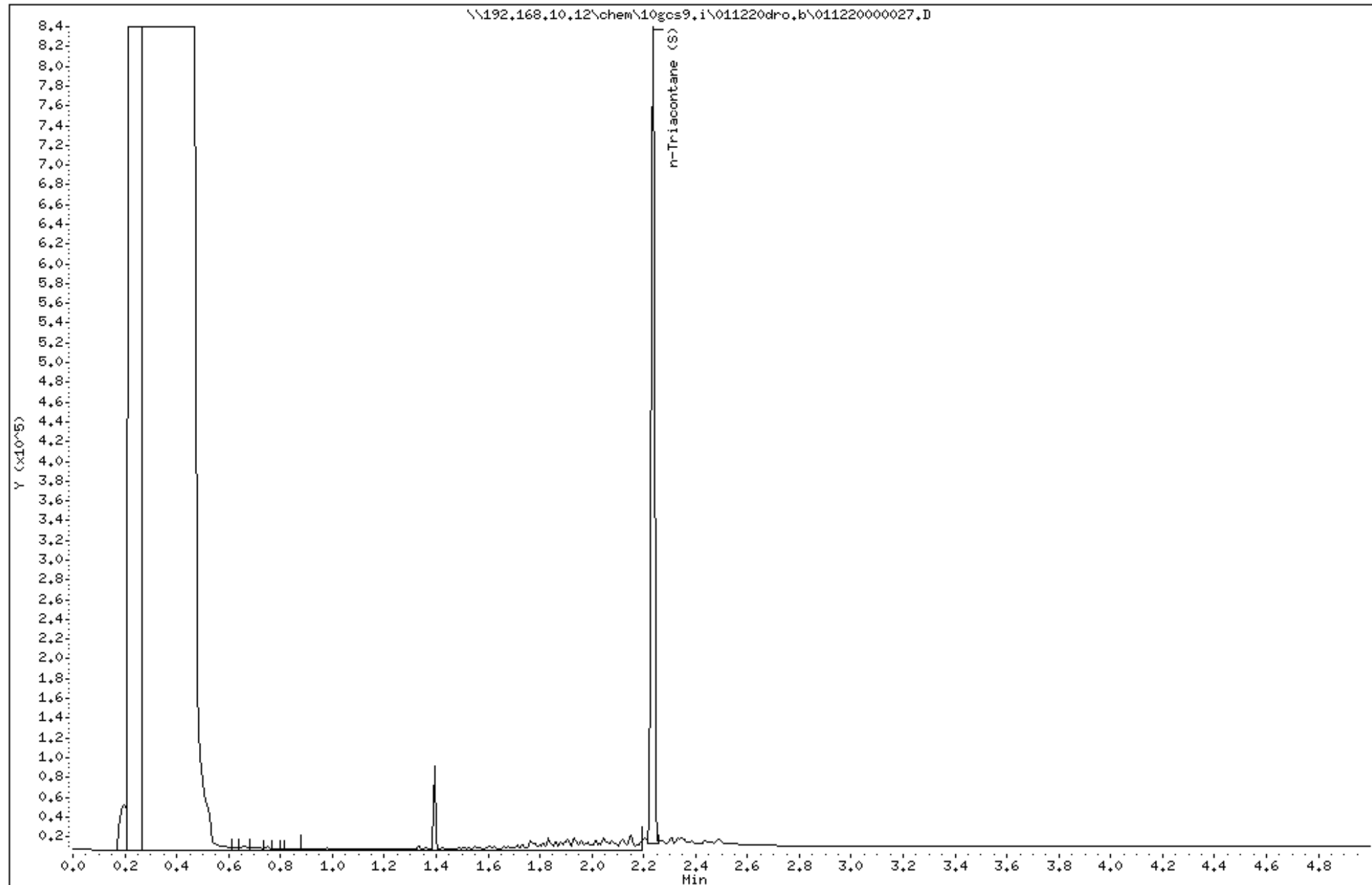
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 14:56

Client ID: SB-19_6-8

Sample Info: 10504984033

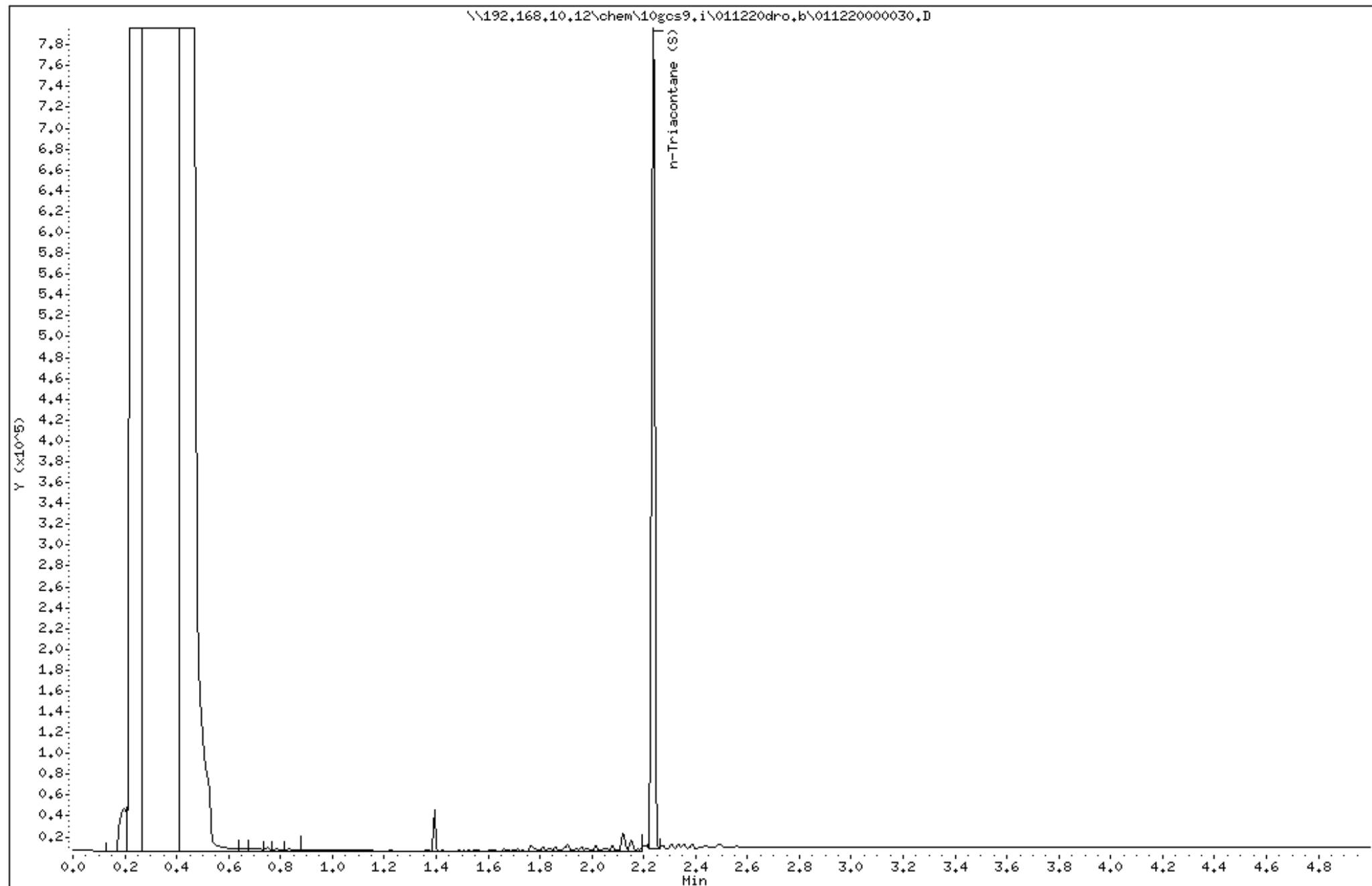
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 15:03

Client ID: SB-18_2-4

Sample Info: 10504984034

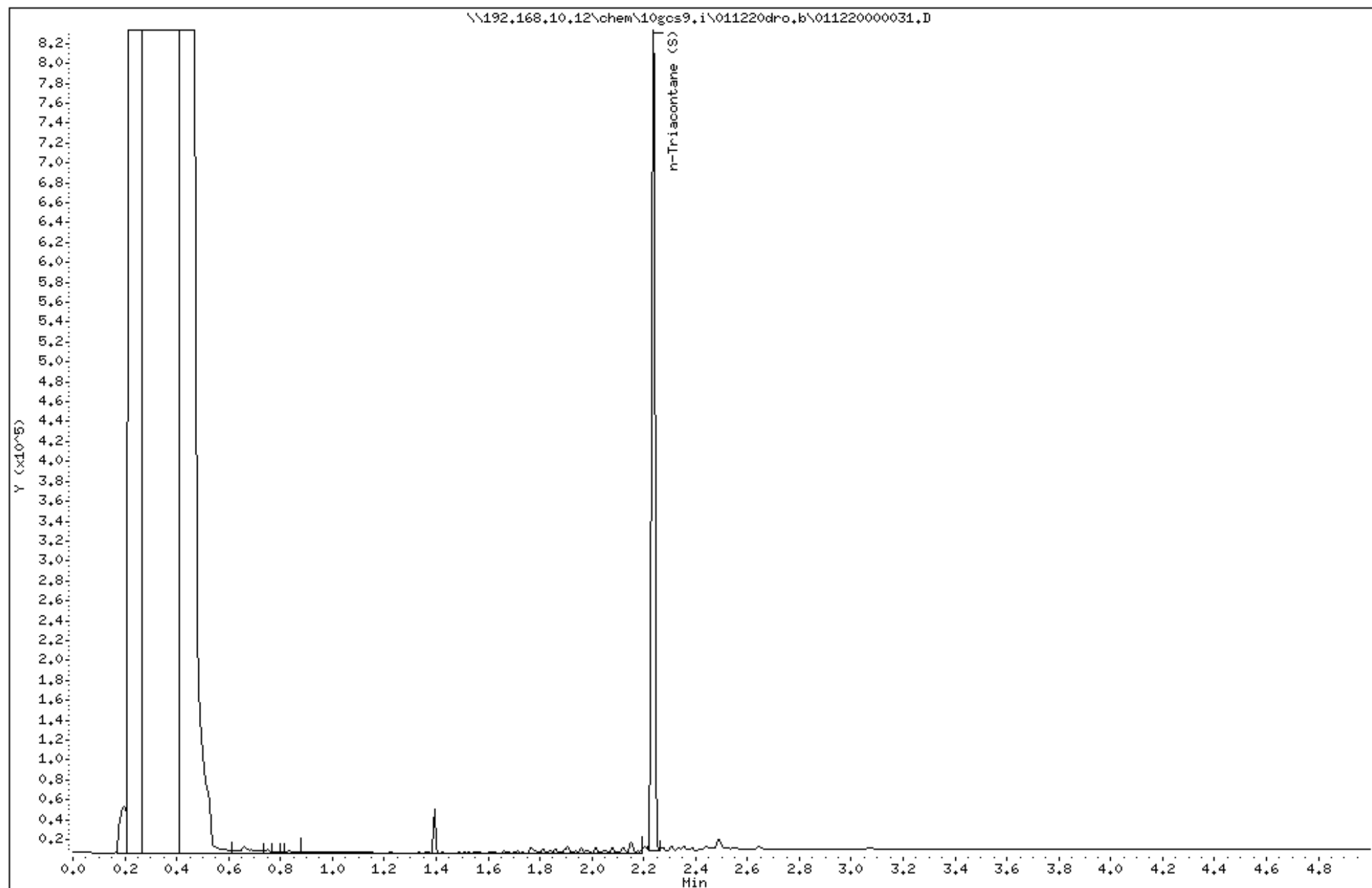
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 15:10

Client ID: SB-18_6-8

Sample Info: 10504984035

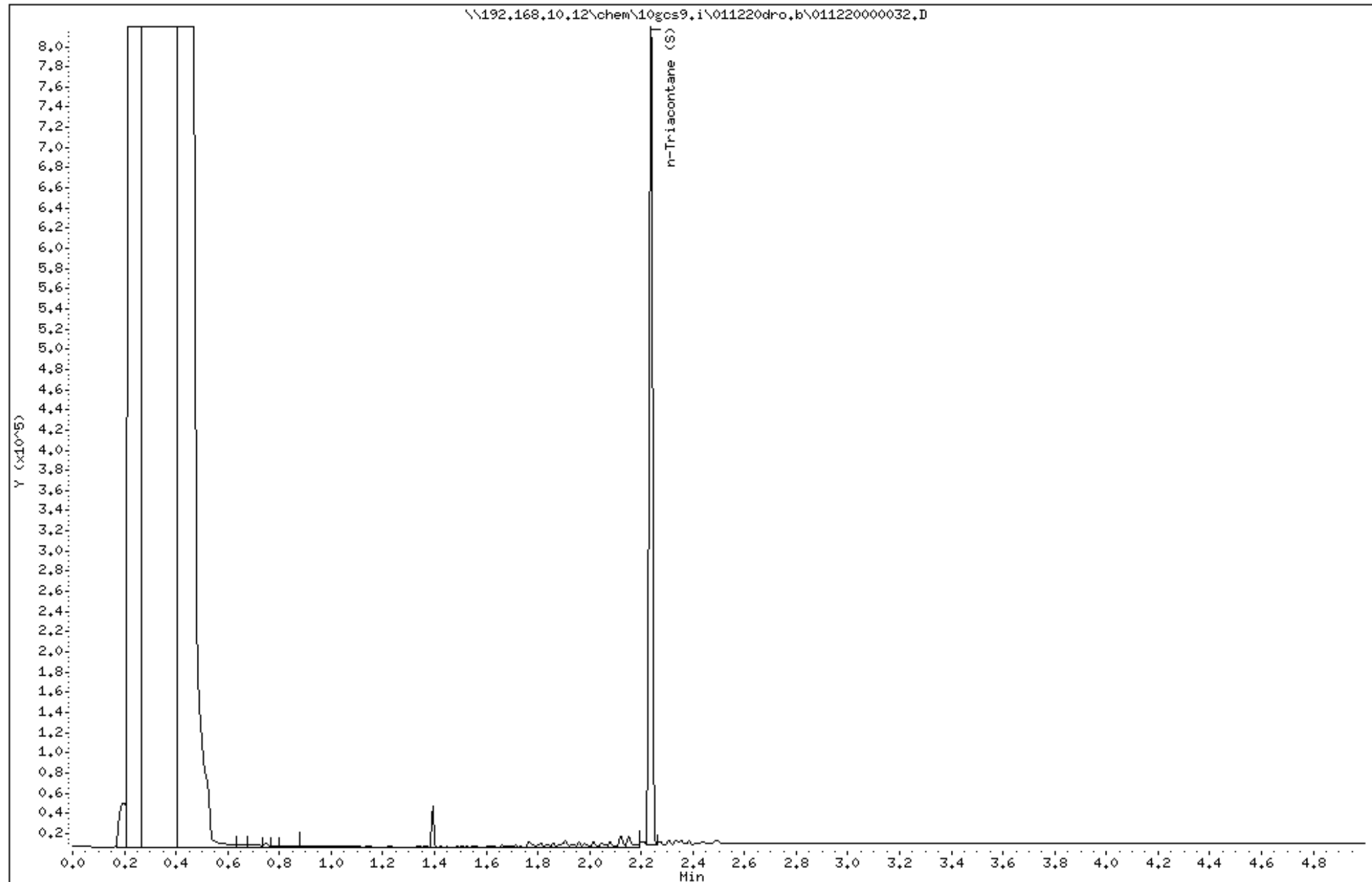
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 15:17

Client ID: SB-17_6-8

Sample Info: 10504984036

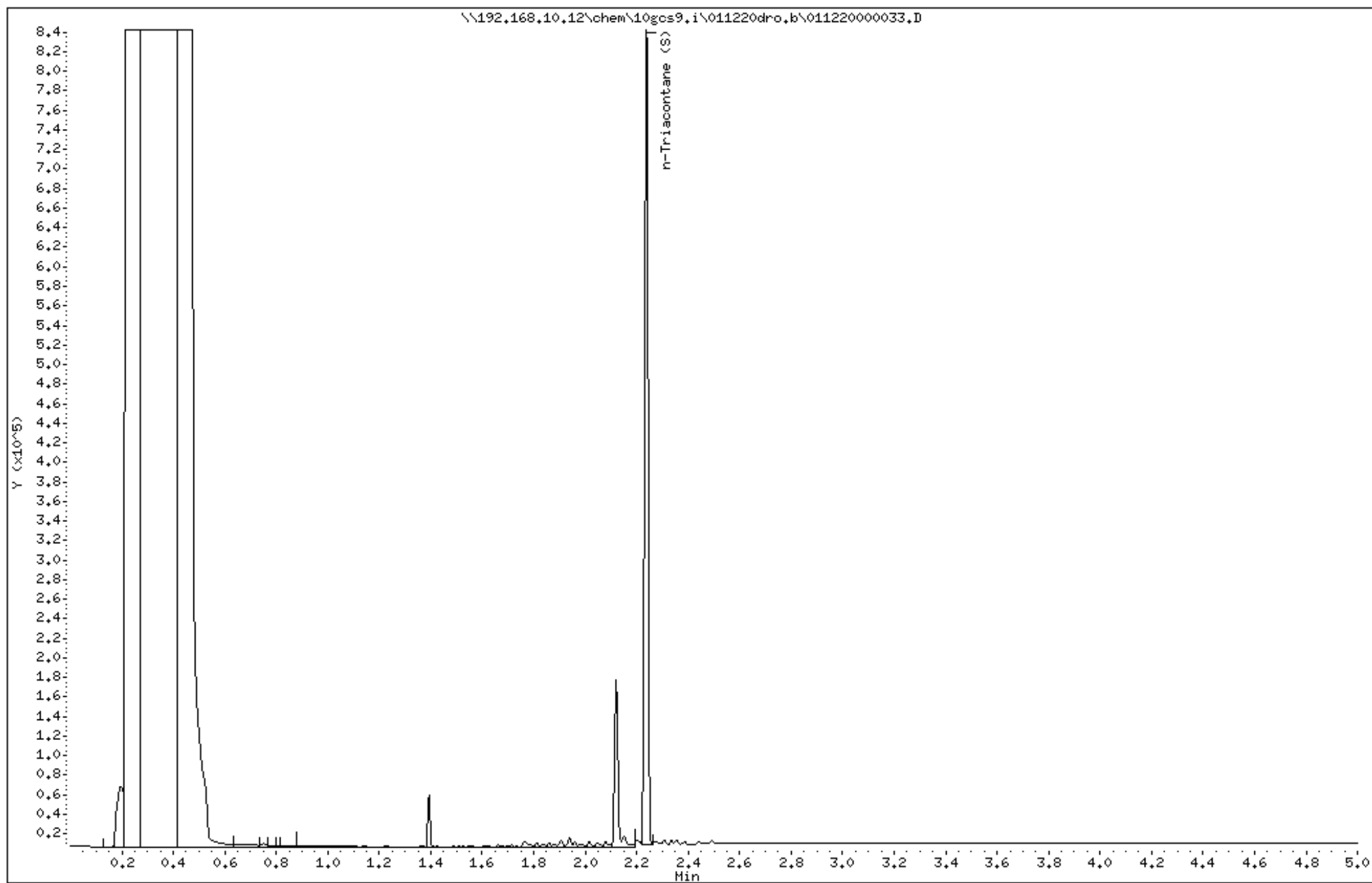
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



Date : 12-JAN-2020 14:42

Client ID: SB-20_6-8

Sample Info: 10504984037

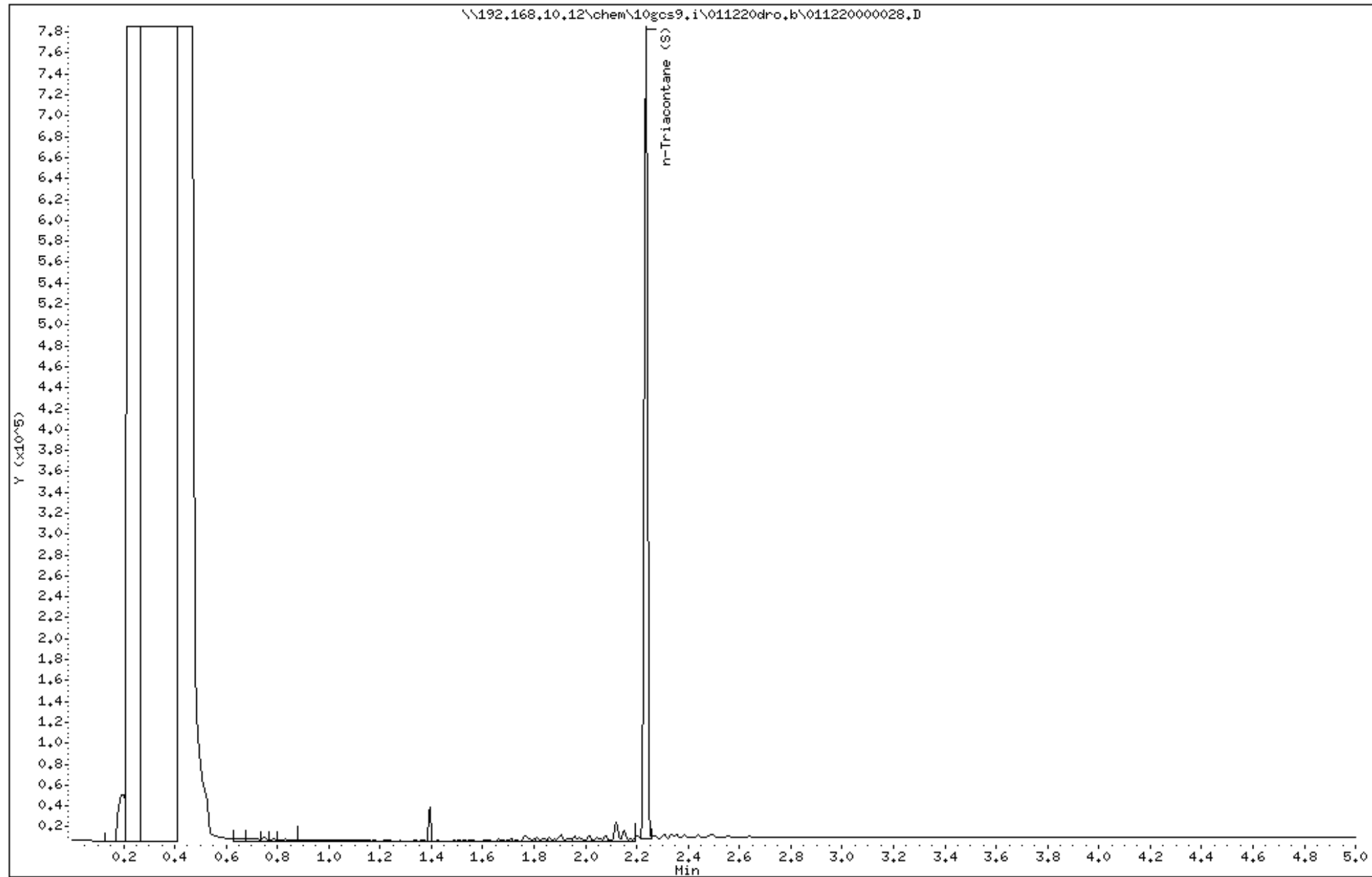
Volume Injected (uL): 1.0

Column phase: DB-5-US1933048

Instrument: 10gcs9,i

Operator: JMH

Column diameter: 0.32



C.2 – Investigation Waste Disposal Documentation

P.O. Number	Customer Code	SKB Representative Kyle Backstrom	CL
-------------	---------------	-----------------------------------	----

I. Generator Information

Generator Name: Superior Water Light and Power		Generator EPA ID Number WIR 000 150 185	SIC Code
Generator Location: Nemadji Substation, Hill Avenue and Stinson Avenue Superior WI, 54880		County: Douglas	Generator Contact: Greg Prom or Zach Golkowski
Generator Mailing Address (if different: SWLP 2915 Hill Avenue Superior, WI 54880)		Phone: 218-355-3191	Fax:
Bill To Name & Address: SWLP 2915 Hill Avenue Superior, WI 54880		Bill To #:	Billing Contact: Accounts Payable
Invoice Contact: Zach Golkowski		Phone: 218-355-3191	Fax:
		Billing Email Address: accountspayable@allete.com	
		Generator Email Address: gprom@mnpower.com or zgolkowski@mnpower.com	

II. Waste Generation Information

Waste Name: Oil Impacted Soil/Debris	Estimated rate of waste generation: 1,000	<input checked="" type="checkbox"/> one time
	<input type="checkbox"/> Lbs. <input checked="" type="checkbox"/> tons <input type="checkbox"/> cy <input type="checkbox"/> drums	<input type="checkbox"/> yearly
Generator Facility Operations and/or Site History: Buried debris mixed with bituminous.		
Describe the generating process or source of contaminated soil/debris and/or waste: Historic dumping of oily tarry bituminous.		

III. Waste Composition and Constituents (list all known)

	Actual Range	
	%	ppm
Oil Contaimainted Soil/Debris (e.g. class 5, grave, sand clay, topsoil, crushed rock, metal debris)	100	<50 (PCB)

IV. Waste Properties

Physical state: <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Sludge <input type="checkbox"/> Gas	Free Liquids: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Content %	pH Range: <input type="checkbox"/> <2 <input type="checkbox"/> 2-4 <input checked="" type="checkbox"/> 5-8 <input type="checkbox"/> 8-12.4 <input type="checkbox"/> >12.5	Flash point: <input type="checkbox"/> ≤ 140°F <input type="checkbox"/> > 140°F to < 200°F <input checked="" type="checkbox"/> > 200°F	Color: Brown	Odor (describe): Slight petroleum
--	---	--	--	--------------	-----------------------------------

V. Waste Classification

Waste stream properties (answer ALL questions)	Does this waste contain absorbents? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Does this waste stream contain any D, F, K, U or P listed as hazardous waste, either in pure form, as a mixture, or treatment residue? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this waste lethal (by Minn. Rules 7045.0131 Subp. 6)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Does this waste stream contain PCB material? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, concentration: _____ppm	Is this waste recyclable? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Does this waste stream contain fuming acids? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this waste explosive? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Does this waste contain asbestos? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this waste infectious? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Does this waste contain oxidizers? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this putrescible waste? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Does this waste contain radioactive material? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this waste demolition debris? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	Is this waste sewer sludge? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Please attach any available information or analytical test results that have previously been performed on this waste that substantiates these determinations. Include MSDS's and any information from other agencies (i.e., MPCA, USEPA)	

VI. Shipping Information

Proper DOT Shipping Name (per CFR 172.101) where applicable			
Reportable Quantity	DOT Hazard Class	UN/NA Number	Packing Group
Method of packaging: <input type="checkbox"/> drums (size _____) <input checked="" type="checkbox"/> Bulk Solids <input type="checkbox"/> boxes (size _____)		Method of shipment <input checked="" type="checkbox"/> Roll-off <input type="checkbox"/> End dump <input type="checkbox"/> Rail <input type="checkbox"/> Other (Specify) _____	

VII. Certification of Non Hazardous Waste & Approval Conditions

I hereby certify and warrant, on behalf of the generator and myself that, to the best of my knowledge and belief, the information contained herein is accurate, and true and that the waste is nonhazardous as defined in Title 42, Unites States Code Section 6903, Minnesota Statute Section 116.06, Subdivision 13, and/or any rules adopted by the Minnesota Pollution Control Agency under Minnesota Statute Section 116.07.

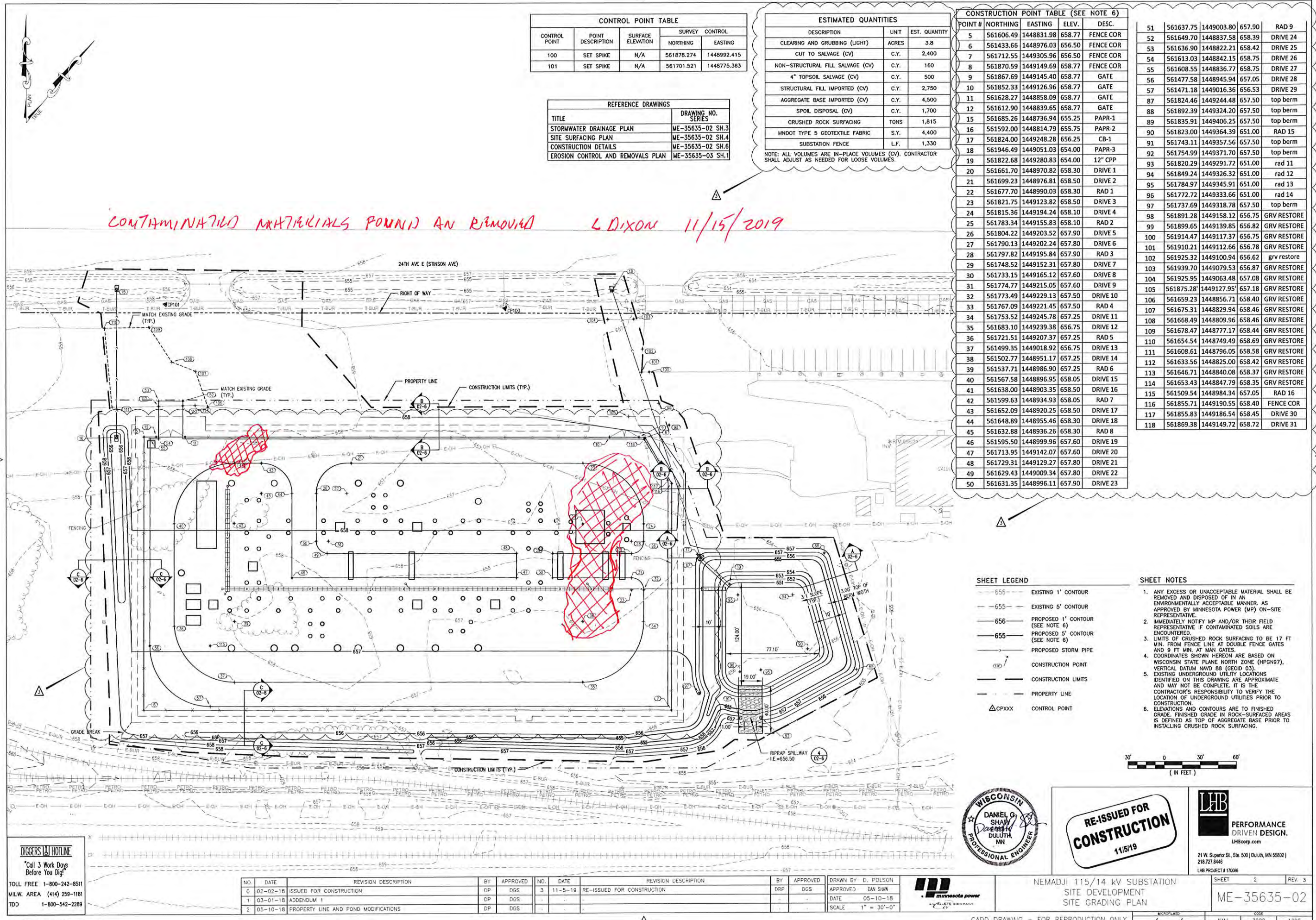
I understand that any approval is no longer valid if there are any changes in the process generating the waste or there have been changes in the composition of the waste. Therefore, if the composition of the waste stream changes or potentially changes, I or someone representing the generator, will immediately notify SKB Environmental. I, on behalf of the generator, hereby agree to fully indemnify SKB Environmental for any damages and/or costs incurred as a result of this certification being inaccurate or untrue.

Signature

Greg Prom
Printed Name

Env. Complinace Spec
Title

11/18/2019
Date



CONTROL POINT TABLE				
CONTROL POINT	POINT DESCRIPTION	SURFACE ELEVATION	SURVEY CONTROL	
			NORTHING	EASTING
100	SET SPIKE	N/A	561878.274	1448992.415
101	SET SPIKE	N/A	561701.521	1448775.383

REFERENCE DRAWINGS	
TITLE	DRAWING NO. SERIES
STORMWATER DRAINAGE PLAN	ME-35635-02 SH.3
SITE SURFACING PLAN	ME-35635-02 SH.4
CONSTRUCTION DETAILS	ME-35635-02 SH.6
EROSION CONTROL AND REMOVALS PLAN	ME-35635-03 SH.1

ESTIMATED QUANTITIES		
DESCRIPTION	UNIT	EST. QUANTITY
CLEARING AND GRUBBING (LIGHT)	ACRES	3.8
CUT TO SALVAGE (CV)	C.Y.	2,400
NON-STRUCTURAL FILL SALVAGE (CV)	C.Y.	160
4" TOPSOIL SALVAGE (CV)	C.Y.	500
STRUCTURAL FILL IMPORTED (CV)	C.Y.	2,750
AGGREGATE BASE IMPORTED (CV)	C.Y.	4,500
SPOIL DISPOSAL (CV)	C.Y.	1,700
CRUSHED ROCK SURFACING	TONS	1,815
MMDOT TYPE 5 GEOTEXTILE FABRIC	S.Y.	4,400
SUBSTATION FENCE	L.F.	1,330

NOTE: ALL VOLUMES ARE IN-PLACE VOLUMES (CV). CONTRACTOR SHALL ADJUST AS NEEDED FOR LOOSE VOLUMES.

CONSTRUCTION POINT TABLE (SEE NOTE 6)				
POINT #	NORTHING	EASTING	ELEV.	DESC.
5	561606.49	1448831.98	658.77	FENCE COR
6	561433.66	1448976.03	656.50	FENCE COR
7	561712.55	1449305.96	656.50	FENCE COR
8	561870.59	1449149.69	658.77	FENCE COR
9	561867.69	1449145.40	658.77	GATE
10	561852.33	1449126.96	658.77	GATE
11	561628.27	1448858.09	658.77	GATE
12	561612.90	1448839.65	658.77	GATE
15	561685.26	1448736.94	655.25	PAPR-1
16	561592.00	1448814.79	655.75	PAPR-2
17	561824.00	1449248.28	656.25	CB-1
18	561946.49	1449051.03	654.00	PAPR-3
19	561822.68	1449280.83	654.00	12" CPP
20	561661.70	1448970.82	658.30	DRIVE 1
21	561699.23	1448976.81	658.50	DRIVE 2
22	561677.70	1448990.03	658.30	RAD 1
23	561821.75	1449123.82	658.50	DRIVE 3
24	561815.36	1449194.24	658.10	DRIVE 4
25	561783.34	1449155.83	658.10	RAD 2
26	561804.22	1449203.52	657.90	DRIVE 5
27	561790.13	1449202.24	657.80	DRIVE 6
28	561797.82	1449195.84	657.90	RAD 3
29	561748.52	1449152.31	657.80	DRIVE 7
30	561733.15	1449165.12	657.60	DRIVE 8
31	561774.77	1449215.05	657.60	DRIVE 9
32	561773.49	1449229.13	657.50	DRIVE 10
33	561767.09	1449221.45	657.50	RAD 4
34	561753.52	1449245.78	657.25	DRIVE 11
35	561683.10	1449239.38	656.75	DRIVE 12
36	561721.51	1449207.37	657.25	RAD 5
37	561499.35	1449018.92	656.75	DRIVE 13
38	561502.77	1448951.17	657.25	DRIVE 14
39	561537.71	1448986.90	657.25	RAD 6
40	561567.58	1448996.95	658.05	DRIVE 15
41	561638.00	1448903.35	658.50	DRIVE 16
42	561599.63	1448934.93	658.05	RAD 7
43	561652.09	1448920.25	658.50	DRIVE 17
44	561648.89	1448955.46	658.30	DRIVE 18
45	561632.88	1448936.26	658.30	RAD 8
46	561595.50	1448999.96	657.60	DRIVE 19
47	561713.95	1449142.07	657.60	DRIVE 20
48	561729.31	1449129.27	657.80	DRIVE 21
49	561629.43	1449009.34	657.80	DRIVE 22
50	561631.35	1448996.11	657.90	DRIVE 23

51	561637.75	1449003.80	657.90	RAD 9
52	561649.70	1448837.58	658.39	DRIVE 24
53	561636.90	1448822.21	658.42	DRIVE 25
54	561613.03	1448842.15	658.75	DRIVE 26
55	561608.55	1448836.77	658.75	DRIVE 27
56	561477.58	1448945.94	657.05	DRIVE 28
57	561471.18	1449016.36	656.53	DRIVE 29
87	561824.46	1449244.48	657.50	top berm
88	561892.39	1449324.20	657.50	top berm
89	561835.91	1449406.25	657.50	top berm
90	561823.00	1449364.39	651.00	RAD 15
91	561743.11	1449357.56	657.50	top berm
92	561754.99	1449371.70	657.50	top berm
93	561820.29	1449291.72	651.00	rad 11
94	561849.24	1449326.32	651.00	rad 12
95	561784.97	1449345.91	651.00	rad 13
96	561772.72	1449333.66	651.00	rad 14
97	561737.69	1449318.78	657.50	top berm
98	561891.28	1449158.12	656.75	GRV RESTORE
99	561899.65	1449139.85	656.82	GRV RESTORE
100	561914.47	1449117.37	656.75	GRV RESTORE
101	561910.21	1449112.66	656.78	GRV RESTORE
102	561925.32	1449100.94	656.62	grv restore
103	561939.70	1449079.53	656.87	GRV RESTORE
104	561925.95	1449063.48	657.08	GRV RESTORE
105	561875.28	1449127.95	657.18	GRV RESTORE
106	561659.23	1448856.71	658.40	GRV RESTORE
107	561675.31	1448829.94	658.46	GRV RESTORE
108	561668.49	1448809.96	658.46	GRV RESTORE
109	561678.47	1448777.17	658.44	GRV RESTORE
110	561654.54	1448749.49	658.69	GRV RESTORE
111	561608.61	1448796.05	658.58	GRV RESTORE
112	561633.56	1448825.00	658.42	GRV RESTORE
113	561646.71	1448840.08	658.37	GRV RESTORE
114	561653.43	1448847.79	658.35	GRV RESTORE
115	561509.54	1448984.34	657.00	RAD 16
116	561855.71	1449190.55	658.40	FENCE COR
117	561855.83	1449186.54	658.45	DRIVE 30
118	561869.38	1449149.72	658.72	DRIVE 31

SHEET LEGEND	
---	EXISTING 1' CONTOUR
---	EXISTING 5' CONTOUR
---	PROPOSED 1' CONTOUR (SEE NOTE 6)
---	PROPOSED 5' CONTOUR (SEE NOTE 6)
---	PROPOSED STORM PIPE
---	CONSTRUCTION POINT
---	CONSTRUCTION LIMITS
---	PROPERTY LINE
△CPXXX	CONTROL POINT

- SHEET NOTES**
- ANY EXCESS OR UNACCEPTABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF IN AN ENVIRONMENTALLY ACCEPTABLE MANNER, AS APPROVED BY MINNESOTA POWER (MP) ON-SITE REPRESENTATIVE.
 - IMMEDIATELY NOTIFY MP AND/OR THEIR FIELD REPRESENTATIVE IF CONTAMINATED SOILS ARE ENCOUNTERED.
 - LIMITS OF CRUSHED ROCK SURFACING TO BE 17 FT MIN. FROM FENCE LINE AT DOUBLE FENCE GATES AND 9 FT MIN. AT MAN GATES.
 - COORDINATES SHOWN HEREON ARE BASED ON WISCONSIN STATE PLANE NORTH ZONE (WPGN97), VERTICAL DATUM NAVD 83 (GEOID 03).
 - EXISTING UNDERGROUND UTILITY LOCATIONS IDENTIFIED ON THIS DRAWING ARE APPROXIMATE AND MAY NOT BE COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
 - ELEVATIONS AND CONTOURS ARE TO FINISHED GRADE. FINISHED GRADE IN ROCK-SURFACED AREAS IS DEFINED AS TOP OF AGGREGATE BASE PRIOR TO INSTALLING CRUSHED ROCK SURFACING.

DIGGERS HOTLINE
 Call 3 Work Days Before You Dig!
 TOLL FREE 1-800-242-8511
 MILW. AREA (414) 259-1181
 TDD 1-800-542-2289

NO.	DATE	REVISION DESCRIPTION	BY	APPROVED	NO.	DATE	REVISION DESCRIPTION	BY	APPROVED
0	02-02-18	ISSUED FOR CONSTRUCTION	DP	DGS	3	11-5-19	RE-ISSUED FOR CONSTRUCTION	DRP	DGS
1	03-01-18	ADDENDUM 1	DP	DGS					
2	05-10-18	PROPERTY LINE AND POND MODIFICATIONS	DP	DGS					



RE-ISSUED FOR CONSTRUCTION
 11/5/19



NEMADJI 115/14 KV SUBSTATION
 SITE DEVELOPMENT
 SITE GRADING PLAN

SHEET 2 REV. 3
 ME-35635-02

November 15, 2019

Zach Golkowski
MN Power
30 W. Superior St.
Duluth, MN 55802

RE: Project: Nemadji Substation Soil Sampli
Pace Project No.: 10498837

Dear Zach Golkowski:

Enclosed are the analytical results for sample(s) received by the laboratory on November 08, 2019. 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,



Ryan Thibault
ryan.thibault@pacelabs.com
(612)607-1700
Project Manager

Enclosures

cc: Ross Dudzik, Minnesota Power
Drew Janke, Minnesota Power



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

Pace Analytical Services Minneapolis

A2LA Certification #: 2926.01
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
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
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 #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Massachusetts DWP Certification #: via MN 027-053-137
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certification #: via MN 027-053-137
Minnesota Petrofund Certification #: 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 #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification #: CL101
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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Nemadji Substation Soil Sampli
Pace Project No.: 10498837

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10498837001	Nemadji Sub	Solid	11/08/19 02:07	11/08/19 14:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10498837001	Nemadji Sub	EPA 8082A	JVM	12	PASI-M
		WI MOD DRO	EC2	2	PASI-M
		EPA 6010D	BD1	7	PASI-M
		EPA 7470A	LMW	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8270D	STB	18	PASI-M
		EPA 8260B	AEZ	14	PASI-M

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

Sample: Nemadji Sub **Lab ID: 10498837001** Collected: 11/08/19 02:07 Received: 11/08/19 14:00 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082A GCS PCB								
Analytical Method: EPA 8082A Preparation Method: EPA 3550								
PCB-1016 (Aroclor 1016)	ND	ug/kg	46.8	1	11/11/19 17:17	11/14/19 20:23	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/kg	46.8	1	11/11/19 17:17	11/14/19 20:23	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/kg	46.8	1	11/11/19 17:17	11/14/19 20:23	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/kg	46.8	1	11/11/19 17:17	11/14/19 20:23	53469-21-9	
PCB-1248 (Aroclor 1248)	ND	ug/kg	46.8	1	11/11/19 17:17	11/14/19 20:23	12672-29-6	
PCB-1254 (Aroclor 1254)	ND	ug/kg	46.8	1	11/11/19 17:17	11/14/19 20:23	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/kg	46.8	1	11/11/19 17:17	11/14/19 20:23	11096-82-5	
PCB-1262 (Aroclor 1262)	ND	ug/kg	46.8	1	11/11/19 17:17	11/14/19 20:23	37324-23-5	
PCB-1268 (Aroclor 1268)	ND	ug/kg	46.8	1	11/11/19 17:17	11/14/19 20:23	11100-14-4	
PCB, Total	ND	ug/kg	46.8	1	11/11/19 17:17	11/14/19 20:23	1336-36-3	
Surrogates								
Tetrachloro-m-xylene (S)	54	%	57-125	1	11/11/19 17:17	11/14/19 20:23	877-09-8	S0
Decachlorobiphenyl (S)	49	%	49-125	1	11/11/19 17:17	11/14/19 20:23	2051-24-3	
WIDRO GCS								
Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	9220	mg/kg	2530	50	11/11/19 13:02	11/12/19 17:20		
Surrogates								
n-Triacontane (S)	0	%	50-150	50	11/11/19 13:02	11/12/19 17:20	638-68-6	P3,S4
6010D MET ICP, TCLP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010								
Leachate Method/Date: EPA 1311; 11/12/19 14:20 Initial pH: 8.98; Final pH: 1.87								
Arsenic	ND	mg/L	0.50	1	11/14/19 05:33	11/14/19 15:32	7440-38-2	
Barium	1.2	mg/L	1.0	1	11/14/19 05:33	11/14/19 15:32	7440-39-3	
Cadmium	ND	mg/L	0.050	1	11/14/19 05:33	11/14/19 15:32	7440-43-9	
Chromium	ND	mg/L	0.50	1	11/14/19 05:33	11/14/19 15:32	7440-47-3	
Lead	ND	mg/L	0.50	1	11/14/19 05:33	11/14/19 15:32	7439-92-1	
Selenium	ND	mg/L	0.10	1	11/14/19 05:33	11/14/19 15:32	7782-49-2	
Silver	ND	mg/L	0.10	1	11/14/19 05:33	11/14/19 15:32	7440-22-4	
7470A Mercury, TCLP								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Leachate Method/Date: EPA 1311; 11/12/19 14:20 Initial pH: 8.98; Final pH: 1.87								
Mercury	ND	ug/L	0.60	1	11/14/19 09:28	11/15/19 11:04	7439-97-6	
Dry Weight / %M by ASTM D2974								
Analytical Method: ASTM D2974								
Percent Moisture	29.6	%	0.10	1		11/14/19 13:40		N2
8270D MSSV TCLP								
Analytical Method: EPA 8270D Preparation Method: EPA 3510								
Leachate Method/Date: EPA 1311; 11/12/19 14:20 Initial pH: 8.98; Final pH: 1.87								
1,4-Dichlorobenzene	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32	106-46-7	
2,4-Dinitrotoluene	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32	121-14-2	
Hexachloro-1,3-butadiene	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32	87-68-3	
Hexachlorobenzene	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32	118-74-1	
Hexachloroethane	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

Sample: Nemadji Sub **Lab ID: 10498837001** Collected: 11/08/19 02:07 Received: 11/08/19 14:00 Matrix: Solid

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

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270D MSSV TCLP								
Analytical Method: EPA 8270D Preparation Method: EPA 3510								
Leachate Method/Date: EPA 1311; 11/12/19 14:20 Initial pH: 8.98; Final pH: 1.87								
Nitrobenzene	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32	98-95-3	
Pentachlorophenol	ND	ug/L	200	1	11/13/19 13:28	11/13/19 23:32	87-86-5	
Pyridine	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32	110-86-1	
2,4,5-Trichlorophenol	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	100	1	11/13/19 13:28	11/13/19 23:32	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	78	%	57-125	1	11/13/19 13:28	11/13/19 23:32	4165-60-0	
2-Fluorobiphenyl (S)	71	%	48-125	1	11/13/19 13:28	11/13/19 23:32	321-60-8	
p-Terphenyl-d14 (S)	102	%	53-125	1	11/13/19 13:28	11/13/19 23:32	1718-51-0	
Phenol-d6 (S)	34	%	10-128	1	11/13/19 13:28	11/13/19 23:32	13127-88-3	
2-Fluorophenol (S)	54	%	30-125	1	11/13/19 13:28	11/13/19 23:32	367-12-4	
2,4,6-Tribromophenol (S)	80	%	45-125	1	11/13/19 13:28	11/13/19 23:32	118-79-6	
8260B MSV TCLP								
Analytical Method: EPA 8260B Leachate Method/Date: EPA 1311; 11/11/19 16:14								
Benzene	ND	ug/L	25.0	1		11/14/19 06:11	71-43-2	
2-Butanone (MEK)	ND	ug/L	125	1		11/14/19 06:11	78-93-3	
Carbon tetrachloride	ND	ug/L	25.0	1		11/14/19 06:11	56-23-5	
Chlorobenzene	ND	ug/L	25.0	1		11/14/19 06:11	108-90-7	
Chloroform	ND	ug/L	25.0	1		11/14/19 06:11	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	25.0	1		11/14/19 06:11	106-46-7	
1,2-Dichloroethane	ND	ug/L	25.0	1		11/14/19 06:11	107-06-2	
1,1-Dichloroethene	ND	ug/L	25.0	1		11/14/19 06:11	75-35-4	
Tetrachloroethene	ND	ug/L	25.0	1		11/14/19 06:11	127-18-4	
Trichloroethene	ND	ug/L	10.0	1		11/14/19 06:11	79-01-6	
Vinyl chloride	ND	ug/L	5.0	1		11/14/19 06:11	75-01-4	
Surrogates								
1,2-Dichloroethane-d4 (S)	102	%	75-125	1		11/14/19 06:11	17060-07-0	
Toluene-d8 (S)	81	%	75-125	1		11/14/19 06:11	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125	1		11/14/19 06:11	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli
Pace Project No.: 10498837

QC Batch: 644684 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470A Mercury TCLP
Associated Lab Samples: 10498837001

METHOD BLANK: 3470775 Matrix: Water
Associated Lab Samples: 10498837001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.60	11/15/19 10:52	

METHOD BLANK: 3468794 Matrix: Water
Associated Lab Samples: 10498837001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.60	11/15/19 11:35	

LABORATORY CONTROL SAMPLE: 3470776

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	15	15.5	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3470777 3470778

Parameter	Units	10498724001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	15	15	15.5	15.4	103	103	80-120	1	20	

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

QC Batch: 644686

Analysis Method: EPA 6010D

QC Batch Method: EPA 3010

Analysis Description: 6010D TCLP

Associated Lab Samples: 10498837001

METHOD BLANK: 3470783

Matrix: Water

Associated Lab Samples: 10498837001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.50	11/14/19 15:12	
Barium	mg/L	ND	1.0	11/14/19 15:12	
Cadmium	mg/L	ND	0.050	11/14/19 15:12	
Chromium	mg/L	ND	0.50	11/14/19 15:12	
Lead	mg/L	ND	0.50	11/14/19 15:12	
Selenium	mg/L	ND	0.10	11/14/19 15:12	
Silver	mg/L	ND	0.10	11/14/19 15:12	

METHOD BLANK: 3468794

Matrix: Water

Associated Lab Samples: 10498837001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.50	11/14/19 15:14	
Barium	mg/L	ND	1.0	11/14/19 15:14	
Cadmium	mg/L	ND	0.050	11/14/19 15:14	
Chromium	mg/L	ND	0.50	11/14/19 15:14	
Lead	mg/L	ND	0.50	11/14/19 15:14	
Selenium	mg/L	ND	0.10	11/14/19 15:14	
Silver	mg/L	ND	0.10	11/14/19 15:14	

LABORATORY CONTROL SAMPLE: 3470784

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	5	5.3	106	80-120	
Barium	mg/L	5	5.2	104	80-120	
Cadmium	mg/L	5	5.3	105	80-120	
Chromium	mg/L	5	5.2	104	80-120	
Lead	mg/L	5	5.2	104	80-120	
Selenium	mg/L	5	5.5	109	80-120	
Silver	mg/L	2.5	2.6	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3470785

3470786

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10498724001 Result	Spike Conc.	Spike Conc.	MS Result						
Arsenic	mg/L	ND	5	5	5.3	5.4	106	108	75-125	2	20

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

Parameter	Units	3470785		3470786		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10498724001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	ND	5	5	5.3	5.4	100	103	75-125	3	20		
Cadmium	mg/L	ND	5	5	5.1	5.2	101	104	75-125	3	20		
Chromium	mg/L	ND	5	5	5.1	5.2	101	104	75-125	3	20		
Lead	mg/L	ND	5	5	5.0	5.1	100	102	75-125	2	20		
Selenium	mg/L	ND	5	5	5.5	5.6	109	112	75-125	2	20		
Silver	mg/L	ND	2.5	2.5	2.6	2.7	104	107	75-125	2	20		

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

QC Batch: 644825

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight / %M by ASTM D2974

Associated Lab Samples: 10498837001

SAMPLE DUPLICATE: 3471559

Parameter	Units	10498814003 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	5.6	5.9	6	30	N2

SAMPLE DUPLICATE: 3471560

Parameter	Units	10497839003 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	18.3	19.4	6	30	N2

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli
Pace Project No.: 10498837

QC Batch: 644619 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV TCLP
Associated Lab Samples: 10498837001

METHOD BLANK: 3470492 Matrix: Water
Associated Lab Samples: 10498837001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	25.0	11/13/19 11:11	
1,2-Dichloroethane	ug/L	ND	25.0	11/13/19 11:11	
1,4-Dichlorobenzene	ug/L	ND	25.0	11/13/19 11:11	
2-Butanone (MEK)	ug/L	ND	125	11/13/19 11:11	
Benzene	ug/L	ND	25.0	11/13/19 11:11	
Carbon tetrachloride	ug/L	ND	25.0	11/13/19 11:11	
Chlorobenzene	ug/L	ND	25.0	11/13/19 11:11	
Chloroform	ug/L	ND	25.0	11/13/19 11:11	
Tetrachloroethene	ug/L	ND	25.0	11/13/19 11:11	
Trichloroethene	ug/L	ND	10.0	11/13/19 11:11	
Vinyl chloride	ug/L	ND	5.0	11/13/19 11:11	
1,2-Dichloroethane-d4 (S)	%	101	75-125	11/13/19 11:11	
4-Bromofluorobenzene (S)	%	101	75-125	11/13/19 11:11	
Toluene-d8 (S)	%	97	75-125	11/13/19 11:11	

METHOD BLANK: 3468472 Matrix: Solid
Associated Lab Samples: 10498837001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	25.0	11/13/19 11:11	
1,2-Dichloroethane	ug/L	ND	25.0	11/13/19 11:11	
1,4-Dichlorobenzene	ug/L	ND	25.0	11/13/19 11:11	
2-Butanone (MEK)	ug/L	ND	125	11/13/19 11:11	
Benzene	ug/L	ND	25.0	11/13/19 11:11	
Carbon tetrachloride	ug/L	ND	25.0	11/13/19 11:11	
Chlorobenzene	ug/L	ND	25.0	11/13/19 11:11	
Chloroform	ug/L	ND	25.0	11/13/19 11:11	
Tetrachloroethene	ug/L	ND	25.0	11/13/19 11:11	
Trichloroethene	ug/L	ND	10.0	11/13/19 11:11	
Vinyl chloride	ug/L	ND	5.0	11/13/19 11:11	
1,2-Dichloroethane-d4 (S)	%	101	75-125	11/13/19 11:11	
4-Bromofluorobenzene (S)	%	101	75-125	11/13/19 11:11	
Toluene-d8 (S)	%	97	75-125	11/13/19 11:11	

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli
Pace Project No.: 10498837

METHOD BLANK: 3469532 Matrix: Solid
Associated Lab Samples: 10498837001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	25.0	11/13/19 11:28	
1,2-Dichloroethane	ug/L	ND	25.0	11/13/19 11:28	
1,4-Dichlorobenzene	ug/L	ND	25.0	11/13/19 11:28	
2-Butanone (MEK)	ug/L	ND	125	11/13/19 11:28	
Benzene	ug/L	ND	25.0	11/13/19 11:28	
Carbon tetrachloride	ug/L	ND	25.0	11/13/19 11:28	
Chlorobenzene	ug/L	ND	25.0	11/13/19 11:28	
Chloroform	ug/L	ND	25.0	11/13/19 11:28	
Tetrachloroethene	ug/L	ND	25.0	11/13/19 11:28	
Trichloroethene	ug/L	ND	10.0	11/13/19 11:28	
Vinyl chloride	ug/L	ND	5.0	11/13/19 11:28	
1,2-Dichloroethane-d4 (S)	%	102	75-125	11/13/19 11:28	
4-Bromofluorobenzene (S)	%	100	75-125	11/13/19 11:28	
Toluene-d8 (S)	%	95	75-125	11/13/19 11:28	

LABORATORY CONTROL SAMPLE: 3470493

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	500	423	85	73-125	
1,2-Dichloroethane	ug/L	500	444	89	75-125	
1,4-Dichlorobenzene	ug/L	500	470	94	75-125	
2-Butanone (MEK)	ug/L	2500	2090	84	67-127	
Benzene	ug/L	500	469	94	75-125	
Carbon tetrachloride	ug/L	500	513	103	73-125	
Chlorobenzene	ug/L	500	517	103	75-125	
Chloroform	ug/L	500	477	95	75-125	
Tetrachloroethene	ug/L	500	559	112	75-125	
Trichloroethene	ug/L	500	504	101	75-125	
Vinyl chloride	ug/L	500	409	82	68-127	
1,2-Dichloroethane-d4 (S)	%			95	75-125	
4-Bromofluorobenzene (S)	%			106	75-125	
Toluene-d8 (S)	%			103	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3470823 3470824

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10499029001 Result	Spike Conc.	Spike Conc.	Result								
1,1-Dichloroethene	ug/L	ND	500	500	626	561	125	112	60-137	11	30		
1,2-Dichloroethane	ug/L	ND	500	500	529	492	106	98	69-125	7	30		
1,4-Dichlorobenzene	ug/L	ND	500	500	537	501	107	100	75-125	7	30		
2-Butanone (MEK)	ug/L	ND	2500	2500	2270	3000	91	120	59-133	28	30		
Benzene	ug/L	2610	500	500	3240	4060	126	290	70-125	23	30	M1	

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

Parameter	Units	3470823		3470824		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10499029001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Carbon tetrachloride	ug/L	ND	500	500	625	685	125	137	67-130	9	30	M1	
Chlorobenzene	ug/L	ND	500	500	559	527	112	105	75-125	6	30		
Chloroform	ug/L	ND	500	500	552	626	110	125	71-125	13	30		
Tetrachloroethene	ug/L	ND	500	500	590	563	118	113	73-126	5	30		
Trichloroethene	ug/L	ND	500	500	555	515	111	103	72-133	8	30		
Vinyl chloride	ug/L	ND	500	500	576	533	115	107	70-134	8	30		
1,2-Dichloroethane-d4 (S)	%						104	103	75-125				
4-Bromofluorobenzene (S)	%						96	103	75-125				
Toluene-d8 (S)	%						97	101	75-125				

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli
Pace Project No.: 10498837

QC Batch: 644184 Analysis Method: EPA 8082A
QC Batch Method: EPA 3550 Analysis Description: 8082A GCS PCB
Associated Lab Samples: 10498837001

METHOD BLANK: 3468508 Matrix: Solid
Associated Lab Samples: 10498837001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	ND	33.0	11/14/19 19:35	
PCB-1221 (Aroclor 1221)	ug/kg	ND	33.0	11/14/19 19:35	
PCB-1232 (Aroclor 1232)	ug/kg	ND	33.0	11/14/19 19:35	
PCB-1242 (Aroclor 1242)	ug/kg	ND	33.0	11/14/19 19:35	
PCB-1248 (Aroclor 1248)	ug/kg	ND	33.0	11/14/19 19:35	
PCB-1254 (Aroclor 1254)	ug/kg	ND	33.0	11/14/19 19:35	
PCB-1260 (Aroclor 1260)	ug/kg	ND	33.0	11/14/19 19:35	
PCB-1262 (Aroclor 1262)	ug/kg	ND	33.0	11/14/19 19:35	
PCB-1268 (Aroclor 1268)	ug/kg	ND	33.0	11/14/19 19:35	
Decachlorobiphenyl (S)	%	82	49-125	11/14/19 19:35	
Tetrachloro-m-xylene (S)	%	87	57-125	11/14/19 19:35	

LABORATORY CONTROL SAMPLE: 3468509

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	667	582	87	69-125	
PCB-1260 (Aroclor 1260)	ug/kg	667	559	84	63-125	
Decachlorobiphenyl (S)	%			85	49-125	
Tetrachloro-m-xylene (S)	%			91	57-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3468544 3468545

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		10498837001 Result	Spike Conc.	Spike Conc.	Result							Result
PCB-1016 (Aroclor 1016)	ug/kg	ND	944	946	654	640	69	68	56-125	2	30	
PCB-1260 (Aroclor 1260)	ug/kg	ND	944	946	568	571	60	60	45-125	0	30	
Decachlorobiphenyl (S)	%						60	62	49-125			
Tetrachloro-m-xylene (S)	%						68	68	57-125			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

QC Batch: 644645	Analysis Method: EPA 8270D
QC Batch Method: EPA 3510	Analysis Description: 8270D TCLP MSSV
Associated Lab Samples: 10498837001	

METHOD BLANK: 3470595 Matrix: Water

Associated Lab Samples: 10498837001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dichlorobenzene	ug/L	ND	100	11/13/19 19:06	
2,4,5-Trichlorophenol	ug/L	ND	100	11/13/19 19:06	
2,4,6-Trichlorophenol	ug/L	ND	100	11/13/19 19:06	
2,4-Dinitrotoluene	ug/L	ND	100	11/13/19 19:06	
2-Methylphenol(o-Cresol)	ug/L	ND	100	11/13/19 19:06	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	100	11/13/19 19:06	
Hexachloro-1,3-butadiene	ug/L	ND	100	11/13/19 19:06	
Hexachlorobenzene	ug/L	ND	100	11/13/19 19:06	
Hexachloroethane	ug/L	ND	100	11/13/19 19:06	
Nitrobenzene	ug/L	ND	100	11/13/19 19:06	
Pentachlorophenol	ug/L	ND	200	11/13/19 19:06	
Pyridine	ug/L	ND	100	11/13/19 19:06	
2,4,6-Tribromophenol (S)	%	82	45-125	11/13/19 19:06	
2-Fluorobiphenyl (S)	%	72	48-125	11/13/19 19:06	
2-Fluorophenol (S)	%	54	30-125	11/13/19 19:06	
Nitrobenzene-d5 (S)	%	77	57-125	11/13/19 19:06	
p-Terphenyl-d14 (S)	%	108	53-125	11/13/19 19:06	
Phenol-d6 (S)	%	33	10-128	11/13/19 19:06	

LABORATORY CONTROL SAMPLE: 3470596

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	500	272	54	34-125	
2,4,5-Trichlorophenol	ug/L	500	420	84	70-125	
2,4,6-Trichlorophenol	ug/L	500	408	82	70-125	
2,4-Dinitrotoluene	ug/L	500	435	87	55-125	
2-Methylphenol(o-Cresol)	ug/L	500	365	73	43-125	
3&4-Methylphenol(m&p Cresol)	ug/L	500	335	67	41-125	
Hexachloro-1,3-butadiene	ug/L	500	206	41	40-125	
Hexachlorobenzene	ug/L	500	399	80	72-125	
Hexachloroethane	ug/L	500	251	50	30-125	
Nitrobenzene	ug/L	500	370	74	62-125	
Pentachlorophenol	ug/L	500	322	64	36-125	
Pyridine	ug/L	500	183	37	30-125	
2,4,6-Tribromophenol (S)	%			78	45-125	
2-Fluorobiphenyl (S)	%			77	48-125	
2-Fluorophenol (S)	%			53	30-125	
Nitrobenzene-d5 (S)	%			77	57-125	
p-Terphenyl-d14 (S)	%			92	53-125	
Phenol-d6 (S)	%			33	10-128	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

Parameter	Units	10499029001		3470597		3470598		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
1,4-Dichlorobenzene	ug/L	ND	500	500	287	236	57	47	70-130	20	30	M1		
2,4,5-Trichlorophenol	ug/L	ND	500	500	390	370	78	74	70-130	5	30			
2,4,6-Trichlorophenol	ug/L	ND	500	500	397	351	79	70	70-130	12	30			
2,4-Dinitrotoluene	ug/L	ND	500	500	415	372	83	74	70-130	11	30			
2-Methylphenol(o-Cresol)	ug/L	ND	500	500	369	331	70	62	70-130	11	30	M1		
3&4-Methylphenol(m&p Cresol)	ug/L	ND	500	500	360	319	67	59	70-130	12	30	M1		
Hexachloro-1,3-butadiene	ug/L	ND	500	500	243	212	49	42	70-130	13	30	M1		
Hexachlorobenzene	ug/L	ND	500	500	378	334	76	67	70-130	12	30	M1		
Hexachloroethane	ug/L	ND	500	500	278	242	56	48	70-130	14	30	M1		
Nitrobenzene	ug/L	ND	500	500	386	329	77	66	70-130	16	30	M1		
Pentachlorophenol	ug/L	ND	500	500	309	279	62	56	70-130	10	30	M1		
Pyridine	ug/L	ND	500	500	156	134	31	27	70-130	15	30	M1		
2,4,6-Tribromophenol (S)	%						73	69	45-125					
2-Fluorobiphenyl (S)	%						77	71	48-125					
2-Fluorophenol (S)	%						54	48	30-125					
Nitrobenzene-d5 (S)	%						80	68	57-125					
p-Terphenyl-d14 (S)	%						93	84	53-125					
Phenol-d6 (S)	%						34	30	10-128					

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

QC Batch: 644171	Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO	Analysis Description: WIDRO GCS
Associated Lab Samples: 10498837001	

METHOD BLANK: 3468463 Matrix: Solid

Associated Lab Samples: 10498837001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
WDRO C10-C28	mg/kg	ND	10.0	11/12/19 17:07	
n-Triacontane (S)	%.	89	50-150	11/12/19 17:07	

LABORATORY CONTROL SAMPLE & LCSD: 3468464

3468465

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/kg	80	61.7	60.7	77	76	70-120	2	20	
n-Triacontane (S)	%.				90	88	50-150			

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

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 adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

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-M Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

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

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.

P3 Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.

S0 Surrogate recovery outside laboratory control limits.

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Nemadji Substation Soil Sampli

Pace Project No.: 10498837

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10498837001	Nemadji Sub	EPA 3550	644184	EPA 8082A	645040
10498837001	Nemadji Sub	WI MOD DRO	644171	WI MOD DRO	644499
10498837001	Nemadji Sub	EPA 3010	644686	EPA 6010D	644988
10498837001	Nemadji Sub	EPA 7470A	644684	EPA 7470A	645053
10498837001	Nemadji Sub	ASTM D2974	644825		
10498837001	Nemadji Sub	EPA 3510	644645	EPA 8270D	644783
10498837001	Nemadji Sub	EPA 8260B	644619		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt **Client Name:** Minnesota Power **Project #:** **WO#: 10498837**

Courier: Fed Ex UPS USPS Client
 Pace Speedee Commercial See Exceptions

Tracking Number: _____

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(0489) **Type of Ice:** Wet Blue None Dry Melted

Note: Each West Virginia Sample must have temp taken (no temp blanks) MK2 11-8-19

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 15.6 3.6 °C **Average Corrected Temp**
Correction Factor: -0.1 **Cooler Temp Corrected w/temp blank:** MK2 15.5 3.5 °C (no temp blank only): See Exceptions
 1 Container

USDA Regulated Soil: (N/A, water sample/Other: _____) 11-8-19 **Date/Initials of Person Examining Contents:** MK2 11-8-19

Did samples originate in a quarantine zone within the United States: AL, AR, 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 (F-MN-Q-338) and include with SCUR/COC paperwork.

		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.
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 Chrome <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 Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. If no, write ID/ Date/Time on Container Below: <input type="checkbox"/> See Exception
Matrix: <input type="checkbox"/> Water <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Oil <input type="checkbox"/> Other _____		
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 #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , <2pH, NaOH >9 Sulfide, NaOH >12 Cyanide)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/> NaOH <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Positive for Res. <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> See Exception Chlorine? <input type="checkbox"/> No pH Paper Lot# <input type="checkbox"/>
		Res. Chlorine 0-6 Roll 0-6 Strip 0-14 Strip
Headspace in VOA Vials (greater than 6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> See Exception
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
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 **Field Data Required?** Yes No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Anna Asp **Date:** 11/11/19

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).



Notification of Waste Acceptance

11/18/2019

CUSTOMER INFORMATION

Superior Water, Light & Power Co
Nemadji Substation
Hill Ave & Stinson Ave
Superior, WI 54880
Contact: Greg Prom
Phone: (218) 355-3191

INVOICE INFORMATION

Bill #: 2636
Superior Water, Light & Power Co
2915 Hill Ave
Superior, WI 54880
Contact: Accounts Payable
Phone: (218) 355-3191

Waste Stream #: CL19-0049
Waste Name: Oil Impacted Soil/Debris

Thank you for selecting SHAMROCK LANDFILL for your waste management requirements. Your waste stream has been reviewed and is acceptable for management at our facility based on the information provided in the profile sheet number listed above and conditions below. Our facility has the necessary permits to allow the storage, treatment, or disposal of this waste. The above referenced acceptance number should be listed on all shipping documents and correspondence. Please retain these documents for your records and future reference.

To schedule a shipment, or should you have any questions, please contact the facility at (218) 878-0112.

ACCEPTANCE INFORMATION

The waste stream identified by the reference above is acceptable for disposal.

This waste is acceptable for delivery beginning on 11/18/2019 thru 11/8/2021 at which time the material will need to be reanalyzed and recertified.

Spill Reporting Reminder: MPCA spill reporting procedures must be followed.

Free Liquid Statement: Free liquids will not be placed in cells at Shamrock Landfill. Free liquids must be solidified either prior to shipment to Shamrock Landfill or at Shamrock Landfill.

Shipping Requirements A NON-HAZARDOUS certificate is required to be on file, certifying the waste is non-hazardous as specified per 40 CFR 261.4. The shipment may be accompanied with an Shamrock Landfill manifest.

AUTHORIZATION

Approval: Heath Genzly Date: 11-18-19

We want to assist you with the proper completion of the Shipping Manifest for this waste stream. Based on our analytical data from WS # CL19-0049 , we suggest your waste stream should be shipped using the following information...

Non Hazardous Industrial Waste Shamrock Landfill

Shipping Manifest	1. Generator's US EPA ID No. (if any)	2. Page 1 of _____ page(s)	
3. Generator's Name and Facility Address: Superior Water, Light & Power Co Hill Ave & Stinson Ave Superior, WI 54880		Mailing Address: Superior Water, Light & Power Co Nemadji Substat 2915 Hill Ave Superior, WI 54880	
4. Generator's Phone (218) 355-3191		Fax	
5. Transporter 1 Company Name			
Phone:			
6. Transporter 2 Company Name			
Phone:			
7. Designated Facility Name and Site Address 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
		No. Type	Quantity
a. Non Hazardous Industrial Waste (Oil Impacted Soil/Debris)			
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 CL19-0049 Oil Impacted Soil/Debris			
b. CL			
c. CL			
d. CL			
15. Special Handling Instructions and Additional Information			Office Use Only:
Emergency Contact: GENERATORS MUST SUPPLY EMERGENCY CONTACT NUMBER!!			Load # _____
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		Signature	
Month		Day	
Year			
PLEASE BE SURE GENERATOR HAS SIGNED AND DATED IN THIS SECTION OF THE MANIFEST!!			
17. Transporter 1 Acknowledged Receipt of Materials			
Printed/Typed Name		Signature	
Month		Day	
Year			
18. Transporter 2 Acknowledgement of Receipt of Materials			
Printed/Typed Name		Signature	
Month		Day	
Year			
19. Discrepancy Indication Space			
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		Signature	
Month		Day	
Year			

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



November 18, 2019

Accounts Payable
Superior Water, Light & Power Co
2915 Hill Ave
Superior, WI 54880

RE: CL19-0049 Oil Impacted Soil/Debris

Dear Sir/Madam:

This agreement will confirm the price and length of service for disposal and /or transportation of your non-hazardous industrial material at our facility. This agreement is for the term of the Waste Approval granted by Shamrock Landfill and is for all services ordered and performance initiated within such period and does include the disposal surcharge fees which you are obligated to pay as of the date of this agreement. Shamrock Landfill may incur additional costs including but not limited to increases in state and local taxes. Shamrock Landfill may pass these costs on to the customer only after notification to the Customer. This agreement grants Shamrock Landfill the exclusive right to dispose of the referenced waste for the term of this agreement. This agreement shall automatically renew thereafter for an additional term of 24 months "Renewal Term" unless either party gives the other party written notification of termination at least 90 days prior to the termination of the then-existing term. Shamrock Landfill will notify the customer prior to the expiration of the agreement of any rate changes prior to the start of the Renewal Term.

Payment and terms are net thirty (30) days. Interest will be charged at a rate of 1 1/2% per month (18% annually) on any unpaid balance 30 days after the date of the invoice. In the event Customer terminates this Agreement prior to its expiration other than as a result of a breach by Shamrock Landfill or Shamrock Landfill terminates this agreement for Customer's breach (including nonpayment) Customer agrees to pay to Shamrock Landfill as liquidated damages a sum calculated as follows: (1) if the remaining term under this agreement is six or more months Customer shall pay its average monthly charges multiplied by six; or (2) if the remaining term under this agreement is less than six months Customer shall pay its average monthly charge multiplied by the number of months remaining in the term. Customer expressly acknowledges that in the event of an unauthorized termination of this agreement the anticipated loss to Shamrock Landfill in such event is estimated to be the amount set forth in the foregoing liquidated damages provision and such estimated value is reasonable and is not imposed as a penalty.

These prices are based on an approved waste stream composition. In the event that a non-conforming waste is received, you will be notified of additional charges, when applicable.

To accept this agreement, please sign one copy and return it to Shamrock Landfill, PO Box 2232, Cloquet, MN 55720 or email to janetb@wasteconnections.com.

For all Terms and Conditions please refer to Contract Purchase Agreement # 7311008059
Customer ACCEPTED BY: (name, position) Greg R. Env. Specialist

DATE: 11/18/2019

WASTE APPROVAL Period: 11/18/2019 to 11/8/2021

BILL TO ACCOUNT

2636 Superior Water Light & Power C

SUPSR

Superior Water - Nemadji Subst

Hill Ave & Stinson Ave

Superior, WI 54880

TICKET	Manifest	DATE	Waste Stream	Waste Name	TONS
48693	65386	11/19/19	19-0049	Oil Impacted Soil/Debris	12.82
48694	65385	11/19/19	19-0049	Oil Impacted Soil/Debris	12.74
48697	65387	11/19/19	19-0049	Oil Impacted Soil/Debris	17.27
48698	65388	11/19/19	19-0049	Oil Impacted Soil/Debris	17.38
48700	65389	11/19/19	19-0049	Oil Impacted Soil/Debris	20.18
48705	69648	11/19/19	19-0049	Oil Impacted Soil/Debris	20.15
48706	69649	11/19/19	19-0049	Oil Impacted Soil/Debris	18.25
48707	65390	11/19/19	19-0049	Oil Impacted Soil/Debris	10.45
48710	69650	11/19/19	19-0049	Oil Impacted Soil/Debris	16.35
48711	69651	11/19/19	19-0049	Oil Impacted Soil/Debris	18.10
48712	69652	11/19/19	19-0049	Oil Impacted Soil/Debris	14.82
48714	69653	11/19/19	19-0049	Oil Impacted Soil/Debris	14.74
48716	69655	11/19/19	19-0049	Oil Impacted Soil/Debris	15.59
48718	69656	11/19/19	19-0049	Oil Impacted Soil/Debris	16.91
48719	69654	11/19/19	19-0049	Oil Impacted Soil/Debris	17.57
48720	69657	11/19/19	19-0049	Oil Impacted Soil/Debris	18.67
48722	69658	11/19/19	19-0049	Oil Impacted Soil/Debris	17.27
48724	69659	11/19/19	19-0049	Oil Impacted Soil/Debris	16.60
48726	69660	11/19/19	19-0049	Oil Impacted Soil/Debris	11.16
48728	69662	11/19/19	19-0049	Oil Impacted Soil/Debris	19.63
48729	69663	11/19/19	19-0049	Oil Impacted Soil/Debris	16.32
48730	69664	11/19/19	19-0049	Oil Impacted Soil/Debris	16.53
48731	69661	11/19/19	19-0049	Oil Impacted Soil/Debris	8.40
48732	69665	11/19/19	19-0049	Oil Impacted Soil/Debris	15.38
48733	69666	11/19/19	19-0049	Oil Impacted Soil/Debris	19.24
48735	69667	11/19/19	19-0049	Oil Impacted Soil/Debris	18.55
48736	69668	11/19/19	19-0049	Oil Impacted Soil/Debris	18.75
48738	69669	11/19/19	19-0049	Oil Impacted Soil/Debris	18.22
48739	69670	11/19/19	19-0049	Oil Impacted Soil/Debris	17.04
48740	69671	11/19/19	19-0049	Oil Impacted Soil/Debris	20.12
48743	69672	11/19/19	19-0049	Oil Impacted Soil/Debris	19.54


BILL TO ACCOUNT

48744	69673	11/19/19 19-0049	Oil Impacted Soil/Debris	16.38
48745	69674	11/19/19 19-0049	Oil Impacted Soil/Debris	13.17
48747	69675	11/19/19 19-0049	Oil Impacted Soil/Debris	19.48
48748	69676	11/19/19 19-0049	Oil Impacted Soil/Debris	15.75
48750	69678	11/19/19 19-0049	Oil Impacted Soil/Debris	16.40
48753	69677	11/19/19 19-0049	Oil Impacted Soil/Debris	16.75
48754	69680	11/19/19 19-0049	Oil Impacted Soil/Debris	17.84
48755	69681	11/19/19 19-0049	Oil Impacted Soil/Debris	14.86
48756	69679	11/19/19 19-0049	Oil Impacted Soil/Debris	13.79
48757	69682	11/19/19 19-0049	Oil Impacted Soil/Debris	18.46
48761	69683	11/19/19 19-0049	Oil Impacted Soil/Debris	20.03
48762	69684	11/19/19 19-0049	Oil Impacted Soil/Debris	16.52
48763	69685	11/19/19 19-0049	Oil Impacted Soil/Debris	18.38
48764	69686	11/19/19 19-0049	Oil Impacted Soil/Debris	10.50
48765	69687	11/19/19 19-0049	Oil Impacted Soil/Debris	17.66
48767	69688	11/19/19 19-0049	Oil Impacted Soil/Debris	24.48
48768	69689	11/19/19 19-0049	Oil Impacted Soil/Debris	19.68
48770	69690	11/19/19 19-0049	Oil Impacted Soil/Debris	18.63
48774	69691	11/19/19 19-0049	Oil Impacted Soil/Debris	11.13
48780	69693	11/20/19 19-0049	Oil Impacted Soil/Debris	9.79
48781	69692	11/20/19 19-0049	Oil Impacted Soil/Debris	8.82
48789	69694	11/20/19 19-0049	Oil Impacted Soil/Debris	12.46
48792	69695	11/20/19 19-0049	Oil Impacted Soil/Debris	12.99
48798	69696	11/20/19 19-0049	Oil Impacted Soil/Debris	8.93
48807	69697	11/20/19 19-0049	Oil Impacted Soil/Debris	11.36
48816	69698	11/20/19 19-0049	Oil Impacted Soil/Debris	13.07
48817	69699	11/20/19 19-0049	Oil Impacted Soil/Debris	13.06
48821	66951	11/21/19 19-0049	Oil Impacted Soil/Debris	9.06
48823	66950	11/21/19 19-0049	Oil Impacted Soil/Debris	12.81
48833	66952	11/21/19 19-0049	Oil Impacted Soil/Debris	12.57
48846	66953	11/21/19 19-0049	Oil Impacted Soil/Debris	14.11
48858	66954	11/21/19 19-0049	Oil Impacted Soil/Debris	14.16

of Loads: 63

SUBTOTAL FOR Waste Stream**987.82****GRAND TOTALS****987.82**



Shamrock Landfill 

Non Hazardous Industrial Waste

65385

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)								
3. Generator's Name and Facility Address <i>SWLP 11.11 Ave S. 27 25th Ave 54701 MN 55803</i>		Mailing Address <i>ATTENTION: TOWER 3030 SUPERDOME ST. DULUTH, MN 55819 54710</i>											
4. Generator's Phone: <i>218-878-1112</i>		Fax: _____											
5. Transporter 1 Company Name <i>SHAMROCK TRUCKING</i>		Phone: <i>218-878-0112</i>											
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 (OIL CONTAMINATED DEBRIS)													
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													
b. CL <i>18-0049</i> CL15-0000 OIL CONTAMINATED DEBRIS -													
c. CL													
d. CL													
15. Special Handling Instructions and Additional Information Emergency Contact:					SKB Use Only Load # _____								
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 <i>L. K. OXON</i>					Signature <i>[Signature]</i>			Month		Day		Year	
17. Transporter 1 Acknowledged of Receipt of Materials													
Printed/Typed Name <i>DAVID LECHE</i>					Signature <i>[Signature]</i>			Month		Day		Year	
18. Transporter 2 Acknowledgement of Receipt of Materials													
Printed/Typed Name					Signature			Month		Day		Year	
19. Discrepancy Indication Space													
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					Signature			Month		Day		Year	

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

65386

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)								
3. Generator's Name and Facility Address <i>1111 Ave S St. SW-P Superior WI 54980</i>				Mailing Address <i>3072 DEERBROOK ST, CLOQUET, MN 55716</i>									
4. Generator's Phone: <i>218-305-3191</i>				Fax: <i>Superior WI 54980</i>									
5. Transporter 1 Company Name SHAMROCK TRUCKING				Phone: <i>218-878-0112</i>									
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 (OIL CONTAMINATED DEBRIS)													
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													
b. CL <i>COFIS OHS</i> OIL CONTAMINATED DEBRIS -													
c. CL DISTRICT OPS													
d. CL													
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load # _____							
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 <i>L. J. Dixon</i>				Signature <i>[Signature]</i>				Month <i>11</i>		Day <i>19</i>		Year <i>19</i>	
17. Transporter 1 Acknowledged of Receipt of Materials													
Printed/Typed Name <i>Chris Robinson</i>				Signature <i>[Signature]</i>				Month <i>11</i>		Day <i>19</i>		Year <i>19</i>	
18. Transporter 2 Acknowledgement of Receipt of Materials													
Printed/Typed Name				Signature				Month		Day		Year	
19. Discrepancy Indication Space													
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				Signature				Month		Day		Year	

GENERATOR

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

65387

Shipping Manifest		1. Generator's US EPA ID No. (if any)		1. Page 1 of _____ page(s)	
3. Generator's Name and Facility Address <i>SWLP 14.11 Ave & St. Jean Ave Superior, WI 54080</i>			Mailing Address <i>ALLIANCE POWER 2001 SUPERIOR ST. ELLIOTT, MN 55016</i>		
4. Generator's Phone: <i>270-350-3191</i>		Fax: <i>Superior, WI 54080</i>			
5. Transporter 1 Company Name SHAMROCK TRUCKING			Phone: 218-878-0112		
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#
a. Non Hazardous Industrial Waste (OIL CONTAMINATED DEBRIS)		No. Type			
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					
b. CL					
c. CL <i>PLAS-OIL OIL CONTAMINATED DEBRIS - DISTRICT OPS</i>					
d. CL					
15. Special Handling Instructions and Additional Information Emergency Contact:				SKB Use Only Load #	
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 <i>LUKAS DIXON</i>		Signature <i>[Signature]</i>		Month Day Year <i>11 19 19</i>	
17. Transporter 1 Acknowledged of Receipt of Materials					
Printed/Typed Name <i>AI-EMISS</i>		Signature <i>[Signature]</i>		Month Day Year <i>11 19 19</i>	
18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space					
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		Signature		Month Day Year	

GENERATOR

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

65388

Shipping Manifest		1. Generator's US EPA ID No. (if any)		1. Page 1 of page(s)	
3. Generator's Name and Facility Address <i>SWLP 11111 N. Highway 45 Superior, WI 54880</i>			Mailing Address <i>2415 N. Highway 45 Superior, WI 54880</i>		
4. Generator's Phone: <i>715-395-3771</i>			Fax: <i>30 W SUPERIOR ST. DULUTH, MN 55816</i>		
5. Transporter 1 Company Name			Phone:		
6. Transporter 2 Company Name			Phone: <i>218-878-0112</i>		
7. Designated Facility Name and Site Address			Phone: <i>218-878-0112</i>		
SKB/Shamrock Environmental, LLC 761 MN Highway 45 Cloquet, MN 55720					
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 (OIL CONTAMINATED DEBRIS)					
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 <i>619-0049</i>					
b. CL					
c. CL					
d. CL <i>CL13-0030 OIL CONTAMINATED DEBRIS - DISTRICT 109</i>					
15. Special Handling Instructions and Additional Information Emergency Contact:				SKB Use Only Load #	
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 <i>LORIAN DIXON</i>		Signature <i>[Signature]</i>		Month <i>11</i>	Day <i>11</i>
17. Transporter 1 Acknowledged of Receipt of Materials		Printed/Typed Name <i>Richard Lora</i>		Signature <i>[Signature]</i>	
18. Transporter 2 Acknowledgement of Receipt of Materials		Printed/Typed Name		Signature	
19. Discrepancy Indication Space		Month		Day	
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		Signature	
		Month		Day	

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

65389

Shipping Manifest		1. Generator's US EPA ID No. (if any)		1. Page 1 of page(s)	
3. Generator's Name and Facility Address <i>SUEP Hill Ave 5 Lincoln Ave Superior WI 54980 218-355-3171</i>		Mailing Address <i>SUEP 8715 N.H. Ave Superior WI 54980</i>			
4. Generator's Phone:		Fax: <i>40 W SUPERIOR ST. ELLIOTT, MN 55816</i>			
5. Transporter 1 Company Name		Phone:			
6. Transporter 2 Company Name		Phone: <i>218-878-0112</i>			
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
		No. Type			
a. Non Hazardous Industrial Waste (OIL CONTAMINATED DEBRIS)					
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 <i>CL 19-0049</i>					
b. CL					
c. CL					
d. CL <i>CL 15-0030 OIL CONTAMINATED DEBRIS - DISTRICT OPS</i>					
15. Special Handling Instructions and Additional Information Emergency Contact:		SKB Use Only Load #			
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 <i>LUKAS DIXON</i>		Signature <i>[Signature]</i>		Month <i>11</i>	Day <i>17</i>
17. Transporter 1 Acknowledged of Receipt of Materials		Signature <i>[Signature]</i>		Month <i>11</i>	Day <i>19</i>
Printed/Typed Name <i>WAYNE BOEIK</i>		Signature <i>[Signature]</i>		Month <i>11</i>	Day <i>19</i>
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Month	Day
Printed/Typed Name		Signature		Month	Day
19. Discrepancy Indication Space					
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		Signature		Month	Day

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

65390

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)		
3. Generator's Name and Facility Address <i>SWLP 1111 Ave, Superior Ave Superior, WI 54880</i>				Mailing Address <i>SWLP 2415 Hill Ave Superior, WI 54880</i>			
4. Generator's Phone: <i>920-307-3111</i>				Fax: <i>30 W SUPERIOR ST. DULUTH, MN 55816</i>			
5. Transporter 1 Company Name				Phone:			
6. Transporter 2 Company Name				Phone: <i>218-878-0112</i>			
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#	
a. Non Hazardous Industrial Waste (OIL CONTAMINATED DEBRIS)		No. Type					
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 <i>2619-0049</i>							
b. CL							
c. CL							
d. CL <i>CL15-0030 OIL CONTAMINATED DEBRIS - INDUSTRIAL OIL</i>							
15. Special Handling Instructions and Additional Information Emergency Contact:					SKB Use Only Load #		
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 <i>LUCAS DIXON</i>				Signature <i>[Signature]</i>		Month Day Year <i>11 19 11</i>	
17. Transporter 1 Acknowledged of Receipt of Materials							
Printed/Typed Name <i>[Signature]</i>				Signature <i>[Signature]</i>		Month Day Year <i>11 19 11</i>	
18. Transporter 2 Acknowledgement of Receipt of Materials							
Printed/Typed Name				Signature		Month Day Year	
19. Discrepancy Indication Space							
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				Signature		Month Day Year	

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy

76



Shamrock Landfill



Non Hazardous Industrial Waste

66951

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)		
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO BERNARDI BLVD MILL AVE & PINEAUX AVE SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2015 HILL AVE SUPERIOR, WI 54980			
4. Generator's Phone: 218-888-2101				Fax:			
5. Transporter 1 Company Name				Phone:			
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 (OIL IMPACTED SOIL/DEBRIS)							
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							
b. CL 11-0002 OIL IMPACTED SOIL/DEBRIS							
c. CL							
d. CL							
15. Special Handling Instructions and Additional Information Emergency Contact:					SKB Use Only Load # _____		
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 Lukas Dixon				Signature <i>[Signature]</i>		Month Day Year 11 21 19	
17. Transporter 1 Acknowledged of Receipt of Materials							
Printed/Typed Name Jake Endres				Signature <i>[Signature]</i>		Month Day Year 11 21 19	
18. Transporter 2 Acknowledgement of Receipt of Materials							
Printed/Typed Name				Signature		Month Day Year	
19. Discrepancy Indication Space							
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				Signature		Month Day Year	

GENERATOR A

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

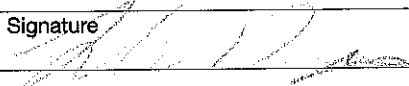
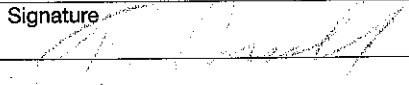
Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

66950

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)		
3. Generator's Name and Facility Address				Mailing Address			
SUPERIOR WATER LIGHT & POWER CO NEWMAENI COURT 1111 AVE & SUPERIOR AVE SUPERIOR, WI 54980				SUPERIOR WATER LIGHT & POWER CO 6015 HILL AVE SUPERIOR, WI 54980			
4. Generator's Phone: _____				Fax: _____			
5. Transporter 1 Company Name				Phone: _____			
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 (OIL IMPACTED SOIL/DEBRIS)							
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 b. CL c. CL d. CL							
15. Special Handling Instructions and Additional Information					SKB Use Only		
Emergency Contact: _____					Load # _____		
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				Signature		Month Day Year	
LUKAS D... ..						11 21 17	
17. Transporter 1 Acknowledged of Receipt of Materials				Signature		Month Day Year	
Printed/Typed Name				Signature		Month Day Year	
TERRY W... ..						11 25 17	
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature		Month Day Year	
Printed/Typed Name				Signature		Month Day Year	
19. Discrepancy Indication Space				Signature		Month Day Year	
20. Facility Owner or Operator: Certification of receipt of non-hazardous materials covered by this Manifest except as noted in item 19.				Signature		Month Day Year	
Printed/Typed Name				Signature		Month Day Year	

GENERATOR
TRANSPORTER
FACILITY



Shamrock Landfill



Non Hazardous Industrial Waste

66952

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)			
3. Generator's Name and Facility Address				Mailing Address				
SUPERIOR WATER LIGHT & POWER CO MEMPHIS SUPPLY HILL AVE. & STINSON AVE. BOSTON, WI 53840				SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE. SUPERIOR, WI 53089				
4. Generator's Phone:				Fax:				
5. Transporter 1 Company Name				Phone:				
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. Like Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)								
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								
b. CL 119-0049 OIL IMPACTED SOIL/DEBRIS								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information					SKB Use Only			
Emergency Contact:					Load # _____			
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				Signature		Month	Day	Year
L. Keith Dixon						11	21	19
17. Transporter 1 Acknowledged of Receipt of Materials				Signature		Month	Day	Year
Printed/Typed Name				Signature		Month	Day	Year
T. K. ...						11	21	19
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature		Month	Day	Year
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

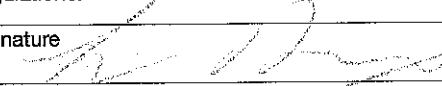
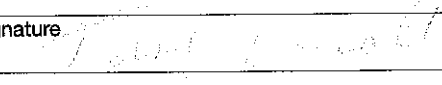
Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

66953

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address				Mailing Address						
SUPERIOR WATER LIGHT & POWER CO HERMANN STREET, HILL AVE & STEINBOCK AVE SUPERIOR, WI 54880				SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54880						
4. Generator's Phone: 218-888-2101				Fax:						
5. Transporter 1 Company Name				Phone:						
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 (OIL IMPACTED SOIL/DEBRIS)										
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 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information							SKB Use Only			
Emergency Contact:							Load # _____			
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				Signature			Month	Day	Year	
LUKAS DORR							11	21	19	
17. Transporter 1 Acknowledged of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
TERRY L. LUKAS							11	21	19	
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

GENERATOR
TRANSPORTER
FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

66954

GENERATOR	Shipping Manifest		1. Generator's US EPA ID No. (if any)				1. Page 1 of _____ page(s)		
	3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMADON BURNT HILL AVE & HIGSON AVE SCORNBOR, WI 54880					Mailing Address SUPERIOR WATER LIGHT & POWER CO HIGSON AVE SCORNBOR, WI 54880			
	4. Generator's Phone: _____					Fax: _____			
	5. Transporter 1 Company Name _____					Phone: _____			
	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#
	a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)					No. Type			
	b.								
	c.								
d.									
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below) a. CL b. CL 19-0049 OIL IMPACTED SOIL/DEBRIS c. CL d. CL					14. Special Handling Procedures for Wastes Listed Above				
15. Special Handling Instructions and Additional Information Emergency Contact: _____					SKB Use Only Load # _____				
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 <i>[Signature]</i>				Signature <i>[Signature]</i>		Month Day Year 11 21 19			
17. Transporter 1 Acknowledged of Receipt of Materials									
Printed/Typed Name <i>[Signature]</i>				Signature <i>[Signature]</i>		Month Day Year 11 21 19			
18. Transporter 2 Acknowledgement of Receipt of Materials									
Printed/Typed Name				Signature		Month Day Year			
19. Discrepancy Indication Space									
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				Signature		Month Day Year			

TRANSPORTER FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

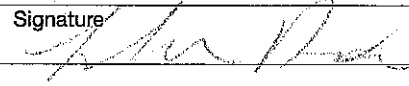
Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

63648

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)										
3. Generator's Name and Facility Address				Mailing Address											
4. Generator's Phone: SUPERIOR WATER LIGHT & POWER CO MEMPHIS BLVD, SHELBYVILLE, TN 37080				Fax: SUPERIOR WATER LIGHT & POWER CO, 15 MILL AVE, SUPERIOR, WI 54980											
5. Transporter 1 Company Name				Phone:											
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 (OIL IMPACTED SOIL/DEBRIS)															
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															
b. CL 119-0002 OIL IMPACTED SOIL/DEBRIS															
c. CL															
d. CL															
15. Special Handling Instructions and Additional Information						SKB Use Only									
Emergency Contact:						Load # _____									
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				Signature			Month			Day			Year		
LUKEAS DIXON							11			19			11		
17. Transporter 1 Acknowledged of Receipt of Materials															
Printed/Typed Name				Signature			Month			Day			Year		
18. Transporter 2 Acknowledgement of Receipt of Materials															
Printed/Typed Name				Signature			Month			Day			Year		
19. Discrepancy Indication Space															
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				Signature			Month			Day			Year		

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69649

GENERATOR	Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)				
	3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMPHIS SUBST. HILL AVE & STINSON AVE SUPERIOR, WI 53080				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 53080					
	4. Generator's Phone: 262-553-3151				Fax:					
	5. Transporter 1 Company Name				Phone:					
	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#
	a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)									
	b.									
	c.									
d.										
13. Additional Descriptions for Materials Listed Above (Indicate waste stream Approval # below) a. CL12-0049 OIL IMPACTED SOIL/DEBRIS b. CL c. CL d. CL				14. Special Handling Procedures for Wastes Listed Above						
15. Special Handling Instructions and Additional Information Emergency Contact:				SKB Use Only Load #						
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 LUKAS DIXON				Signature <i>[Signature]</i>			Month 11	Day 17	Year 14	
17. Transporter 1 Acknowledged of Receipt of Materials										
Printed/Typed Name DREW LESNY				Signature <i>[Signature]</i>			Month 11	Day 17	Year 14	
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

TRANSPORTER FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill

Non Hazardous Industrial Waste

69650

↑	Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)						
	3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO BELLAIR BLVD MILL AVE & STATE ST SW SUPERIOR, WI 54080					Mailing Address SUPERIOR WATER LIGHT & POWER CO 3015 MILL AVE SUPERIOR, WI 54080						
4. Generator's Phone: 218-888-3141					Fax:							
5. Transporter 1 Company Name					Phone:							
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							
Y G E N E R A T O R A	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 (OIL IMPACTED SOIL/DEBRIS)											
	b.											
	c.											
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below)					14. Special Handling Procedures for Wastes Listed Above							
a. CL 10-0149 OIL IMPACTED SOIL/DEBRIS												
b. CL												
c. CL												
d. CL												
15. Special Handling Instructions and Additional Information Emergency Contact:					SKB Use Only Load # _____							
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 LUCAS DIXON					Signature 			Month 11	Day 15	Year 17		
T R A N S P O R T E R	17. Transporter 1 Acknowledged of Receipt of Materials					Printed/Typed Name WILLIAM K...			Signature 	Month 11	Day 16	Year 17
	18. Transporter 2 Acknowledgement of Receipt of Materials					Printed/Typed Name			Signature	Month	Day	Year
	19. Discrepancy Indication Space											
F A C I L I T Y	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					Signature			Month	Day	Year	


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

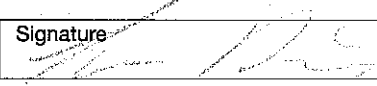
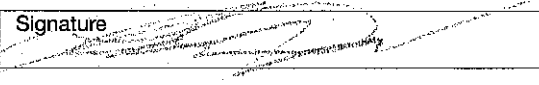
Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69651

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)								
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMADJI SUBST. HILL AVE. & STUBBINS AVE SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2015 HILL AVE SUPERIOR, WI 54880									
4. Generator's Phone: 218-359-3101				Fax:									
5. Transporter 1 Company Name				Phone:									
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 (OIL IMPACTED SOIL/DEBRIS)													
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 019-0049 OIL IMPACTED SOIL/DEBRIS													
b. CL													
c. CL													
d. CL													
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load #							
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 Lukasz Nixon				Signature 				Month 11		Day 17		Year 17	
17. Transporter 1 Acknowledged of Receipt of Materials													
Printed/Typed Name Chad Warner				Signature 				Month 11		Day 17		Year 17	
18. Transporter 2 Acknowledgement of Receipt of Materials													
Printed/Typed Name				Signature				Month		Day		Year	
19. Discrepancy Indication Space													
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				Signature				Month		Day		Year	

GENERATOR
TRANSPORTER
FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69852

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)								
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMPHIS SUBST. HILL AVE & STINSON AVE. COHENTON, WI 53000				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2913 HILL AVE. SUITE 200, WI 53000									
4. Generator's Phone: 218-333-3191				Fax:									
5. Transporter 1 Company Name				Phone:									
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 (OIL IMPACTED SOIL/DEBRIS)													
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 119-0049 OIL IMPACTED SOIL/DEBRIS													
b. CL													
c. CL													
d. CL													
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load # _____							
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				Signature				Month		Day		Year	
17. Transporter 1 Acknowledged of Receipt of Materials								11		17		19	
Printed/Typed Name				Signature				Month		Day		Year	
18. Transporter 2 Acknowledgement of Receipt of Materials													
Printed/Typed Name				Signature				Month		Day		Year	
19. Discrepancy Indication Space													
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				Signature				Month		Day		Year	

GENERATOR

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

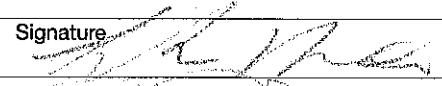
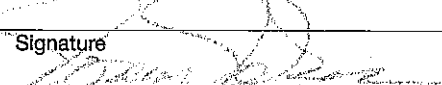
Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69653

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMBER TRUST HILL AVE & SYMONS AVE. SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54880						
4. Generator's Phone: 920-855-3101				Fax:						
5. Transporter 1 Company Name				Phone:						
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 (OIL IMPACTED SOIL/DEBRIS)										
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 117-0049 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load #			
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 LUKAS DIXON				Signature 			Month 11	Day 17	Year 11	
17. Transporter 1 Acknowledged of Receipt of Materials										
Printed/Typed Name Jeremy Johnson				Signature 			Month 11	Day 19	Year 11	
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill




Non Hazardous Industrial Waste

69654

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO BELMONT JUNCTION HILL AVE & STINSON AVE SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2015 HILL AVE SUPERIOR, WI 54980						
4. Generator's Phone 218-398-2123				Fax:						
5. Transporter 1 Company Name				Phone:						
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 (OIL IMPACTED SOIL/DEBRIS)										
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 0115-0049 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load # _____			
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				Signature			Month	Day	Year	
17. Transporter 1 Acknowledged of Receipt of Materials							11	17	17	
Printed/Typed Name				Signature			Month	Day	Year	
18. Transporter 2 Acknowledgement of Receipt of Materials							11	17	17	
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

GENERATOR
TRANSPORTER
FACILITY



Shamrock Landfill 

Non Hazardous Industrial Waste

63655

GENERATOR	Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
	3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMPHIS DISTRICT HILL AVE & STURZEN AVE SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2019 HILL AVE SUPERIOR, WI 54980						
4. Generator's Phone: 218-853-3171				Fax:							
5. Transporter 1 Company Name				Phone:							
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							
TRANSPORTER	8. U.S. DOT Description (including Proper Shipping name)				9. Containers		10. Total Quantity		11. Unit Wt/Vol	12. Waste Profile Sheet#	
	a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)				No. Type						
	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 218-0049 OIL IMPACTED SOIL/DEBRIS											
b. CL											
c. CL											
d. CL											
15. Special Handling Instructions and Additional Information				SKB Use Only							
Emergency Contact:				Load # _____							
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 <i>Ryan Young</i>				Signature <i>[Signature]</i>				Month Day Year 			
FACILITY	17. Transporter 1 Acknowledged of Receipt of Materials										
	Printed/Typed Name <i>Ryan Young</i>				Signature <i>[Signature]</i>				Month Day Year 		
	18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature				Month Day Year 			
19. Discrepancy Indication Space											
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				Signature				Month Day Year 			

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69656

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO FEMADMI SUBST. 1111 L AVE & STEVENSON AVE. SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE. SUPERIOR, WI 54880				
4. Generator's Phone: 218-343-3191				Fax:				
5. Transporter 1 Company Name				Phone:				
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 (OIL IMPACTED SOIL/DEBRIS)								
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 119-0019 OIL IMPACTED SOIL/DEBRIS								
b. CL								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load #		
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				Signature		Month	Day	Year
17. Transporter 1 Acknowledged of Receipt of Materials						11	17	19
Printed/Typed Name				Signature		Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials						11	17	19
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

63657

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMADJI SUBST. HILL AVE. & HENSON AVE. SUPERIOR, WI 54080				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE. SUPERIOR, WI 54080						
4. Generator's Phone: 218-355-3191				Fax:						
5. Transporter 1 Company Name				Phone:						
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 (OIL IMPACTED SOIL/DEBRIS)										
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 19-0019 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load # _____			
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 LORRY DAVIS				Signature <i>Lorry Davis</i>			Month 11	Day 17	Year 17	
17. Transporter 1 Acknowledged of Receipt of Materials										
Printed/Typed Name Wayne Boelk				Signature <i>Wayne Boelk</i>			Month 11	Day 17	Year 17	
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69658

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)		
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMADJI BURST HILL AVE & STUBBEN AVE SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54980			
4. Generator's Phone: (8-355-3101)				Fax:			
5. Transporter 1 Company Name <i>NIC #4</i>				Phone:			
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#
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)		No. Type					
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 019-0019 OIL IM CTED SOIL/DEBRIS							
b. CL							
c. CL							
d. CL							
15. Special Handling Instructions and Additional Information Emergency Contact:					SKB Use Only Load # _____		
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 <i>Chris Gibson</i>				Signature <i>[Signature]</i>		Month Day Year 11 19 14	
17. Transporter 1 Acknowledged of Receipt of Materials							
Printed/Typed Name <i>Chris Gibson</i>				Signature <i>[Signature]</i>		Month Day Year 11 19 14	
18. Transporter 2 Acknowledgement of Receipt of Materials							
Printed/Typed Name				Signature		Month Day Year	
19. Discrepancy Indication Space							
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				Signature		Month Day Year	

GENERATOR

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

68659

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)		
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMADJI SUBST. HILL AVE & HUNTER AVE SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54880			
4. Generator's Phone: 218-355-3191				Fax:			
5. Transporter 1 Company Name A I EXPRESS MIDG				Phone:			
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#
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)		No.	Type				
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 19-049 OIL IMPACTED SOIL/DEBRIS							
b. CL							
c. CL							
d. CL							
15. Special Handling Instructions and Additional Information Emergency Contact:					SKB Use Only Load #		
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 LUCAS WILSON				Signature <i>Lucas Wilson</i>		Month Day Year 11 17 17	
17. Transporter 1 Acknowledged of Receipt of Materials							
Printed/Typed Name CHRIS LESNY				Signature <i>Chris Lesny</i>		Month Day Year 11 17 17	
18. Transporter 2 Acknowledgement of Receipt of Materials							
Printed/Typed Name				Signature		Month Day Year	
19. Discrepancy Indication Space							
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				Signature		Month Day Year	

GENERATOR

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69660

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)		
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO DEMAND SUBST 1011 AVE & STINSON AVE SUPERIOR, WI 54660				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2015 HILL AVE SUPERIOR, WI 54660			
4. Generator's Phone: 218-355-3101				Fax:			
5. Transporter 1 Company Name				Phone:			
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 (OIL IMPACTED SOIL/DEBRIS)							
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 0119-0019 OIL IMPACTED SOIL/DEBRIS							
b. CL							
c. CL							
d. CL							
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load # _____	
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 <i>L. White</i>				Signature <i>[Signature]</i>		Month Day Year 11 19 19	
17. Transporter 1 Acknowledged of Receipt of Materials							
Printed/Typed Name <i>John P. Adams</i>				Signature <i>[Signature]</i>		Month Day Year 11 19 19	
18. Transporter 2 Acknowledgement of Receipt of Materials							
Printed/Typed Name				Signature		Month Day Year	
19. Discrepancy Indication Space							
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				Signature		Month Day Year	

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator


Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy

76



Shamrock Landfill 

Non Hazardous Industrial Waste

69661

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NERIAJJI BUSTY HILL AVE & STANBEN AVE SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54980				
4. Generator's Phone: 218-353-3191				Fax:				
5. Transporter 1 Company Name				Phone:				
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 (OIL IMPACTED SOIL/DEBRIS)								
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 119-0049 OIL IMPACTED SOIL/DEBRIS								
b. CL								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information Emergency Contact:					SKB Use Only Load # _____			
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 <i>Lukas Dixon</i>				Signature <i>[Signature]</i>		Month <i>11</i>	Day <i>17</i>	Year <i>19</i>
17. Transporter 1 Acknowledged of Receipt of Materials								
Printed/Typed Name <i>[Signature]</i>				Signature <i>[Signature]</i>		Month <i>11</i>	Day <i>17</i>	Year <i>19</i>
18. Transporter 2 Acknowledgement of Receipt of Materials								
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator


Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy

76



Shamrock Landfill 

Non Hazardous Industrial Waste

69662

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMPHIS SUBMIT. HILL AVE & STINSEN AVE SUPERIOR, WI 54660				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2013 HILL AVE SUPERIOR, WI 54660				
4. Generator's Phone: 214-355-3191				Fax:				
5. Transporter 1 Company Name				Phone:				
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 (OIL IMPACTED SOIL/DEBRIS)								
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 CL19-0019 OIL IMPACTED SOIL/DEBRIS								
b. CL								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load # _____		
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				Signature		Month	Day	Year
17. Transporter 1 Acknowledged of Receipt of Materials						11	19	19
Printed/Typed Name				Signature		Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials						11	19	19
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

59663

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMPHIS SUBST. HILL AVE. & STANBEN AVE SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54980				
4. Generator's Phone: 218-878-3191				Fax:				
5. Transporter 1 Company Name				Phone:				
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 (OIL IMPACTED SOIL/DEBRIS)								
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 119-0049 OIL IMPACTED SOIL/DEBRIS								
b. CL								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load # _____		
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 T. SKA...				Signature <i>[Signature]</i>		Month Day Year 11 19 19		
17. Transporter 1 Acknowledged of Receipt of Materials								
Printed/Typed Name R. V. ...				Signature <i>[Signature]</i>		Month Day Year 11 19 19		
18. Transporter 2 Acknowledgement of Receipt of Materials								
Printed/Typed Name				Signature		Month Day Year		
19. Discrepancy Indication Space								
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				Signature		Month Day Year		

GENERATOR

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69664

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMADJI SUBST MILL AVE & STUBBINS AVE SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2015 HILL AVE SUPERIOR, WI 54880						
4. Generator's Phone: 218-354-3191				Fax:						
5. Transporter 1 Company Name				Phone:						
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 (OIL IMPACTED SOIL/DEBRIS)										
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 19-0049 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load #			
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				Signature			Month	Day	Year	
17. Transporter 1 Acknowledged of Receipt of Materials							11	13	10	
Printed/Typed Name				Signature			Month	Day	Year	
18. Transporter 2 Acknowledgement of Receipt of Materials							11	11	9119	
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

99665

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NIEMADJI SUBST. HILL AVE & STUBBIN AVE. SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE. SUPERIOR, WI 54880				
4. Generator's Phone: 218-388-3191				Fax:				
5. Transporter 1 Company Name				Phone:				
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 (OIL IMPACTED SOIL/DEBRIS)								
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 19-0049 OIL IMPACTED SOIL/DEBRIS								
b. CL								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load #		
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 <i>Thomas Dixon</i>				Signature <i>[Signature]</i>		Month 11	Day 17	Year 11
17. Transporter 1 Acknowledged of Receipt of Materials								
Printed/Typed Name <i>Ryan [unclear]</i>				Signature <i>[Signature]</i>		Month 11	Day 17	Year 11
18. Transporter 2 Acknowledgement of Receipt of Materials								
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

89666

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMPHIS SUBST. HILL AVE & STIMBERY AVE SUPERIOR, WI 53680				Mailing Address SUPERIOR WATER LIGHT & POWER CO 3915 HILL AVE SUPERIOR, WI 53680						
4. Generator's Phone: 218-878-3101				Fax:						
5. Transporter 1 Company Name				Phone:						
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 (OIL IMPACTED SOIL/DEBRIS)										
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 19-0049 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load # _____			
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 <i>LUKASZ DROZDZ</i>				Signature <i>[Signature]</i>			Month	Day	Year	
17. Transporter 1 Acknowledged of Receipt of Materials										
Printed/Typed Name <i>Jeremy Johnson</i>				Signature <i>[Signature]</i>			Month	Day	Year	
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

63667

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMADUN STREET HILL AVE. & STINSEN AVE. SUPERIOR, WI 54660				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE. SUPERIOR, WI 54660				
4. Generator's Phone: 218-353-3191				Fax:				
5. Transporter 1 Company Name				Phone:				
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#
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)				No.	Type			
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 0019 OIL IMPACTED SOIL/DEBRIS								
b. CL								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load #		
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 LUKAS DIXON				Signature <i>[Signature]</i>		Month 11	Day 17	Year 19
17. Transporter 1 Acknowledged of Receipt of Materials								
Printed/Typed Name Richard Korva				Signature <i>[Signature]</i>		Month 11	Day 19	Year 19
18. Transporter 2 Acknowledgement of Receipt of Materials								
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69668

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO HEMADJI BUSTI HILL AVE. & STUBSEN AVE. SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2015 HILL AVE. SUPERIOR, WI 54980				
4. Generator's Phone: 218-355-3191				Fax:				
5. Transporter 1 Company Name				Phone:				
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#	
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)		No.	Type					
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 19-0049 OIL IMPACTED SOIL/DEBRIS								
b. CL								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information Emergency Contact:					SKB Use Only Load #			
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 <i>Wayne Boelk</i>				Signature <i>Wayne Boelk</i>		Month 11	Day 19	Year 19
17. Transporter 1 Acknowledged of Receipt of Materials								
Printed/Typed Name <i>Wayne Boelk</i>				Signature <i>Wayne Boelk</i>		Month 11	Day 19	Year 19
18. Transporter 2 Acknowledgement of Receipt of Materials								
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69669

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)										
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMAUNI QUEST. HILL AVE. & STINSEN AVE. SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE. SUPERIOR, WI 54880											
4. Generator's Phone: 218-333-3191				Fax:											
5. Transporter 1 Company Name NIC #41				Phone:											
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 (OIL IMPACTED SOIL/DEBRIS)															
b.															
c.															
d.															
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below)				14. Special Handling Procedures for Wastes Listed Above											
a. CL19-0049 OIL IMPACTED SOIL/DEBRIS															
b. CL															
c. CL															
d. CL															
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only									
						Load # _____									
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 LUKAS DIXON				Signature <i>[Signature]</i>			Month 11			Day 11			Year 11		
17. Transporter 1 Acknowledged of Receipt of Materials															
Printed/Typed Name Chris Robinson				Signature <i>[Signature]</i>			Month 11			Day 11			Year 11		
18. Transporter 2 Acknowledgement of Receipt of Materials															
Printed/Typed Name				Signature			Month			Day			Year		
19. Discrepancy Indication Space															
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				Signature			Month			Day			Year		

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69670

GENERATOR	Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)					
	3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMPADU SUBSE, HILL AVE. & STINSEN AVE. SUPERIOR, WI 54880					Mailing Address SUPERIOR WATER LIGHT & POWER CO 2015 HILL AVE. SUPERIOR, WI 54880					
4. Generator's Phone: 218-335-3191					Fax:						
5. Transporter 1 Company Name AI EXPRESS 1126					Phone:						
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						
TRANSPORTER	8. U.S. DOT Description (including Proper Shipping name)					9. Containers		10. Total Quantity	11. Unit Wt/Vol	12. Waste Profile Sheet#	
	a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)					No.	Type				
	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 19-0049 OIL IMPACTED SOIL/DEBRIS											
b. CL											
c. CL											
d. CL											
15. Special Handling Instructions and Additional Information Emergency Contact:					SKB Use Only Load #						
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 LUKAS					Signature <i>[Signature]</i>			Month 11	Day 11	Year 19	
17. Transporter 1 Acknowledged of Receipt of Materials					Signature <i>[Signature]</i>			Month 11	Day 11	Year 19	
Printed/Typed Name DAVID LESNY					Signature <i>[Signature]</i>			Month 11	Day 11	Year 19	
18. Transporter 2 Acknowledgement of Receipt of Materials					Signature			Month	Day	Year	
Printed/Typed Name					Signature			Month	Day	Year	
19. Discrepancy Indication Space											
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					Signature			Month	Day	Year	

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69671

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMAHA COUNTY RD. L AVE & STINSON AVE SUPERIOR, WI 54080				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54080				
4. Generator's Phone: 218-385-3191				Fax:				
5. Transporter 1 Company Name				Phone:				
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#
a. Non-Hazardous Industrial Waste (Oil, Impacted Solids/Water)				No.	Type			
b.								
c.								
d.								
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below) a. CL 119-0019 OF IMPACTED SOLIDS/WATER b. CL c. CL d. CL				14. Special Handling Procedures for Wastes Listed Above				
15. Special Handling Instructions and Additional Information Emergency Contact:				SKB Use Only Load #				
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			Signature			Month	Day	Year
17. Transporter 1 Acknowledged of Receipt of Materials			Signature			Month	Day	Year
Printed/Typed Name			Signature			Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials								
Printed/Typed Name			Signature			Month	Day	Year
19. Discrepancy Indication Space								
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			Signature			Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69672

GENERATOR	Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)				
	3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO HILL AVE. & STINBEN AVE. SUDAS, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUDAS, WI 54980					
4. Generator's Phone: 218-333-2101				Fax:						
5. Transporter 1 Company Name				Phone:						
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						
TRANSPORTER	8. U.S. DOT Description (including Proper Shipping name)			9. Containers		10. Total Quantity		11. Unit Wt/Vol	12. Waste Profile Sheet#	
	a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)									
	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 1119-0049 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load #				
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				Signature			Month		Day	Year
17. Transporter 1 Acknowledged of Receipt of Materials							11		11	17
Printed/Typed Name				Signature			Month		Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials							11		18	17
Printed/Typed Name				Signature			Month		Day	Year
19. Discrepancy Indication Space										
FACILITY	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				Signature			Month		Day


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69673

GENERATOR	Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)						
	3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMPHIS SUBST. HILL AVE. & STINSON AVE. SUPERIOR, WI 54880					Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE. SUPERIOR, WI 54880						
4. Generator's Phone: 218-355-3191					Fax:							
5. Transporter 1 Company Name					Phone:							
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							
TRANSPORTER	8. U.S. DOT Description (including Proper Shipping name)					9. Containers		10. Total Quantity		11. Unit Wt/Vol	12. Waste Profile Sheet#	
	a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)											
	b.											
	c.											
	d.											
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below) a. CL 01-19-0049 OIL IMPACTED SOIL/DEBRIS b. CL c. CL d. CL					14. Special Handling Procedures for Wastes Listed Above							
15. Special Handling Instructions and Additional Information Emergency Contact:					SKB Use Only Load # _____							
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 <i>W. K. ...</i>					Signature <i>[Signature]</i>			Month	Day	Year		
17. Transporter 1 Acknowledged of Receipt of Materials					Printed/Typed Name <i>Ron ...</i>			Signature <i>[Signature]</i>			Month Day Year <i>11/19/19</i>	
18. Transporter 2 Acknowledgement of Receipt of Materials					Printed/Typed Name			Signature			Month Day Year	
19. Discrepancy Indication Space												
FACILITY	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					Signature			Month	Day	Year	

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69874

Shipping Manifest		1. Generator's US EPA ID No. (if any)		1. Page 1 of _____ page(s)	
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMADJI SUBST. HILL AVE. & STINSON AVE. SUPERIOR, WI 54660			Mailing Address SUPERIOR WATER LIGHT & POWER CO 3715 HILL AVE. SUPERIOR, WI 54660		
4. Generator's Phone: 216-325-1111			Fax:		
5. Transporter 1 Company Name			Phone:		
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#
a. Non Hazardous Industrial Waste (SOIL IMPACTED SOIL/DEBRIS)		No. Type			
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 219-0049 OIL IMPACTED SOIL/DEBRIS					
b. CL					
c. CL					
d. CL					
15. Special Handling Instructions and Additional Information Emergency Contact:				SKB Use Only Load # _____	
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		Signature		Month Day Year	
17. Transporter 1 Acknowledged of Receipt of Materials		Signature		11 19 19	
Printed/Typed Name		Signature		Month Day Year	
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		11 19 19	
Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space					
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		Signature		Month Day Year	

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill

Non Hazardous Industrial Waste

69675

Shipping Manifest	1. Generator's US EPA ID No. (if any)	1. Page 1 of _____ page(s)
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMADJI STREET HILL AVE & STINEB AVE SUPERIOR, WI 54660		Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54660
4. Generator's Phone 216-335-3191		Fax:
5. Transporter 1 Company Name <i>AI-EXPRESS 117</i>		Phone:
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 No. Type	10. Total Quantity
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)		
b.		
c.		
d.		
13. Additional Descriptions for Materials Listed Above (Indicate waste stream Approval # below)		12. Waste Profile Sheet#
a. CL 19-0049 OIL IMPACTED SOIL/DEBRIS		
b. CL		
c. CL		
d. CL		
14. Special Handling Procedures for Wastes Listed Above		
15. Special Handling Instructions and Additional Information Emergency Contact:		SKB Use Only Load # _____
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 <i>[Signature]</i>		Signature <i>[Signature]</i> Month Day Year <i>11/19/11</i>
17. Transporter 1 Acknowledged of Receipt of Materials		
Printed/Typed Name <i>Ken Young</i>		Signature <i>[Signature]</i> Month Day Year <i>11/19/11</i>
18. Transporter 2 Acknowledgement of Receipt of Materials		
Printed/Typed Name		Signature Month Day Year
19. Discrepancy Indication Space		
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		Signature Month Day Year

GENERATOR
TRANSPORTER
FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69576

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO BELMONT ST. HILL AVE. S. SUPERIOR AVE. SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE. SUPERIOR, WI 54880						
4. Generator's Phone: 218-325-3191				Fax:						
5. Transporter 1 Company Name				Phone:						
6. Transporter 2 Company Name <i>NIC</i>				Phone: <i>715-398-7561</i>						
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 (OIL IMPACTED SOIL/DEBRIS)										
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 119-0019 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load # _____			
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				Signature			Month	Day	Year	
<i>[Signature]</i>				<i>[Signature]</i>			11	11	11	
17. Transporter 1 Acknowledged of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
<i>[Signature]</i>				<i>[Signature]</i>			11	11	11	
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
<i>[Signature]</i>				<i>[Signature]</i>			11	11	11	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	
<i>[Signature]</i>				<i>[Signature]</i>						

GENERATOR
TRANSPORTER
FACILITY


White - Return to Generator

Pink - Transporter

Canary - Facility Copy

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69677

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)							
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO INC (A) 112 WEST HILL AVE & STINEB AVE SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54880								
4. Generator's Phone: 218-285-3101				Fax:								
5. Transporter 1 Company Name <i>NIC #6</i>				Phone:								
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 (OIL IMPACTED SOIL/DEBRIS)												
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 <i>CL 19-0019 OIL IMPACTED SOIL/DEBRIS</i>												
b. CL												
c. CL												
d. CL												
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load # _____					
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 <i>LUKAS WILSON</i>				Signature <i>[Signature]</i>			Month	Day	Year			
17. Transporter 1 Acknowledged of Receipt of Materials				Printed/Typed Name <i>Wayne Bark</i>			Signature <i>[Signature]</i>			Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials				Printed/Typed Name			Signature			Month	Day	Year
19. Discrepancy Indication Space												
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				Signature			Month	Day	Year			

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill

Non Hazardous Industrial Waste

69678

Shipping Manifest		1. Generator's US EPA ID No. (if any)		1. Page 1 of _____ page(s)	
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMPHIS SUBST. BILL AVE & STINSON AVE SUPERIOR, WI 54280			Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 ED.L AVE SUPERIOR, WI 54280		
4. Generator's Phone: 218-355-2171		Fax:			
5. Transporter 1 Company Name <i>Northwestern Intergate Corp</i>		Phone:			
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#
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)		No. Type			
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 111-0042 OIL IMPACTED SOIL/DEBRIS					
b. CL					
c. CL					
d. CL					
15. Special Handling Instructions and Additional Information Emergency Contact:			SKB Use Only Load # _____		
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 <i>Greg Johnson</i>		Signature <i>[Signature]</i>		Month Day Year 11/19/19	
17. Transporter 1 Acknowledged of Receipt of Materials					
Printed/Typed Name <i>Rich Karna</i>		Signature <i>[Signature]</i>		Month Day Year 11/19/19	
18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space					
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		Signature		Month Day Year	

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator Canary - Facility Copy Pink - Transporter Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69679

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMADJI SUBST. HILL AVE. & STINSON AVE. SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54880						
4. Generator's Phone: 218-845-3101				Fax:						
5. Transporter 1 Company Name				Phone:						
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 (OIL IMPACTED SOIL/DEBRIS)										
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 0119-0049 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load # _____				
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 L. H. H. H.				Signature [Signature]		Month	Day	Year		
17. Transporter 1 Acknowledged of Receipt of Materials				Printed/Typed Name T. Carroll		Signature [Signature]		Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials				Printed/Typed Name		Signature		Month	Day	Year
19. Discrepancy Indication Space										
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				Signature		Month	Day	Year		

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy

76



Shamrock Landfill



Non Hazardous Industrial Waste

69680

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMADJI SUBST. HILL AVE. & STINSON AVE. SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2015 HILL AVE. SUPERIOR, WI 54980				
4. Generator's Phone: (218-335-319)				Fax:				
5. Transporter 1 Company Name NIC #4				Phone:				
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#
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)				No.	Type			
b.								
c.								
d.								
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below) a. CL 17-0049 OIL IMPACTED SOIL/DEBRIS b. CL c. CL d. CL				14. Special Handling Procedures for Wastes Listed Above				
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load #		
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				Signature		Month	Day	Year
17. Transporter 1 Acknowledged of Receipt of Materials				Signature		Month	Day	Year
Printed/Typed Name				Signature		Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature		Month	Day	Year
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill Non Hazardous Industrial Waste

69681

Shipping Manifest		1. Generator's US EPA ID No. (if any)		1. Page 1 of _____ page(s)	
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO HILL AVE & STINSON AVE SUPERIOR, WI 54880			Mailing Address SUPERIOR WATER LIGHT & POWER CO 2918 HILL AVE SUPERIOR, WI 54880		
4. Generator's Phone: 218-333-3101			Fax:		
5. Transporter 1 Company Name <i>MAIL EXPRESS AIR</i>			Phone:		
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#
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)		No. Type			
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 0119-0049 OIL IMPACTED SOIL/DEBRIS					
b. CL					
c. CL					
d. CL					
15. Special Handling Instructions and Additional Information Emergency Contact:				SKB Use Only Load # _____	
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		Signature		Month Day Year	
<i>[Signature]</i>		<i>[Signature]</i>			
17. Transporter 1 Acknowledged of Receipt of Materials					
Printed/Typed Name		Signature		Month Day Year	
DAVID LESNY		<i>[Signature]</i>			
18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space					
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		Signature		Month Day Year	

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

89682

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)				
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO. N. MADISON BLVD. HILL AVE. & STINSON AVE. SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO. 2015 HILL AVE. SUPERIOR, WI 54980					
4. Generator's Phone: 218-878-1101				Fax:					
5. Transporter 1 Company Name				Phone:					
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 (OIL IMPACTED SOIL/DEBRIS)									
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 119-0049 OIL IMPACTED SOIL/DEBRIS									
b. CL									
c. CL									
d. CL									
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load # _____			
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				Signature		Month		Day	Year
17. Transporter 1 Acknowledged of Receipt of Materials				Signature		11		17	17
Printed/Typed Name				Signature		Month		Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature		11		19	17
Printed/Typed Name				Signature		Month		Day	Year
19. Discrepancy Indication Space									
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				Signature		Month		Day	Year

GENERATOR

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

63683

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMPHIS SUBST. HILL AVE & HINSON AVE. BLUETRIER, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE. SUPERIOR, WI 54880						
4. Generator's Phone: 218-325-2121				Fax:						
5. Transporter 1 Company Name				Phone:						
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 (OIL IMPACTED SOIL/DEBRIS)										
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 0115-0049 OIL IMPACTED SOIL/DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load # _____			
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 LUCAS DIXON				Signature <i>[Signature]</i>				Month 11	Day 17	Year 11
17. Transporter 1 Acknowledged of Receipt of Materials										
Printed/Typed Name <i>[Signature]</i>				Signature <i>[Signature]</i>				Month 11	Day 19	Year 11
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature				Month	Day	Year
19. Discrepancy Indication Space										
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				Signature				Month	Day	Year

GENERATOR FACILITY TRANSPORTER

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill

Non Hazardous Industrial Waste

69684

Shipping Manifest		1. Generator's US EPA ID No. (if any)		1. Page 1 of page(s)	
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMADU SUBST. HILL AVE & STANBOM AVE SUPERIOR, WI 54880			Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE. SUPERIOR, WI 54880		
4. Generator's Phone: 218-355-3101			Fax:		
5. Transporter 1 Company Name			Phone:		
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#
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)		No. Type			
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 19-0049 OIL IMPACTED SOIL/DEBRIS					
b. CL					
c. CL					
d. CL					
15. Special Handling Instructions and Additional Information Emergency Contact:				SKB Use Only Load #	
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		Signature		Month Day Year	
17. Transporter 1 Acknowledged of Receipt of Materials		Signature		Month Day Year	
Printed/Typed Name		Signature		Month Day Year	
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Month Day Year	
Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space					
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		Signature		Month Day Year	

GENERATOR

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69685

Shipping Manifest		1. Generator's US EPA ID No. (if any)		1. Page 1 of page(s)	
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEUMATAH SUBST. HILL AVE & STINSON AVE SUPERIOR, WI 54880			Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54880		
4. Generator's Phone: 920-343-2101			Fax:		
5. Transporter 1 Company Name			Phone:		
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#
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)		No. Type			
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 117-0019 OIL IMPACTED SOIL/DEBRIS					
b. CL					
c. CL					
d. CL					
15. Special Handling Instructions and Additional Information Emergency Contact:				SKB Use Only Load #	
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 Erik H...		Signature <i>Erik H...</i>		Month Day Year 11/1/19	
17. Transporter 1 Acknowledged of Receipt of Materials					
Printed/Typed Name Chad Weiner		Signature <i>Chad Weiner</i>		Month Day Year 11/1/19	
18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space					
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		Signature		Month Day Year	

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69686

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)				
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMAHA BLVD HILL AVE & STATION AVE SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54980					
4. Generator's Phone: 218-3-3101				Fax:					
5. Transporter 1 Company Name				Phone:					
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 (OIL IMPACTED SOIL/DEBRIS)									
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 19-0049 OIL IMPACTED SOIL/DEBRIS									
b. CL									
c. CL									
d. CL									
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load # _____		
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 <i>Lukas Meyer</i>				Signature <i>[Signature]</i>			Month Day Year <i>11/19/19</i>		
17. Transporter 1 Acknowledged of Receipt of Materials									
Printed/Typed Name <i>[Name]</i>				Signature <i>[Signature]</i>			Month Day Year <i>11/19/19</i>		
18. Transporter 2 Acknowledgement of Receipt of Materials									
Printed/Typed Name				Signature			Month Day Year		
19. Discrepancy Indication Space									
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				Signature			Month Day Year		

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

59587

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)						
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO. MEMPHIS SUBST. BILL AVE. & STINSON AVE. SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO. 2013 BILL AVE. SUPERIOR, WI 54980							
4. Generator's Phone: 218-215-2101				Fax:							
5. Transporter 1 Company Name <i>AI-Express</i>				Phone: <i>117</i>							
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#			
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)				No. Type							
b.											
c.											
d.											
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below) a. CL 218-0049 OIL IMPACTED SOIL/DEBRIS b. CL c. CL d. CL				14. Special Handling Procedures for Wastes Listed Above							
15. Special Handling Instructions and Additional Information Emergency Contact:				SKB Use Only Load #							
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 <i>William Dixon</i>				Signature <i>[Signature]</i>		Month <i>11</i>		Day <i>17</i>		Year <i>19</i>	
17. Transporter 1 Acknowledged of Receipt of Materials											
Printed/Typed Name <i>William Dixon</i>				Signature <i>[Signature]</i>		Month <i>11</i>		Day <i>17</i>		Year <i>19</i>	
18. Transporter 2 Acknowledgement of Receipt of Materials											
Printed/Typed Name				Signature		Month		Day		Year	
19. Discrepancy Indication Space											
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				Signature		Month		Day		Year	

GENERATOR A

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69688

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO HEMADJI STREET HILL AVE. & SIMPSON AVE. SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 213 HILL AVE. SUPERIOR, WI 54880				
4. Generator's Phone: (920) 353-3101				Fax:				
5. Transporter 1 Company Name <i>NIC</i>				Phone: <i>715-398-7561</i>				
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#
a. Non Hazardous industrial Waste (OIL IMPACTED SOIL/DIBERIS)				No. Type				
b.								
c.								
d.								
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below) a. CL 119-0019 OIL IMPACTED SOIL/DIBERIS b. CL c. CL d. CL				14. Special Handling Procedures for Wastes Listed Above				
15. Special Handling Instructions and Additional Information Emergency Contact:				SKB Use Only Load # _____				
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			Signature			Month Day Year		
<i>[Signature]</i>			<i>[Signature]</i>					
17. Transporter 1 Acknowledged of Receipt of Materials								
Printed/Typed Name			Signature			Month Day Year		
<i>[Signature]</i>			<i>[Signature]</i>					
18. Transporter 2 Acknowledgement of Receipt of Materials								
Printed/Typed Name			Signature			Month Day Year		
<i>[Signature]</i>			<i>[Signature]</i>					
19. Discrepancy Indication Space								
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			Signature			Month Day Year		
<i>[Signature]</i>			<i>[Signature]</i>					

GENERATOR
TRANSPORTER
FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69689

GENERATOR	Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)				
	3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO. HEMLOCK SUBST. HILL AVE & THURON AVE SUPERIOR, WI 54880					Mailing Address SUPERIOR WATER LIGHT & POWER CO. 2915 HILL AVE SUPERIOR, WI 54880				
4. Generator's Phone: 715-325-3191					Fax:					
5. Transporter 1 Company Name <i>MIC</i>					Phone:					
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					
TRANSPORTER	8. U.S. DOT Description (including Proper Shipping name)				9. Containers		10. Total Quantity		11. Unit Wt/Vol	12. Waste Profile Sheet#
	a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)				No. Type					
	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 C19-0419 OIL IMPACTED SOIL DEBRIS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:					SKB Use Only Load # _____					
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 <i>Laura Dixon</i>				Signature <i>[Signature]</i>			Month 11	Day 19	Year 11	
17. Transporter 1 Acknowledged of Receipt of Materials										
Printed/Typed Name <i>Chris Robinson</i>				Signature <i>[Signature]</i>			Month 11	Day 19	Year 11	
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69690

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)				
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO METWADJI STREET, HILL AVE. & HILLBORN AVE SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2015 HILL AVE SUPERIOR, WI 54880					
4. Generator's Phone: 218-233-2111				Fax:					
5. Transporter 1 Company Name <i>WALMART EXPRESS #126</i>				Phone:					
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 (OIL IMPACTED SOIL/DEBRIS)									
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 019-0019 OIL IMPACTED SOIL/DEBRIS									
b. CL									
c. CL									
d. CL									
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load #			
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				Signature			Month Day Year		
<i>[Signature]</i>				<i>[Signature]</i>			7 1 19 19		
17. Transporter 1 Acknowledged of Receipt of Materials									
Printed/Typed Name				Signature			Month Day Year		
<i>[Signature]</i>				<i>[Signature]</i>			7 1 19 19		
18. Transporter 2 Acknowledgement of Receipt of Materials									
Printed/Typed Name				Signature			Month Day Year		
19. Discrepancy Indication Space									
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				Signature			Month Day Year		

GENERATOR

TRANSPORTER

FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69691

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMORIAL BUDGET MILL AVE & SUTHERLAND AVE SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54880				
4. Generator's Phone: 218-233-7191				Fax:				
5. Transporter 1 Company Name				Phone:				
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#
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)				No.	Type			
b.								
c.								
d.								
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below) a. CL 117-0049 OIL IMPACTED ECL/DEBRIS b. CL c. CL d. CL				14. Special Handling Procedures for Wastes Listed Above				
15. Special Handling Instructions and Additional Information Emergency Contact:				SKB Use Only Load #				
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 <i>Laura Dixon</i>				Signature <i>[Signature]</i>		Month 11	Day 19	Year 19
17. Transporter 1 Acknowledged of Receipt of Materials								
Printed/Typed Name <i>[Name]</i>				Signature <i>[Signature]</i>		Month 11	Day 19	Year 19
18. Transporter 2 Acknowledgement of Receipt of Materials								
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR A

TRANSPORTER

FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69692

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO NEMAHA STREET, LILL AVE & HUNTER AVE SUPERIOR, WI 54660				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2415 LILL AVE, SUPERIOR, WI 54660				
4. Generator's Phone: 218-335-3791				Fax:				
5. Transporter 1 Company Name				Phone:				
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 (OIL IMPACTED SOIL/DIRT)								
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 OIL IMPACTED SOIL/DIRT								
b. CL								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load #		
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				Signature		Month	Day	Year
17. Transporter 1 Acknowledged of Receipt of Materials						11	20	19
Printed/Typed Name				Signature		Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials						11	20	19
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR A

TRANSPORTER

FACILITY

White - Return to Generator


Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy

76



Shamrock Landfill 

Non Hazardous Industrial Waste

69693

GENERATOR	Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)						
	3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO 1111 AVE. & HUNTER AVE. SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWER CO 7015 HILL AVE SUPERIOR, WI 54980							
4. Generator's Phone: 218-335-2191				Fax:								
5. Transporter 1 Company Name				Phone:								
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								
TRANSPORTER	8. U.S. DOT Description (including Proper Shipping name)		9. Containers		10. Total Quantity		11. Unit Wt/Vol	12. Waste Profile Sheet#				
	a. Non Hazardous Industrial Waste (CL IMPACTED SOIL/SEDIMENT)		No. Type									
	b.											
	c.											
	d.											
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below) a. CL 119-0001 CL IMPACTED SOIL/SEDIMENT b. CL c. CL d. CL				14. Special Handling Procedures for Wastes Listed Above								
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load #						
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 L. A. Dixon				Signature <i>L. A. Dixon</i>			Month 11		Day 20	Year 19		
17. Transporter 1 Acknowledged of Receipt of Materials				Printed/Typed Name Terry Carroll			Signature <i>Terry Carroll</i>			Month 11	Day 20	Year 19
18. Transporter 2 Acknowledgement of Receipt of Materials				Printed/Typed Name			Signature			Month	Day	Year
19. Discrepancy Indication Space												
FACILITY	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				Signature			Month		Day	Year	

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69594

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO HEMLOCK SUBST. HILL AVE & EATSON AVE SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2915 HILL AVE SUPERIOR, WI 54880				
4. Generator's Phone: 218-335-3191				Fax:				
5. Transporter 1 Company Name				Phone:				
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 (OIL IMPACTED SOIL/DROPS)								
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 019-0019 OIL IMPACTED SOIL/DROPS								
b. CL								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load # _____		
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 <i>Wesley Dixon</i>				Signature <i>[Signature]</i>		Month	Day	Year
17. Transporter 1 Acknowledged of Receipt of Materials						11	20	19
Printed/Typed Name <i>John E. [unclear]</i>				Signature <i>[Signature]</i>		Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials						11	20	19
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

89695

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)			
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO BELMONT WASTW HILL AVE & BOSTON AVE BOSTON, VT 05600				Mailing Address SUPERIOR WATER LIGHT & POWER CO BOSTON AVE BOSTON, VT 05600				
4. Generator's Phone: 218-325-8151				Fax:				
5. Transporter 1 Company Name				Phone:				
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 (OIL IMPACTED SOIL/DEBRIS)								
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 218-0049 OIL IMPACTED SOIL/DEBRIS								
b. CL								
c. CL								
d. CL								
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load #		
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 KIM'S DISCO				Signature <i>[Signature]</i>		Month 11	Day 20	Year 19
17. Transporter 1 Acknowledged of Receipt of Materials				Signature <i>[Signature]</i>		Month 11	Day 20	Year 19
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature <i>[Signature]</i>		Month 11	Day 20	Year 19
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69696

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWDR CO 7111 AVE. & STATION AVE. SUPERIOR, WI 54980				Mailing Address SUPERIOR WATER LIGHT & POWDR CO 2015 EAST AVE. SUPERIOR, WI 54980						
4. Generator's Phone: 920-853-3191				Fax:						
5. Transporter 1 Company Name				Phone:						
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 (Oil Impacted Soil/Dregs)										
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 261.9-0019 OIL IMPACTED W. DREGS										
b. CL										
c. CL										
d. CL										
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load # _____				
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 <i>Justin Dixon</i>				Signature <i>[Signature]</i>			Month 11	Day 20	Year 19	
17. Transporter 1 Acknowledged of Receipt of Materials										
Printed/Typed Name <i>Justin Dixon</i>				Signature <i>[Signature]</i>			Month 11	Day 20	Year 19	
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69697

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of page(s)												
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO BELMONT MOUNT. HILL AVE. & CEDAR AVE. SUPERIOR, WI 54660				Mailing Address SUPERIOR WATER LIGHT & POWER CO 2015 HILL AVE SUPERIOR, WI 54660													
4. Generator's Phone: 218-235-3101				Fax:													
5. Transporter 1 Company Name				Phone:													
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 (OIL IMPACTED SOIL/DEBRIS)																	
b.																	
c.																	
d.																	
13. Additional Descriptions for Materials Listed Above (Indicate waste stream Approval # below)				14. Special Handling Procedures for Wastes Listed Above													
a. CL19-0047 OIL IMPACTED SOIL/DEBRIS																	
b. CL																	
c. CL																	
d. CL																	
15. Special Handling Instructions and Additional Information Emergency Contact:						SKB Use Only Load #											
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 LUKE'S DIXON				Signature <i>[Signature]</i>				Month 11		Day 10		Year 19					
17. Transporter 1 Acknowledged of Receipt of Materials				Printed/Typed Name Sue Erdos				Signature <i>[Signature]</i>				Month 11		Day 10		Year 19	
18. Transporter 2 Acknowledgement of Receipt of Materials				Printed/Typed Name				Signature				Month		Day		Year	
19. Discrepancy Indication Space																	
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				Signature				Month		Day		Year					

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill



Non Hazardous Industrial Waste

69698

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)			
3. Generator's Name and Facility Address				Mailing Address				
4. Generator's Phone:		SUPERIOR WATER LIGHT & POWER CO MEMPHIS STREET SUPERIOR WATER LIGHTS & POWER CO 2015 ELLIOTT AVE. SUITE 1000, WI 53190						
5. Transporter 1 Company Name		Phone:						
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								
b. (OIL IMPREGNATED SOLID DEBRIS)								
c.								
d.								
13. Additional Descriptions for Materials Listed Above (Indicate waste stream Approval # below)				14. Special Handling Procedures for Wastes Listed Above				
a. CL								
b. CL								
c. CL 119-0049 OIL IMPREGNATED SOLID DEBRIS								
d. CL								
15. Special Handling Instructions and Additional Information					SKB Use Only			
Emergency Contact:					Load # _____			
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				Signature		Month	Day	Year
17. Transporter 1 Acknowledged of Receipt of Materials				Signature		11	12	14
Printed/Typed Name				Signature		Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials				Signature		11	12	14
Printed/Typed Name				Signature		Month	Day	Year
19. Discrepancy Indication Space								
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				Signature		Month	Day	Year

GENERATOR
TRANSPORTER
FACILITY


White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy



Shamrock Landfill 

Non Hazardous Industrial Waste

69699

Shipping Manifest		1. Generator's US EPA ID No. (if any)			1. Page 1 of _____ page(s)					
3. Generator's Name and Facility Address SUPERIOR WATER LIGHT & POWER CO MEMORIAL BLDG. 1011 L. AVE. & BRINSON AVE. SUPERIOR, WI 54880				Mailing Address SUPERIOR WATER LIGHT & POWER CO 5015 HILL AVE. SUPERIOR, WI 54880						
4. Generator's Phone: (919) 355-3191				Fax:						
5. Transporter 1 Company Name				Phone:						
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#	
a. Non Hazardous Industrial Waste (OIL IMPACTED SOIL/DEBRIS)					No. Type					
b.										
c.										
d.										
13. Additional Descriptions for Materials Listed Above (indicate waste stream Approval # below) a. CL-119-0019 OIL IMPACTED SOIL/DEBRIS b. CL c. CL d. CL					14. Special Handling Procedures for Wastes Listed Above					
15. Special Handling Instructions and Additional Information Emergency Contact:							SKB Use Only Load # _____			
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 LORAN DIXON				Signature <i>[Signature]</i>			Month 11	Day 20	Year 11	
17. Transporter 1 Acknowledged of Receipt of Materials										
Printed/Typed Name Julie Endres				Signature <i>[Signature]</i>			Month 11	Day 20	Year 11	
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name				Signature			Month	Day	Year	
19. Discrepancy Indication Space										
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				Signature			Month	Day	Year	

GENERATOR
TRANSPORTER
FACILITY

White - Return to Generator

Canary - Facility Copy

Pink - Transporter

Goldenrod - Generator Copy

Attachment D – Maintenance Plans and Photographs

D.1 Description of Maintenance Actions (Not Applicable)*

D.2 Location Maps (Not Applicable)*

D.3 Photographs (Not Applicable)*

D.4 Inspection Log (Not Applicable)*

***There is no site maintenance in relation to the site**

Attachment E – Monitoring Well Information

Not Applicable - All monitoring wells on-site are part the Husky Energy facility-wide monitoring program and were not installed as part of the site investigation.

Attachment F – Source Legal Documents

F.1 Property Deed

F.2 Certified Survey Map*

F.3 Verification of Zoning

F.4 Signed Statement

*** There is no certified survey map to include**

845763

Document Number

SPECIAL WARRANTY DEED

Document Name

DOCUMENT# 845763

Recorded or Filed on
October 04, 2011 9:15 AM
GAYLE I. WANNER
DOUGLAS COUNTY RECORDER
SUPERIOR, WI 54880-2769
Fee Amount: \$30.00
Transfer Fee: \$47,052.00
Total Pages 13

THIS DEED, made between MURPHY OIL USA, INC., a Delaware corporation, as to Tracts A, D, E, F, G, H and J; MURPHY OIL USA, INC., a Delaware corporation, f/k/a New Murphy Oil USA, Inc., f/k/a Murphy Oil Corporation, as to Tracts B and I; and MURPHY OIL USA, INC., a Delaware corporation, f/k/a Murphy Corporation, a Louisiana corporation, as to Tract C and Tract K ("Grantor," whether one or more), and CALUMET SUPERIOR, LLC, a Delaware limited liability company ("Grantee"),

for and in consideration of good and valuable consideration paid by Grantee, Grantor hereby grants, sells and conveys to Grantee the following described real estate, together with the rents, profits, fixtures, improvements, structures and other appurtenant interests constituting real property, located in Douglas County, State of Wisconsin ("Property"); subject, however, to (i) all easements, rights-of-way, covenants, restrictions, agreements, claims or other matters, rights or encumbrances of record (or referred to or described or discoverable in recorded documents or otherwise known to Grantee), (ii) liens for governmental taxes, assessments or charges, (iii) public or private rights used, laid out or dedicated for road or highway purposes, (iv) rights of owners and governmental regulation of pipelines through public rights of way or privately owned land, respectively, (v) rights of easement, or any encroachments, in and to all railroad switches, sidetracks, spur tracks or similar rights of way, and (vi) any or all reservations of minerals and mineral rights (collectively, "Permitted Encumbrances").

See Attachment A - Legal Description.

Together with all of Grantor's rights and interests in and to all pipelines serving the Property described in Attachment A and all easements and rights appurtenant thereto, and all interest of Grantor, being no less than a 12% interest, in a 7.5 mile 10" gas main extending from the Great Lakes Gas Transmission mainline to a delivery point near the Superior Refinery as more fully described in the Construction, Ownership & Operating Agreement for a Natural Gas Main in Superior, WI, dated as of November 1, 2000, between Superior Water Light & Power Company and Murphy Oil USA, Inc.

Grantor does hereby bind Grantor and Grantor's successors and assigns to forever warrant and defend that the title to the Property is good, indefeasible, in fee simple and free and clear of all encumbrances arising by, through, or under Grantor, except for Permitted Encumbrances.

Dated September 30, 2011

MURPHY OIL USA, INC.

By: [Signature] [(SEAL)]

Name: Thomas McKinlay

Title: President

ACKNOWLEDGMENT

STATE OF ARKANSAS

Union COUNTY

Personally came before me on September 30, 2011

the above-named Thomas McKinlay

to me known to be the person(s) who executed the foregoing instrument and acknowledged the same.

* [Signature]

Notary Public, State of ARKANSAS

My Commission (is permanent) (expires: 2-1-2013)

THIS INSTRUMENT DRAFTED BY:

Bryan C. Esch, Esq.
DeWitt Ross & Stevens S.C.

Recording Area

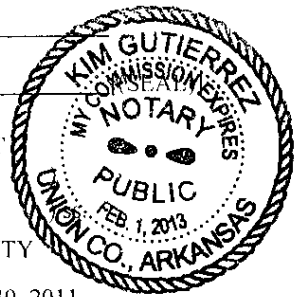
Name and Return Address

Tamarah R. Feigl, Esq.
Fulbright & Jaworski L.L.P.
Fulbright Tower
1301 McKinney, Suite 5100
Houston, TX 77010-3095

See Attachment "A"

Parcel Identification Number (PIN)

This is not homestead property.
(If) (is not)



845763

**Attachment A
to Special Warranty Deed
from Murphy Oil USA, Inc. to Calumet Superior, LLC
dated September 30, 2011**

Legal Description

TRACT A:

Lots 354 through 368, even numbers inclusive, West 18th Street, Bay Front Division. (Doc. No. 805831).

Parcel No. 02-802-01033-00.

Lots 322 through 352, even numbers inclusive, West 19th Street, Bay Front Division. (Doc. No. 766342).

Parcel No. 01-801-04149-00.

Fractional Lots 345 through 351, odd numbers inclusive, West 19th Street, Bay Front Division. (Doc. No. 806050).

Parcel No. 01-801-04161-00.

Lots 353 through 367, odd numbers inclusive, on West 19th Street, Bay Front Division. (Doc. No. 805831).

Parcel No. 02-202-01041-00.

Lots 354 through 384, even numbers inclusive, on West 19th Street, Bay Front Division. (Doc. Nos. 766342 & 805831).

Parcel No. 02-202-01054-00.

Lots 290 through 320, even numbers inclusive, West 20th Street, Bay Front Division. (Doc. No. 766342).

Parcel No. 01-801-04169-00.

Lots 321 through 352, inclusive, West 20th Street, Bay Front Division. (Doc. Nos. 766342 & 806050).

Parcel No. 01-801-04185-00.

Lots 386 through 400, even numbers inclusive, West 20th Street, Bay Front Division. (Doc. Nos. 805831, 806050 & 807145).

Parcel No. 02-802-01099-00.

Lots 353 through 384, inclusive, West 20th Street, Bay Front Division. (Doc. Nos. 766342 & 806050).

Parcel No. 02-802-01066-00.

Lots 289 through 319, odd numbers inclusive, West 21st Street, Bay Front Division. (Doc. Nos. 766342 & 805069).

Parcel No. 01-801-04218-00.

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Lots 321 through 351, odd numbers inclusive, West 21st Street, Bay Front Division. (Doc. Nos. 766342 & 800813).

Parcel No. 01-801-04250-00.

Lots 353 through 415, odd numbers inclusive, West 21st Street, Bay Front Division. (Doc. No. 766342).

Parcel No. 02-802-01105-00.

Lots 385 through 416, inclusive, Herrick's Subdivision of Block 25, West 15th Street. (Doc. No. 794160).

Parcel No. 02-802-02810-00.

Lots 321 to 351, odd numbers inclusive, Linler Place, West 15th Street. (Doc. No. 794160).

Parcel No. 01-801-04630-00.

Lots 289 through 293, Block 20, McBean Blocks, West Thirteenth Street, Lots on West Fourteenth Street; together with that part of the alley which accrued thereto by reason of the vacation thereof. (Doc. Nos. 766592 & 802863).

Parcel No. 01-801-04674-00.

Lots 338 through 352, even numbers inclusive, Block 21, 16th Street, McBean Blocks West 17th Street. (Doc. No. 794160).

Parcel No. 01-801-04738-00.

Lots 1 through 18, inclusive, and Lots 20 through 26, inclusive, Block 5; Lots 1, 2 and 3 and Lots 21 through 26, inclusive, Block 6, Lots 15, 16, 17, 18, and 19, Block 4, all in Dudley Park Addition to South Superior; together with that part of the alleys, Caitlin Avenue, Fisher Avenue & Fifty-Third Street which accrued thereto by reason of the vacation thereof. (Doc. Nos. 835187 & 837523).

Parcel Nos. 08-808-03384-00, 08-808-03409-00, 08-808-03372-00 & 08-808-03412-00.

Lots 23, 24, 25 and 26, Block 5, Lots 2 through 9, inclusive, Block 6, all in Harriet Place Addition to South Superior; together with that part of Caitlin Avenue and Fifty-Third Street which accrued thereto by reason of the vacation thereof. (Doc. Nos. 835187 & 837523).

Parcel Nos. 08-808-04104-00 & 08-808-04109-00.

Lots 329 through 351, odd numbers inclusive, West 13th Street, Burhan's Subdivision of Blocks 21 & 22, West 13th Street.

Lots 322 through 352, even numbers inclusive, West 13th Street, Burhan's Subdivision of Blocks 21 & 22, West 13th Street.

Lots 321 through 351, odd numbers inclusive, West 14th Street, Burhan's Subdivision of Blocks 21 & 22, West 13th Street.

Lots 322 through 330, even numbers inclusive, West 12th Street, Burhan's Subdivision of Blocks 21 & 22, West 13th Street.

Lots 321 through 327, odd numbers inclusive, West 13th Street, Burhan's Subdivision of Blocks 21 & 22, West 13th Street.

Together with that part of 12th Street which accrued thereto by reason of the vacation thereof.

(Doc. Nos. 806050, 806973 and 723202).

Parcel Nos. 01-801-04426-00, 01-801-04442-00, 01-801-04410-00, 01-801-04397-00 & 01-801-04412-00.

Lots 225 through 271, odd numbers inclusive, Frey's Subdivision of Block 16 and of the Southeasterly One Half of Block 18, on West 19th Street. (Doc. No. 766342).

Parcel No. 01-801-04551-00.

Lots 226 through 272, even numbers inclusive, Frey's Subdivision of Block 16 and of the Southeasterly One Half of Block 18, on West 19th Street. (Doc. No. 766342).

Parcel No. 01-801-04528-00.

Lots 273 through 287, odd numbers inclusive, Hanson and Streatfield's Subdivision of Block 18 West Thirteenth Street, Lots on West Fourteenth Street. (Doc. No. 803730).

Parcel No. 01-801-04593-00.

Lots 257 through 265, inclusive, and Lots 267 through 271, odd numbers inclusive, Hanson and Streatfield's Subdivision of Block 18 West Thirteenth Street, Lots on West Fourteenth Street. (Doc. No. 804858).

Parcel Nos. 01-801-04583-00 and 01-801-04566-00.

Blocks 17, 19 and 22 and the Northeast Quarter and the South Half of Block 21, Townsite of Superior West 17th Street. (Doc. No. 794160).

Parcel No. 01-801-03209-00.

The Northeast Quarter of Section 12, Township 48 North, Range 14 West, except that part thereof lying North of County Highway A, and except Railroad Rights of Way, and except the following described property: That part of the Southeast Quarter of the Northeast Quarter of Section 12, Township 48 North, Range 14 West, described as follows: Beginning at the Southeast corner of the Northeast Quarter of Section 12; thence North 0 degrees 35 minutes 7 seconds East, along the East line of said Northeast Quarter, a distance of 362.02 feet; thence South 39 degrees 47 minutes 53 seconds West, a distance of 466.60 feet to the South line of said Northeast Quarter; thence South 89 degrees 19 minutes 05 seconds East, along said South line, a distance of 294.98 feet to the point of beginning; and except the following described property: That part of the Southeast Quarter of the Northeast Quarter of Section 12, Township 48 North, Range 14 West, described as follows: Commencing at the Southeast corner of the Northeast Quarter of Section 12, thence North 0 degrees 35 minutes 07 seconds East, along the East line of said Northeast Quarter, a distance of 362.02 feet to the point of beginning; thence continuing North 0 degrees 35 minutes 07 seconds East, along said East line, a distance of 656.36 feet; thence South 34 degrees 03 minutes 51 seconds West a distance of 1219.58 feet to the South line of said Northeast Quarter; thence South 89 degrees 19 minutes 05 seconds East, along said South line, a distance of 377.78 feet; thence North 39 degrees 47 minutes 53 seconds East a distance of 466.60 feet to the point of beginning. (Doc. No. 832177)

Parcel Nos. TS-030-01326-00, TS-030-01329-00, TS-030-01327-00 & TS-030-01328-00.

Lots 14 through 26, inclusive, Block 5, Lots 1 through 17, inclusive, Block 6, Lots 5 through 8, inclusive, Block 7, Lots 1 through 8, inclusive, Block 8, all of Block 9, all in Short Line Addition to South Superior;

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together with that part of the alleys, Fifty-Fourth Street, Fifty-Fifth Street, Clough Avenue and Weeks Avenue which accrued thereto by reason of the vacation thereof. (Doc. Nos. 835187 and 837523).

Parcel Nos. 08-808-07179-00, 08-808-07197-00, 08-808-07214-00, 08-808-07218-00 & 08-808-07226-00.

Lots 481 through 512, inclusive, Lots on West 20th and West 21st Streets, in W.H. Webb's Subdivision of Block Thirty-one (31) on West 21st Street. (Doc. No. 805831).

Parcel No. 02-802-06749-00.

The Southeast Quarter of the Northeast Quarter of the Northwest Quarter of Section 2, Township 48 North, Range 14 West. (Doc. No. 835187).

Parcel No. 08-808-09932-00.

Block 13, Townsite of Superior West 13th Street, City of Superior. (Doc. No. 794162).
Parcel No. 01-801-03032-00.

Lots 258 through 288, even numbers inclusive, and Lots 257 through 287, odd numbers inclusive, SW 17th Street, Subdivision of Block 18 West 17th Street, City of Superior. (Doc. No. 794160).

Parcel No. 01-801-04019-00.

Block 23, West 13th Street, Townsite of Superior. (Doc. Nos. 803374, 804371 & 806050).

Parcel Nos. 02-802-00698-01, 02-802-00698-00, 02-802-00699-00, 02-802-00734-00, 02-802-00736-00 and 02-802-00700-00.

Lots 300, 302, 304, 1301, 1303 and 1305, Subdivision of Part of the Northeast Quarter of Block 20, West Thirteenth Street, Lots on Becker Avenue, City of Superior; together with the alley which accrued thereto by reason of the vacation thereof. (Doc. Nos. 802863 and 806050)

Parcel Nos. 01-801-03856-00 & 01-801-03852-00.

All of Block 31 on West 14th Street, except right of way for Bardon Avenue, Townsite of Superior. (Doc. No. 801654).

Parcel No. 02-802-00735-00.

Lots 225 through 255, odd numbers inclusive, in the Subdivision of Blocks 16 and 17, West 12th Street, Townsite of Superior. (Doc. Nos. 808863, 812595 & 819919).

Parcel Nos. 01-801-03808-00, 01-801-03814-00 & 01-801-03815-00.

The Southeast Quarter and the Southwest Quarter and the East Half of the Northwest Quarter and the West 150 feet of the Northeast Quarter, Block 18, Townsite of Superior, West 15th Street.

The West Half of the Northwest Quarter, Block 18, West Fifteenth Street, Townsite of Superior. The Westerly Quarter of the Northeast Quarter of Block 20, Townsite of Superior, West Fifteenth Street.

The East 3/8ths of the Northeast Quarter and the East 2/5ths of the West 5/8ths of the Northeast Quarter, Block 20, West Fifteenth Street, Townsite of Superior.

The East 25 feet of the West 3/8ths of the Northeast Quarter of Block 20, West Fifteenth Street, Townsite of Superior.

The Northwest Quarter, Block 20, Townsite of Superior, West Fifteenth Street.
The Southwest Quarter, Block 20, Townsite of Superior, West Fifteenth Street.
The Southeast Quarter, Block 20, Townsite of Superior, West Fifteenth Street.
The North Half of Block 21, Townsite of Superior, West Fifteenth Street.
Block 22, Townsite of Superior, West Fifteenth Street.

(Doc. Nos. 794160 and 801793)

Parcel Nos. 01-801-03133-00, 01-801-03147-00 & 01-801-03148-00.

A certain piece of land located in the Northeast Quarter of Block Twenty, on West Thirteenth Street, in Townsite of Superior, City of Superior, Douglas County, Wisconsin, described as follows: Beginning at a point on the Westerly side of Becker Avenue Seventy-eight feet Southerly from the Northeasterly corner of the Northeasterly Quarter of Block 20 on West Thirteenth Street; thence running Southerly along Becker Avenue Fifty feet to the Southeasterly corner of said Quarter Block; thence Westerly along the Southerly line of said Block and at right angles to Becker Avenue One Hundred Seventeen feet; thence Northerly and parallel to Becker Avenue Fifty feet; thence Easterly and parallel to West Thirteenth Street One Hundred Seventeen feet to the place of beginning; together with that portion of vacated alley abutting Block.

(Doc. Nos. 766592 and 802863)

Parcel No. 01-801-03855-00.

Block 23 & East 14th Street Vacated, Townsite of Superior, West 15th Street.
Block 24, Townsite of Superior, West 15th Street.
Block 26, Townsite of Superior, West 15th Street.
Block 27 & Bardon Avenue Vacated, Townsite of Superior, West 15th Street.
Block 28 & Bardon Avenue Vacated, Townsite of Superior, West 15th Street.
Block 29, Townsite of Superior, West 15th Street.
SW 1/4, Block 30, Townsite of Superior, West 15th Street.
Fractional Block 31, Except R/W, Townsite of Superior, West 15th Street.
Block 32, Except R/W, Townsite of Superior, West 15th Street.
Block 34, Except R/W, Townsite of Superior, West 15th Street.

(Doc. Nos. 794160, 801654 & Volume 508, Page 705).

Parcel No. 02-802-00736-00.

The Southwest Quarter of Block 23 on West 17th Street, Townsite of Superior.
The Northwest Quarter of Block 24 on West 17th Street, Townsite of Superior.
Block 29 on West 17th Street, Townsite of Superior.
The South Half of Block 30 on West 17th Street, Townsite of Superior.
The Northwest Quarter of Block 32 on West 17th Street, Townsite of Superior.
Block 36, except Railroad right of way and North 28th Street, on West 17th Street, Townsite of Superior.

(Doc. No. 801654)

The East Half of Block 23 on West 17th Street, Townsite of Superior.
The Northwest Quarter of Block 23 on West 17th Street, Townsite of Superior.
The West Half of the Northeast Quarter of Block 24 on West 17th Street, Townsite of Superior.
The East Half of the Northeast Quarter of Block 24 on West 17th Street, Townsite of Superior.
The South Half of Block 24 and Bardon Avenue Vacated on West 17th Street, Townsite of Superior.
Block 25 and Bardon Avenue Vacated on West 17th Street, Townsite of Superior.
Block 27 on West 17th Street, Townsite of Superior.

The North Half, the Southeast Quarter and the East Half of the Southwest Quarter of Block 28 on West 17th Street, Townsite of Superior.

The West Half of the Southwest Quarter of Block 28 on West 17th Street, Townsite of Superior.

The Northwest Quarter of Block 30 on West 17th Street, Townsite of Superior.

The West Half of the Northeast Quarter of Block 30 on West 17th Street, Townsite of Superior.

The East Half of the Northeast Quarter of Block 30 on West 17th Street, Townsite of Superior.

Block 31 on West 17th Street, Townsite of Superior.

The Northeast Quarter of Block 32 on West 17th Street, Townsite of Superior.

The South Half of Block 32 on West 17th Street, Townsite of Superior.

The Fractional Block 33, except Right of Way, on West 17th Street, Townsite of Superior.

The Southwest Quarter and the Southeast Quarter of Block 34 on West 17th Street, Townsite of Superior.

The East Quarter of the Northwest Quarter of Block 34 on West 17th Street, Townsite of Superior.

The East 3/4 of the Northeast Quarter of Block 34 on West 17th Street, Townsite of Superior.

(Doc. No. 794160)

Parcel No. 02-802-00763-00.

Blocks 15, 17 and 19, Townsite of Superior on West 19th Street.

The West Half of Block 18, Townsite of Superior on West 19th Street.

The Fractional Blocks of 20 and 21, Townsite of Superior on West 19th Street.

Blocks 13 and 14, Townsite of Superior on West 19th Street.

(Doc. No. 766342)

Parcel No. 01-801-03246-00.

Lots 353, 355 and 371, Bay Front Division, West 23rd Street.

Lots 401 and 403, Bay Front Division, West 22nd Street.

Lots 380, 382 and 384, Bay Front Division, West 22nd Street.

(Doc. Nos. 624956, 603131, 630951 and 807780).

Parcel No. 02-802-00872-00.

TRACT B:

Lots 354 through 416, even numbers inclusive, West 21st Street, Bay Front Division. (Doc. No. 528677).

Parcel No. 02-802-01104-00.

Blocks 28, 30 and 32, Townsite of Superior, West 21st Street.

Blocks 25, 27, 29, 31 and 32, Townsite of Superior, West 23rd Street.

Lots 354 through 400, even numbers inclusive, Bay Front Division, West 21st Street.

Lots 353 through 383, odd numbers inclusive, Bay Front Division, West 22nd Avenue.

Lots 385 through 399, odd numbers inclusive, Bay Front Division, West 22nd Street.

Lots 405 through 415, odd numbers inclusive, Bay Front Division, West 22nd Street.

Lots 354 through 378, even numbers inclusive, Bay Front Division, West 22nd Street.

Lots 357 through 369, odd numbers inclusive and Lots 373 through 383, odd numbers inclusive, Bay Front Division, West 23rd Street.

(Doc. Nos. 505366, 518749 and 528677).

Parcel No. 02-802-00872-00.

Lots 290 through 320, even numbers inclusive, Bay Front Division, West 21st Street.
Lots 322 through 352, even numbers inclusive, Bay Front Division, West 21st Street.
Lots 305 through 351, odd numbers inclusive, Bay Front Division, West 22nd Street.
Lots 314 through 352, even numbers inclusive, Bay Front Division, West 22nd Street.
Lots 321 through 341, odd numbers inclusive, Bay Front Division, West 23rd Street.
Lots 344 through 352, even numbers inclusive, Bay Front Division, West 23rd Street.
Lots 347, 349 and 351, Bay Front Division, West 23rd Street.
Lots 289 through 303, odd numbers inclusive, Nobles Subdivision of Block 20, West 21st Street.
Block 18, Townsite of Superior, West 21st Street.
Southwest Quarter of Block Seventeen, Townsite of Superior, West 23rd Street.
Lots 343 through 351, odd numbers inclusive, Bay Front Division, West 24th Street.

(Doc. Nos. 505366, 513195, 514949, 520340 and 528677).
Parcel No. 01-801-03339-00.

TRACT C:

Blocks 24, 26, 28 and 30, Townsite of Superior, West 23rd Street;
Blocks 22, 23, 24, 25, 26, 27, 28, 29 and 30, Townsite of Superior, West 25th Street;
Block 32, Townsite of Superior, West 26th Street;
Blocks 23, 24, 25, 26, 27, 28, 29, 30, 31 and 32, Townsite of Superior, West 27th Street, together with that part of West 27th Street which accrued thereto by reason of the vacation thereof.
Blocks 23, 24, 25, 26, 27, 28, 29, 30 and 31, Townsite of Superior, West 29th Street, together with that part of West 29th Street which accrued thereto by reason of the vacation thereof, except those parts of Blocks 30 and 31 lying East of the East line of the Wisconsin Central Railway Company Right-of-Way.

(Doc. Nos. 453215, 405966 and 458930).
Parcel No. 02-802-00872-00.

Blocks 15, 16, 18, and 20, Townsite of Superior, West 23rd Street.
The North Half and the Southeast Quarter of Block 17, Townsite of Superior, West 23rd Street.
Blocks 19 and 22, Townsite of Superior, West 23rd Street, except Lots 314, 316, 318 and 320, Bay Front Division, West 22nd Street, and Lots 343 through 352, inclusive, Bay Front Division.
Blocks 13, 14, 15, 16, 17, 18, 19, 20, 21 and 22, Townsite of Superior, West 25th Street.
Blocks 13, 14, 15, 16, 17, 18, 19, 20, 21 and 22, Townsite of Superior, West 27th Street.
Blocks 13, 15, 17, 19 and 21, Townsite of Superior, West 29th Street.
Together with that part of the streets and avenues which accrued thereto by reason of the vacation thereof.

(Doc. Nos. 405966 and 453215).
Parcel No. 01-801-03339-00.

TRACT D:

Lots 354 through 384, even numbers inclusive, Bay Front Division, West 23rd Street. (Doc. No. 453215).

Parcel No. 02-802-00872-00.

Lots 330 through 342, even numbers inclusive, Bay Front Division, West 23rd Street.
Lots 337, 339 and 341, Bay Front Division, West 24th Street.

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(Doc. No. 453215).
Parcel No. 01-801-03339-00.

TRACT E:

Lot 386, Bay Front Division, West 22nd Street. (Doc. No. 315814).

Parcel No. 02-802-00872-00.

TRACT F:

Block 23, Townsite of Superior, West 23rd Street (V 143 P 609).

Parcel No. 02-802-00872-00.

TRACT G:

That certain triangular shaped tract of land described last in deed dated August 30, 1957, from Northwestern Improvement Company to Northern Pacific Railway Company recorded January 2, 1958, in Book 254, Page 427, records of Douglas County, Wisconsin, said tract being described in said deed for reference as follows:

"A triangle of land comprising all of the Northwest Quarter Southwest Quarter (NW 1/4SW 1/4) of Section 36, Township 49 North, Range 14 West, Fourth Principal Meridian, which is situated Northwesterly of the right of way of the Northern Pacific Railway Company, being the same premises described as Parcel No. 1 in deeds recorded in Book 109 of Deeds on Pages 526 and 528, as Document Nos. 186157 and 186158 respectively, records of said county." (Document No. 840739)

Parcel No. 08-808-10047-00.

TRACT H:

The Southeast Quarter of Block 30 on West Nineteenth Street, Townsite of Superior, Douglas County, Wisconsin. (Document No. 840739)

Parcel No. 02-802-00830-00.

TRACT I:

North Half (N 1/2) of Fractional Block Thirteen (13), West Thirty-fifth (35th) Street, Townsite of Superior, according to the recorded plat or plats thereof on file and of record in the Office of the Register of Deeds in and for Douglas County, Wisconsin; together with that part of West 34th Street which accrued thereto by reason of the vacation thereof.

Block 18, West 21st Street, Townsite of Superior, Douglas County, Wisconsin.

(Doc. Nos. 522304, 528677 & 777319).
Parcel Nos. 08-808-09743-00 & 01-801-03304-00.

TRACT J:

The Southwest Quarter (SW 1/4) of Block Twenty-five (25), Townsite of Superior West 31st Street, according to the recorded plat or plats thereof on file and of record in the Office of the Register of Deeds in and for Douglas County, Wisconsin.

The Southeast Quarter (SE 1/4) of Block Fifteen (15), Townsite of Superior West 37th Street, according to the recorded plat or plats thereof on file and of record in the Office of the Register of Deeds in and for Douglas County, Wisconsin.

The Southeasterly One Hundred Seventy-five feet (SEly 175') of the Southwesterly Half (SWly 1/2) of Block Twenty (20), West Eleventh Street, Township of Superior (Southwestern Division), in the City of Superior, Douglas County, Wisconsin.

The Northwesterly One Hundred Twenty-five feet (NWly 125') of the Southwesterly One-Half (SWly 1/2) of Block Twenty (20), West Eleventh Street, Townsite of Superior, in the City of Superior, Douglas County, Wisconsin, being that part of said Block 20 which is bound on the Southwest by West Twelfth Street (now East Twelfth Street); on the Northeast by a line running midway between and parallel with West Eleventh Street and West Twelfth Street (now East Eleventh and Twelfth Streets); on the Northwest by Nettleton Avenue (now Twenty-first Avenue East); and the Southeast by a line One Hundred Twenty-five feet (125') Southeasterly from, and parallel to the Northwesterly boundary of Block 20.

The Southerly One Hundred feet (Sly 100') of Northwesterly Two Hundred Twenty-five feet (NWly 225') of Southwesterly one-half (SWly 1/2) of Block Twenty (20), on West Eleventh Street, Townsite of Superior, in the City of Superior, Douglas County, Wisconsin.

Lots 450 through 480, Even Numbers inclusive, Subdivision of North 1/2 & SE 1/4 Block 30 on West 15th Street, Lots on West 15th Street, Douglas County, Wisconsin.

Lots 449 through 463, Odd Numbers inclusive, Subdivision of North 1/2 & SE 1/4 Block 30 on West 15th Street, Lots on West 16th Street, Douglas County, Wisconsin.

Lots 386 through 416 Even Numbers inclusive, Chrisfield Johnson's Subdivision of Block 26, West 17th Street, Douglas County, Wisconsin.

Lots 385 through 415 Odd Numbers inclusive, Chrisfield Johnson's Subdivision of Block 26, West 17th Street, Douglas County, Wisconsin.

Lots 226 through 256, Even Numbers inclusive, West 17th Street, Subdivision of Block 16 West 17th Street, Douglas County, Wisconsin.

Lots 225 through 255, Odd Numbers inclusive, Southwest 18th Street, Subdivision of Block 16 West 17th Street, Douglas County, Wisconsin.

The Northeast Quarter (NE 1/4) and the East Half of the East Half of the Northwest Quarter (E 1/2 E 1/2 NW 1/4), Block Seventeen (17), West Fifteenth Street, in Townsite of Superior, City of Superior, Douglas County, Wisconsin.

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The West Half of the East Half of the Northwest Quarter (W 1/2 of E 1/2 of NW 1/4) of Block Seventeen (17), West Fifteenth Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin.

The West Half of the Northwest Quarter (W 1/2 NW 1/4) of Block Seventeen (17), West Fifteenth Street, Townsite of Superior, in the City of Superior, Douglas County, Wisconsin.

The East 1/4 of SE 1/4, Block 17, Townsite of Superior West 15th Street, Douglas County, Wisconsin.

The West 3/4 of SE 1/4, Block 17, Townsite of Superior West 15th Street, Douglas County, Wisconsin.

The North Half (N 1/2) of Block Seventeen (17), West Thirteenth Street, Townsite of Superior, (Superior Division), in City of Superior, Douglas County, Wisconsin.

The South Half (S 1/2) of Block Seventeen (17), West Thirteenth Street, Townsite of Superior, (Superior Division), in City of Superior, Douglas County, Wisconsin.

Fractional Lots Two Hundred Fifty-seven (257), Two Hundred Fifty-nine (259), Two Hundred Sixty-one (261), Two Hundred Sixty-three (263) and Two Hundred Sixty-five (265), West Twelfth Street, Subdivision of Block Eighteen (18), West Eleventh Street, in Townsite of Superior, City of Superior, Douglas County, Wisconsin, together with that part of the West Half (W 1/2) of vacated Villard Street abutting said lots.

All of Block Sixteen (16), on West Twenty-First Street, in the City of Superior, Douglas County, Wisconsin.

All of Block Thirteen (13), excluding right of way, West 21st Street, Townsite of Superior, Douglas County, Wisconsin.

The Northwest Quarter (NW 1/4) and the Southwest Quarter (SW 1/4) of Block Twenty (20), Townsite of Superior West 16th Street, Douglas County, Wisconsin.

The West Half of the West Half of the Northwest Quarter (W 1/2 W 1/2 NW 1/4) of Block Nineteen (19), West Thirteenth Street, Townsite of Superior, in the City of Superior, Douglas County, Wisconsin.

The Southeast Quarter (SE 1/4) of Block Nineteen (19), West Thirteenth Street, Townsite of Superior, (Southwestern Division), in the City of Superior, Douglas County, Wisconsin.

The East One Hundred Twenty feet (E 120') of the Northeast Quarter (NE 1/4) of Block Nineteen (19), West Thirteenth Street, Townsite of Superior, (Southwestern Division), in the City of Superior, Douglas County, Wisconsin.

The Southwest Quarter (SW 1/4) of Block Nineteen (19), West 13th Street, Townsite of Superior, City of Superior, County of Douglas, Wisconsin.

The East Three-Fourths of the Northwest Quarter (E 3/4 NW 1/4), except the East Half of the East Half (E 1/2 E 1/2), Block Nineteen (19), West 13th Street, Townsite of Superior, City of Superior, County of Douglas, Wisconsin.

The East Half of the East Half of the Northwest Quarter (E 1/2 E 1/2 NW 1/4) and the West Eighty feet (W 80') of the Northeast Quarter (NE 1/4) of Block Nineteen (19), West Thirteenth Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin.

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The East One-half (E 1/2) of the Northeast Quarter (NE 1/4) and the East One-half (E 1/2) of the Southeast Quarter (SE 1/4) of Block Nineteen (19), West Fifteenth Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin.

The NW 1/4 & W 1/2 of NE 1/4 and W 1/4 of SE 1/4 & E 3/4 of SW 1/4, Block 19, Townsite of Superior of Superior West 15th Street, Douglas County, Wisconsin.

The W 1/2 of the W 1/4 of the SW 1/4 of Block 19, Townsite of Superior West 15th Street, Douglas County, Wisconsin.

Lots 290 through 320, Even Numbers inclusive, West 17th Street, Subdivision of Block 20 West 17th Street, Douglas County, Wisconsin.

Lots 289 through 319, Odd Numbers inclusive, West 18th Street, Subdivision of Block 20 West 17th Street, Douglas County, Wisconsin.

Lots 258 through 288, Even Numbers inclusive, West 20th Street, AND Lots 257 through 287, Odd Numbers inclusive, West 21st Street, all in the Subdivision of Block 17, on West 21st Street, Townsite of Superior, Douglas County, Wisconsin.

Lots 273 through 287, Odd Numbers inclusive, West Fifteenth Street, in Plat of McBean Blocks, being a Subdivision of the Southwest Quarter (SW 1/4) of Block Seventeen (17), West Fifteenth Street, Townsite of Superior, (Southwestern Division), in the City of Superior, Douglas County, Wisconsin.

Lots 258 and 260, Block 18, 15th Street, McBean Blocks, Douglas County, Wisconsin.

Lots 299, 301 & 303, Block 20, 14th Street & alley vacated, McBean Blocks, West 13th Street, Douglas County, Wisconsin.

Lots 393 through 399, Odd Numbers inclusive, Block 25, McBean Blocks, West Thirteenth Street, City of Superior, Douglas County, Wisconsin.

Lots 281 through 287, Odd Numbers inclusive, on West Twelfth Street, in Subdivision of Block Eighteen, West Eleventh Street, Townsite of Superior (Southwestern Division), City of Superior, Douglas County, Wisconsin.

Lots 267 through 279, Odd Numbers inclusive, on West Twelfth Street, in Subdivision of Block Eighteen (18), West Eleventh Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin.

Block Thirteen (13), West Twenty-third Street, except right-of-way, in Townsite of Superior, City of Superior, Douglas County, Wisconsin, together with that part of the West 23rd Street which accrued thereto by reason of vacation thereof.

E 3/4 of Block 12 on West 37th Street, Townsite of Superior, Douglas County, Wisconsin, except right of way.

E 3/4 of Block 11 on West 39th Street, Townsite of Superior, Douglas County, Wisconsin, except right of way.

E 3/4 of Block 12 on West 39th Street, Townsite of Superior, Douglas County, Wisconsin, except right of way.

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NE 1/4 of Block 12 on West 43rd Street, Townsite of Superior, Douglas County, Wisconsin.

That part of Block 10, West 41st Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin, lying north of the following described line: Beginning at the most northerly corner of Fractional Block 8, West 41st Street, Townsite of Superior, thence westerly and parallel with the south line of the Southeast Quarter of Section 35, Township Forty-Nine North, Range 14 West to the northeasterly line of Fractional Block 9, West 43rd Street, Townsite of Superior, and said line there terminating.

That part of Block 11, West 41st Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin lying East of the East right of way line of the former Soo Line Railroad.

Lots 225 through 255, Odd Numbers inclusive, Lots on 16th Street, in the Subdivision of Block 16 on West 15th Street, in the City of Superior, Douglas County, Wisconsin.

Lots 226 through 256, Even Numbers inclusive, Lots on West 15th Street, in the Subdivision of Block 16 on West 15th Street, in the City of Superior, Douglas County, Wisconsin.

(Doc. Nos. 624023, 633082, 725853, 766342, 794160, 795896, 799526, 801654, 802205, 803377, 803498, 803978, 803979, 803733, 803734, 804451, 804524, 804525, 804706, 806050, 806592, 806593, 806973, 809578, 808862, 809996, 810193, 813026, 828601, 829415 & 829526).

Parcel Nos. 02-802-00947-00, 01-801-02976-01, 01-801-02976-03, 01-801-02976-05, 02-802-06614-00, 02-802-01293-00, 01-801-03987-00, 01-801-03125-00, 01-801-03131-00, 01-801-03129-00, 01-801-03128-00, 01-801-03123-00, 01-801-03042-00, 01-801-03046-00, 01-801-03805-00, 01-801-03302-00, 01-801-03294-00, 01-801-03055-00, 01-801-03047-00, 01-801-03047-01, 01-801-03047-02, 01-801-03047-03, 01-801-03047-04, 01-801-03048-00, 01-801-03136-00, 01-801-03145-00, 01-801-04051-00, 01-801-04083-00, 01-801-04706-00, 01-801-04713-00, 01-801-04679-00, 02-802-03804-00, 01-801-03807-00, 01-801-03806-00, 01-801-03326-00, 08-808-09780-00, 08-808-09821-00, 08-808-09823-00, 08-808-09892-00, 08-808-09854-00, 08-808-09856-00, 01-801-03971-00 & 01-801-03955-00.

TRACT K:

That part of the West Half (W 1/2) of Section Thirty-six (36), Township forty-nine (49) North, Range Fourteen (14) West, Douglas County, Wisconsin, more fully described as follows: Commencing at the North quarter corner of said Section 36, Township 49 North, Range 14 West, thence due south along the north-south quarter line, said quarter line being the center line of Bardon Avenue, a distance of 1,456.64 feet to the south property line of 26th Avenue extended, thence south 48 degrees and 36 minutes west along the south property line of 26th Avenue, a distance of 481 feet to the point of beginning, thence continuing in the same straight line a distance of 1,323.53 feet to a point, thence south 89 degrees and 46 minutes west a distance of 151.91 feet to a point, thence South 48 degrees 36 minutes West a distance of 162.43 feet to a point, thence South 41 degrees 24 minutes east a distance of 751 feet to a point, thence north 48 degrees and 36 minutes East a distance of 1,463.36 feet to a point on the west line of Bardon Avenue a distance of 207.10 feet to a point, thence north 41 degrees and 24 minutes west a distance of 495.66 feet to the point of beginning.

(Doc. No. 459590 V 271 P 358)

Parcel No. 01-801-05132-00.

DOCUMENT NO.

AFFIDAVIT OF CORRECTION

DOCUMENT# 890824

Recorded or filed on 08-03-2017 at 02:22 PM TRACY A MIDDLETON DOUGLAS COUNTY RECORDER Fee Amount: \$30.00 FEE EXEMPT: 3 Total Pages: 15 ELECTRONICALLY RECORDED DOCUMENT

This document is exempt from transfer fee pursuant to Wis. Stats. 77.23(3): correction of a document previously recorded.

AFFIANT, John A. Moore, on behalf of the undersigned Murphy Oil USA, Inc., a Delaware corporation, hereby swears or affirms that a certain document titled Special Warranty Deed recorded on the 4th day of October, 2011, as Document Number 845763 which was recorded in Douglas County, State of Wisconsin, contained the following error (if more space is needed, please attach addendum):

The legal description set forth in Attachment A of said document is incomplete.

AFFIANT makes this Affidavit for the purpose of correcting the above document as follows (if more space is needed, please attach addendum):

RETURN TO Danielle M. Bergner, Esq. Michael Best & Friedrich LLP 100 East Wisconsin Ave., Ste. 3300 Milwaukee, WI 53202

The legal descriptions set forth on Exhibit A attached hereto and made a part hereof are hereby incorporated and made part of Attachment A to the above-referenced Special Warranty Deed.

See Attached Exhibit A Parcel Identification Number (PIN)

AFFIANT is the (check one):

- Owner of the property described in the document being corrected. Other (explain: Affiant is the authorized representative of the Grantor named in the above-referenced deed).

The original document (in part or whole) is is not attached to this Affidavit (if original document is not attached, please attach legal description and names of grantors and grantees).

MURPHY OIL USA, INC. Signed: John A. Moore Name/Title: John A. Moore, Sr. Vice President & General Counsel

State of Arkansas) County of Union) ss.

Subscribed and sworn to (or affirmed) before me this 1st day of July, 2017.

Tammy Taylor

TAMMY TAYLOR UNION COUNTY NOTARY PUBLIC - ARKANSAS My Commission Expires September 07, 2024 Commission No. 12400715

Grantor: Murphy Oil USA, INC., a Delaware corporation Grantee: Calumet Superior, LLC, a Delaware corporation

Notary Public, State of Arkansas My Commission (expires) (is): 09/07/2024

THIS INSTRUMENT WAS DRAFTED BY: Danielle M. Berger, Esq. Michael Best & Friedrich LLP

This instrument is not (check one) a conveyance of real property as per s. 77.21(1) Wisconsin Statutes. (A Wisconsin Real Estate Transfer Return is required for instruments that do convey real property).

EXHIBIT A
LEGAL DESCRIPTIONS INCORPORATED AND MADE PART OF
ATTACHMENT A TO SPECIAL WARRANTY DEED DOCUMENT NO. 845763

Parcel 1:

Block Thirteen (13) on West 31st Street, Block Fourteen (14) on West 31st Street, Block Thirteen (13) on West 33rd Street, Fractional Block Fourteen (14) on West 33rd Street, Block Fourteen (14) on West 29th Street, Subject to Northern Pacific Railway Company easement for right-of-way on Newton Avenue, Block Sixteen (16) on West 29th Street, Block Eighteen (18) on West 29th Street, Block Twenty (20) on West 29th Street and Block Twenty-two (22) on West 29th Street, all in the Townsite of Superior, now City of Superior, Douglas County, Wisconsin, together with vacated West 30th, 31st, 32nd, 33rd, and 34th streets and vacated 21st, 22nd and 23rd avenues East, lying East of Hill Avenue.

Parcel 2:

Blocks Fifteen (15), Sixteen (16) and Seventeen (17) of West 31st Street, that part lying East of the East line of Hill Avenue of Blocks, Eighteen (18), Nineteen (19) and Twenty (20) on West 31st Street, Block Fifteen (15) on West 33rd Street and that part lying East of the East line of Hill Avenue of Blocks Sixteen (16) and Seventeen (17) on West 33rd Street, all in the Townsite of Superior, Now City of Superior, Douglas County, Wisconsin, together with the vacated West 30th, 31st, 32nd, 33rd, and 34th streets and Vacated 21st, 22nd and 23rd avenues East, lying East of Hill Avenue.

Parcel No. 08-808-09689-00

Property Address: 4210 Hill Avenue, Superior, WI

AND

Block 30 on W 19th Street, EXCEPT the Southeast Quarter (SE1/4), the West One-half of Block 23 on W 19th Street, Northwest Quarter (NW1/4) of Block 25 on W 21st Street, and all of Blocks 25, 26, 27, 28, 29, 31 and 32 on W 19th Street and Blocks 27 and 29 on West 21st Street, all in the Townsite of Superior, City of Superior, Douglas County, Wisconsin.

Part of Parcel No. 02-802-00815-00

Property Address: Vacant Land on Hill Avenue

845763

SPECIAL WARRANTY DEED

Document Number

Document Name

DOCUMENT# 845763

Recorded or Filed on
October 04, 2011 9:15 AM
GAYLE I. WAHNER
DOUGLAS COUNTY RECORDER
SUPERIOR, WI 54880-2769
Fee Amount: \$30.00
Transfer Fee: \$47,052.00
Total Pages 13

THIS DEED, made between MURPHY OIL USA, INC., a Delaware corporation, as to Tracts A, D, E, F, G, H and J; MURPHY OIL USA, INC., a Delaware corporation, f/k/a New Murphy Oil USA, Inc., f/k/a Murphy Oil Corporation, as to Tracts B and I; and MURPHY OIL USA, INC., a Delaware corporation, f/k/a Murphy Corporation, a Louisiana corporation, as to Tract C and Tract K ("Grantor," whether one or more), and CALUMET SUPERIOR, LLC, a Delaware limited liability company ("Grantee"),

for and in consideration of good and valuable consideration paid by Grantee, Grantor hereby grants, sells and conveys to Grantee the following described real estate, together with the rents, profits, fixtures, improvements, structures and other appurtenant interests constituting real property, located in Douglas County, State of Wisconsin ("Property"); subject, however, to (i) all easements, rights-of-way, covenants, restrictions, agreements, claims or other matters, rights or encumbrances of record (or referred to or described or discoverable in recorded documents or otherwise known to Grantee), (ii) liens for governmental taxes, assessments or charges, (iii) public or private rights used, laid out or dedicated for road or highway purposes, (iv) rights of owners and governmental regulation of pipelines through public rights of way or privately owned land, respectively, (v) rights of easement, or any encroachments, in and to all railroad switches, sidetracks, spur tracks or similar rights of way, and (vi) any or all reservations of minerals and mineral rights (collectively, "Permitted Encumbrances").

See Attachment A - Legal Description.

Together with all of Grantor's rights and interests in and to all pipelines serving the Property described in Attachment A and all easements and rights appurtenant thereto, and all interest of Grantor, being no less than a 12% interest, in a 7.5 mile 10" gas main extending from the Great Lakes Gas Transmission mainline to a delivery point near the Superior Refinery as more fully described in the Construction, Ownership & Operating Agreement for a Natural Gas Main in Superior, WI, dated as of November 1, 2000, between Superior Water Light & Power Company and Murphy Oil USA, Inc.

Grantor does hereby bind Grantor and Grantor's successors and assigns to forever warrant and defend that the title to the Property is good, indefeasible, in fee simple and free and clear of all encumbrances arising by, through, or under Grantor, except for Permitted Encumbrances.

Dated September 30, 2011

MURPHY OIL USA, INC.

By: [Signature] [(SEAL)]

Name: Thomas McKinlay

Title: President

ACKNOWLEDGMENT

STATE OF ARKANSAS

Union COUNTY

Personally came before me on September 30, 2011

the above-named Thomas McKinlay

to me known to be the person(s) who executed the foregoing instrument and acknowledged the same.

* [Signature]

Notary Public, State of ARKANSAS

My Commission (is permanent) (expires: 2-1-2013)

THIS INSTRUMENT DRAFTED BY:

Bryan C. Esch, Esq.

DeWitt Ross & Stevens S.C.

Recording Area

Name and Return Address

Tamarah R. Feigl, Esq.
Fulbright & Jaworski L.L.P.

Fulbright Tower

1301 McKinney, Suite 5100

Houston, TX 77010-3095

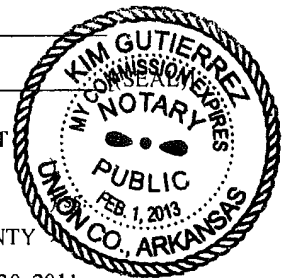
First Am.
30ck

See Attachment "A"

Parcel Identification Number (PIN)

This is not homestead property.

(is) (is not)



845763

**Attachment A
to Special Warranty Deed
from Murphy Oil USA, Inc. to Calumet Superior, LLC
dated September 30, 2011**

Legal Description

TRACT A:

Lots 354 through 368, even numbers inclusive, West 18th Street, Bay Front Division. (Doc. No. 805831).

Parcel No. 02-802-01033-00.

Lots 322 through 352, even numbers inclusive, West 19th Street, Bay Front Division. (Doc. No. 766342).

Parcel No. 01-801-04149-00.

Fractional Lots 345 through 351, odd numbers inclusive, West 19th Street, Bay Front Division. (Doc. No. 806050).

Parcel No. 01-801-04161-00.

Lots 353 through 367, odd numbers inclusive, on West 19th Street, Bay Front Division. (Doc. No. 805831).

Parcel No. 02-202-01041-00.

Lots 354 through 384, even numbers inclusive, on West 19th Street, Bay Front Division. (Doc. Nos. 766342 & 805831).

Parcel No. 02-202-01054-00.

Lots 290 through 320, even numbers inclusive, West 20th Street, Bay Front Division. (Doc. No. 766342).

Parcel No. 01-801-04169-00.

Lots 321 through 352, inclusive, West 20th Street, Bay Front Division. (Doc. Nos. 766342 & 806050).

Parcel No. 01-801-04185-00.

Lots 386 through 400, even numbers inclusive, West 20th Street, Bay Front Division. (Doc. Nos. 805831, 806050 & 807145).

Parcel No. 02-802-01099-00.

Lots 353 through 384, inclusive, West 20th Street, Bay Front Division. (Doc. Nos. 766342 & 806050).

Parcel No. 02-802-01066-00.

Lots 289 through 319, odd numbers inclusive, West 21st Street, Bay Front Division. (Doc. Nos. 766342 & 805069).

Parcel No. 01-801-04218-00.

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Lots 321 through 351, odd numbers inclusive, West 21st Street, Bay Front Division. (Doc. Nos. 766342 & 800813).

Parcel No. 01-801-04250-00.

Lots 353 through 415, odd numbers inclusive, West 21st Street, Bay Front Division. (Doc. No. 766342).

Parcel No. 02-802-01105-00.

Lots 385 through 416, inclusive, Herrick's Subdivision of Block 25, West 15th Street. (Doc. No. 794160).

Parcel No. 02-802-02810-00.

Lots 321 to 351, odd numbers inclusive, Linler Place, West 15th Street. (Doc. No. 794160).

Parcel No. 01-801-04630-00.

Lots 289 through 293, Block 20, McBean Blocks, West Thirteenth Street, Lots on West Fourteenth Street; together with that part of the alley which accrued thereto by reason of the vacation thereof. (Doc. Nos. 766592 & 802863).

Parcel No. 01-801-04674-00.

Lots 338 through 352, even numbers inclusive, Block 21, 16th Street, McBean Blocks West 17th Street. (Doc. No. 794160).

Parcel No. 01-801-04738-00.

Lots 1 through 18, inclusive, and Lots 20 through 26, inclusive, Block 5; Lots 1, 2 and 3 and Lots 21 through 26, inclusive, Block 6, Lots 15, 16, 17, 18, and 19, Block 4, all in Dudley Park Addition to South Superior; together with that part of the alleys, Caitlin Avenue, Fisher Avenue & Fifty-Third Street which accrued thereto by reason of the vacation thereof. (Doc. Nos. 835187 & 837523).

Parcel Nos. 08-808-03384-00, 08-808-03409-00, 08-808-03372-00 & 08-808-03412-00.

Lots 23, 24, 25 and 26, Block 5, Lots 2 through 9, inclusive, Block 6, all in Harriet Place Addition to South Superior; together with that part of Caitlin Avenue and Fifty-Third Street which accrued thereto by reason of the vacation thereof. (Doc. Nos. 835187 & 837523).

Parcel Nos. 08-808-04104-00 & 08-808-04109-00.

Lots 329 through 351, odd numbers inclusive, West 13th Street, Burhan's Subdivision of Blocks 21 & 22, West 13th Street.

Lots 322 through 352, even numbers inclusive, West 13th Street, Burhan's Subdivision of Blocks 21 & 22, West 13th Street.

Lots 321 through 351, odd numbers inclusive, West 14th Street, Burhan's Subdivision of Blocks 21 & 22, West 13th Street.

Lots 322 through 330, even numbers inclusive, West 12th Street, Burhan's Subdivision of Blocks 21 & 22, West 13th Street.

Lots 321 through 327, odd numbers inclusive, West 13th Street, Burhan's Subdivision of Blocks 21 & 22, West 13th Street.

Together with that part of 12th Street which accrued thereto by reason of the vacation thereof.

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(Doc. Nos. 806050, 806973 and 723202).

Parcel Nos. 01-801-04426-00, 01-801-04442-00, 01-801-04410-00, 01-801-04397-00 & 01-801-04412-00.

Lots 225 through 271, odd numbers inclusive, Frey's Subdivision of Block 16 and of the Southeasterly One Half of Block 18, on West 19th Street. (Doc. No. 766342).

Parcel No. 01-801-04551-00.

Lots 226 through 272, even numbers inclusive, Frey's Subdivision of Block 16 and of the Southeasterly One Half of Block 18, on West 19th Street. (Doc. No. 766342).

Parcel No. 01-801-04528-00.

Lots 273 through 287, odd numbers inclusive, Hanson and Streatfield's Subdivision of Block 18 West Thirteenth Street, Lots on West Fourteenth Street. (Doc. No. 803730).

Parcel No. 01-801-04593-00.

Lots 257 through 265, inclusive, and Lots 267 through 271, odd numbers inclusive, Hanson and Streatfield's Subdivision of Block 18 West Thirteenth Street, Lots on West Fourteenth Street. (Doc. No. 804858).

Parcel Nos. 01-801-04583-00 and 01-801-04566-00.

Blocks 17, 19 and 22 and the Northeast Quarter and the South Half of Block 21, Townsite of Superior West 17th Street. (Doc. No. 794160).

Parcel No. 01-801-03209-00.

The Northeast Quarter of Section 12, Township 48 North, Range 14 West, except that part thereof lying North of County Highway A, and except Railroad Rights of Way, and except the following described property: That part of the Southeast Quarter of the Northeast Quarter of Section 12, Township 48 North, Range 14 West, described as follows: Beginning at the Southeast corner of the Northeast Quarter of Section 12; thence North 0 degrees 35 minutes 7 seconds East, along the East line of said Northeast Quarter, a distance of 362.02 feet; thence South 39 degrees 47 minutes 53 seconds West, a distance of 466.60 feet to the South line of said Northeast Quarter; thence South 89 degrees 19 minutes 05 seconds East, along said South line, a distance of 294.98 feet to the point of beginning; and except the following described property: That part of the Southeast Quarter of the Northeast Quarter of Section 12, Township 48 North, Range 14 West, described as follows: Commencing at the Southeast corner of the Northeast Quarter of Section 12, thence North 0 degrees 35 minutes 07 seconds East, along the East line of said Northeast Quarter, a distance of 362.02 feet to the point of beginning; thence continuing North 0 degrees 35 minutes 07 seconds East, along said East line, a distance of 656.36 feet; thence South 34 degrees 03 minutes 51 seconds West a distance of 1219.58 feet to the South line of said Northeast Quarter; thence South 89 degrees 19 minutes 05 seconds East, along said South line, a distance of 377.78 feet; thence North 39 degrees 47 minutes 53 seconds East a distance of 466.60 feet to the point of beginning. (Doc. No. 832177)

Parcel Nos. TS-030-01326-00, TS-030-01329-00, TS-030-01327-00 & TS-030-01328-00.

Lots 14 through 26, inclusive, Block 5, Lots 1 through 17, inclusive, Block 6, Lots 5 through 8, inclusive, Block 7, Lots 1 through 8, inclusive, Block 8, all of Block 9, all in Short Line Addition to South Superior;

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together with that part of the alleys, Fifty-Fourth Street, Fifty-Fifth Street, Clough Avenue and Weeks Avenue which accrued thereto by reason of the vacation thereof. (Doc. Nos. 835187 and 837523).

Parcel Nos. 08-808-07179-00, 08-808-07197-00, 08-808-07214-00, 08-808-07218-00 & 08-808-07226-00.

Lots 481 through 512, inclusive, Lots on West 20th and West 21st Streets, in W.H. Webb's Subdivision of Block Thirty-one (31) on West 21st Street. (Doc. No. 805831).

Parcel No. 02-802-06749-00.

The Southeast Quarter of the Northeast Quarter of the Northwest Quarter of Section 2, Township 48 North, Range 14 West. (Doc. No. 835187).

Parcel No. 08-808-09932-00.

Block 13, Townsite of Superior West 13th Street, City of Superior. (Doc. No. 794162).

Parcel No. 01-801-03032-00.

Lots 258 through 288, even numbers inclusive, and Lots 257 through 287, odd numbers inclusive, SW 17th Street, Subdivision of Block 18 West 17th Street, City of Superior. (Doc. No. 794160).

Parcel No. 01-801-04019-00.

Block 23, West 13th Street, Townsite of Superior. (Doc. Nos. 803374, 804371 & 806050).

Parcel Nos. 02-802-00698-01, 02-802-00698-00, 02-802-00699-00, 02-802-00734-00, 02-802-00736-00 and 02-802-00700-00.

Lots 300, 302, 304, 1301, 1303 and 1305, Subdivision of Part of the Northeast Quarter of Block 20, West Thirteenth Street, Lots on Becker Avenue, City of Superior; together with the alley which accrued thereto by reason of the vacation thereof. (Doc. Nos. 802863 and 806050)

Parcel Nos. 01-801-03856-00 & 01-801-03852-00.

All of Block 31 on West 14th Street, except right of way for Bardon Avenue, Townsite of Superior. (Doc. No. 801654).

Parcel No. 02-802-00735-00.

Lots 225 through 255, odd numbers inclusive, in the Subdivision of Blocks 16 and 17, West 12th Street, Townsite of Superior. (Doc. Nos. 808863, 812595 & 819919).

Parcel Nos. 01-801-03808-00, 01-801-03814-00 & 01-801-03815-00.

The Southeast Quarter and the Southwest Quarter and the East Half of the Northwest Quarter and the West 150 feet of the Northeast Quarter, Block 18, Townsite of Superior, West 15th Street.

The West Half of the Northwest Quarter, Block 18, West Fifteenth Street, Townsite of Superior. The Westerly Quarter of the Northeast Quarter of Block 20, Townsite of Superior, West Fifteenth Street.

The East 3/8ths of the Northeast Quarter and the East 2/5ths of the West 5/8ths of the Northeast Quarter, Block 20, West Fifteenth Street, Townsite of Superior.

The East 25 feet of the West 3/8ths of the Northeast Quarter of Block 20, West Fifteenth Street, Townsite of Superior.

The Northwest Quarter, Block 20, Townsite of Superior, West Fifteenth Street.
The Southwest Quarter, Block 20, Townsite of Superior, West Fifteenth Street.
The Southeast Quarter, Block 20, Townsite of Superior, West Fifteenth Street.
The North Half of Block 21, Townsite of Superior, West Fifteenth Street.
Block 22, Townsite of Superior, West Fifteenth Street.

(Doc. Nos. 794160 and 801793)
Parcel Nos. 01-801-03133-00, 01-801-03147-00 & 01-801-03148-00.

A certain piece of land located in the Northeast Quarter of Block Twenty, on West Thirteenth Street, in Townsite of Superior, City of Superior, Douglas County, Wisconsin, described as follows: Beginning at a point on the Westerly side of Becker Avenue Seventy-eight feet Southerly from the Northeasterly corner of the Northeasterly Quarter of Block 20 on West Thirteenth Street; thence running Southerly along Becker Avenue Fifty feet to the Southeasterly corner of said Quarter Block; thence Westerly along the Southerly line of said Block and at right angles to Becker Avenue One Hundred Seventeen feet; thence Northerly and parallel to Becker Avenue Fifty feet; thence Easterly and parallel to West Thirteenth Street One Hundred Seventeen feet to the place of beginning; together with that portion of vacated alley abutting Block.

(Doc. Nos. 766592 and 802863)
Parcel No. 01-801-03855-00.

Block 23 & East 14th Street Vacated, Townsite of Superior, West 15th Street.
Block 24, Townsite of Superior, West 15th Street.
Block 26, Townsite of Superior, West 15th Street.
Block 27 & Bardon Avenue Vacated, Townsite of Superior, West 15th Street.
Block 28 & Bardon Avenue Vacated, Townsite of Superior, West 15th Street.
Block 29, Townsite of Superior, West 15th Street.
SW 1/4, Block 30, Townsite of Superior, West 15th Street.
Fractional Block 31, Except R/W, Townsite of Superior, West 15th Street.
Block 32, Except R/W, Townsite of Superior, West 15th Street.
Block 34, Except R/W, Townsite of Superior, West 15th Street.

(Doc. Nos. 794160, 801654 & Volume 508, Page 705).
Parcel No. 02-802-00736-00.

The Southwest Quarter of Block 23 on West 17th Street, Townsite of Superior.
The Northwest Quarter of Block 24 on West 17th Street, Townsite of Superior.
Block 29 on West 17th Street, Townsite of Superior.
The South Half of Block 30 on West 17th Street, Townsite of Superior.
The Northwest Quarter of Block 32 on West 17th Street, Townsite of Superior.
Block 36, except Railroad right of way and North 28th Street, on West 17th Street, Townsite of Superior.

(Doc. No. 801654)

The East Half of Block 23 on West 17th Street, Townsite of Superior.
The Northwest Quarter of Block 23 on West 17th Street, Townsite of Superior.
The West Half of the Northeast Quarter of Block 24 on West 17th Street, Townsite of Superior.
The East Half of the Northeast Quarter of Block 24 on West 17th Street, Townsite of Superior.
The South Half of Block 24 and Bardon Avenue Vacated on West 17th Street, Townsite of Superior.
Block 25 and Bardon Avenue Vacated on West 17th Street, Townsite of Superior.
Block 27 on West 17th Street, Townsite of Superior.

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The North Half, the Southeast Quarter and the East Half of the Southwest Quarter of Block 28 on West 17th Street, Townsite of Superior.

The West Half of the Southwest Quarter of Block 28 on West 17th Street, Townsite of Superior.

The Northwest Quarter of Block 30 on West 17th Street, Townsite of Superior.

The West Half of the Northeast Quarter of Block 30 on West 17th Street, Townsite of Superior.

The East Half of the Northeast Quarter of Block 30 on West 17th Street, Townsite of Superior.

Block 31 on West 17th Street, Townsite of Superior.

The Northeast Quarter of Block 32 on West 17th Street, Townsite of Superior.

The South Half of Block 32 on West 17th Street, Townsite of Superior.

The Fractional Block 33, except Right of Way, on West 17th Street, Townsite of Superior.

The Southwest Quarter and the Southeast Quarter of Block 34 on West 17th Street, Townsite of Superior.

The East Quarter of the Northwest Quarter of Block 34 on West 17th Street, Townsite of Superior.

The East 3/4 of the Northeast Quarter of Block 34 on West 17th Street, Townsite of Superior.

(Doc. No. 794160)

Parcel No. 02-802-00763-00.

Blocks 15, 17 and 19, Townsite of Superior on West 19th Street.

The West Half of Block 18, Townsite of Superior on West 19th Street.

The Fractional Blocks of 20 and 21, Townsite of Superior on West 19th Street.

Blocks 13 and 14, Townsite of Superior on West 19th Street.

(Doc. No. 766342)

Parcel No. 01-801-03246-00.

Lots 353, 355 and 371, Bay Front Division, West 23rd Street.

Lots 401 and 403, Bay Front Division, West 22nd Street.

Lots 380, 382 and 384, Bay Front Division, West 22nd Street.

(Doc. Nos. 624956, 603131, 630951 and 807780).

Parcel No. 02-802-00872-00.

TRACT B:

Lots 354 through 416, even numbers inclusive, West 21st Street, Bay Front Division. (Doc. No. 528677).

Parcel No. 02-802-01104-00.

Blocks 28, 30 and 32, Townsite of Superior, West 21st Street.

Blocks 25, 27, 29, 31 and 32, Townsite of Superior, West 23rd Street.

Lots 354 through 400, even numbers inclusive, Bay Front Division, West 21st Street.

Lots 353 through 383, odd numbers inclusive, Bay Front Division, West 22nd Avenue.

Lots 385 through 399, odd numbers inclusive, Bay Front Division, West 22nd Street.

Lots 405 through 415, odd numbers inclusive, Bay Front Division, West 22nd Street.

Lots 354 through 378, even numbers inclusive, Bay Front Division, West 22nd Street.

Lots 357 through 369, odd numbers inclusive and Lots 373 through 383, odd numbers inclusive, Bay Front Division, West 23rd Street.

(Doc. Nos. 505366, 518749 and 528677).

Parcel No. 02-802-00872-00.

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Lots 290 through 320, even numbers inclusive, Bay Front Division, West 21st Street.
Lots 322 through 352, even numbers inclusive, Bay Front Division, West 21st Street.
Lots 305 through 351, odd numbers inclusive, Bay Front Division, West 22nd Street.
Lots 314 through 352, even numbers inclusive, Bay Front Division, West 22nd Street.
Lots 321 through 341, odd numbers inclusive, Bay Front Division, West 23rd Street.
Lots 344 through 352, even numbers inclusive, Bay Front Division, West 23rd Street.
Lots 347, 349 and 351, Bay Front Division, West 23rd Street.
Lots 289 through 303, odd numbers inclusive, Nobles Subdivision of Block 20, West 21st Street.
Block 18, Townsite of Superior, West 21st Street.
Southwest Quarter of Block Seventeen, Townsite of Superior, West 23rd Street.
Lots 343 through 351, odd numbers inclusive, Bay Front Division, West 24th Street.

(Doc. Nos. 505366, 513195, 514949, 520340 and 528677).
Parcel No. 01-801-03339-00.

TRACT C:

Blocks 24, 26, 28 and 30, Townsite of Superior, West 23rd Street;
Blocks 22, 23, 24, 25, 26, 27, 28, 29 and 30, Townsite of Superior, West 25th Street;
Block 32, Townsite of Superior, West 26th Street;
Blocks 23, 24, 25, 26, 27, 28, 29, 30, 31 and 32, Townsite of Superior, West 27th Street, together with that part of West 27th Street which accrued thereto by reason of the vacation thereof.
Blocks 23, 24, 25, 26, 27, 28, 29, 30 and 31, Townsite of Superior, West 29th Street, together with that part of West 29th Street which accrued thereto by reason of the vacation thereof, except those parts of Blocks 30 and 31 lying East of the East line of the Wisconsin Central Railway Company Right-of-Way.

(Doc. Nos. 453215, 405966 and 458930).
Parcel No. 02-802-00872-00.

Blocks 15, 16, 18, and 20, Townsite of Superior, West 23rd Street.
The North Half and the Southeast Quarter of Block 17, Townsite of Superior, West 23rd Street.
Blocks 19 and 22, Townsite of Superior, West 23rd Street, except Lots 314, 316, 318 and 320, Bay Front Division, West 22nd Street, and Lots 343 through 352, inclusive, Bay Front Division.
Blocks 13, 14, 15, 16, 17, 18, 19, 20, 21 and 22, Townsite of Superior, West 25th Street.
Blocks 13, 14, 15, 16, 17, 18, 19, 20, 21 and 22, Townsite of Superior, West 27th Street.
Blocks 13, 15, 17, 19 and 21, Townsite of Superior, West 29th Street.
Together with that part of the streets and avenues which accrued thereto by reason of the vacation thereof.

(Doc. Nos. 405966 and 453215).
Parcel No. 01-801-03339-00.

TRACT D:

Lots 354 through 384, even numbers inclusive, Bay Front Division, West 23rd Street. (Doc. No. 453215).

Parcel No. 02-802-00872-00.

Lots 330 through 342, even numbers inclusive, Bay Front Division, West 23rd Street.
Lots 337, 339 and 341, Bay Front Division, West 24th Street.

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(Doc. No. 453215).
Parcel No. 01-801-03339-00.

TRACT E:

Lot 386, Bay Front Division, West 22nd Street. (Doc. No. 315814).
Parcel No. 02-802-00872-00.

TRACT F:

Block 23, Townsite of Superior, West 23rd Street (V 143 P 609).
Parcel No. 02-802-00872-00.

TRACT G:

That certain triangular shaped tract of land described last in deed dated August 30, 1957, from Northwestern Improvement Company to Northern Pacific Railway Company recorded January 2, 1958, in Book 254, Page 427, records of Douglas County, Wisconsin, said tract being described in said deed for reference as follows:

“A triangle of land comprising all of the Northwest Quarter Southwest Quarter (NW 1/4SW 1/4) of Section 36, Township 49 North, Range 14 West, Fourth Principal Meridian, which is situated Northwesterly of the right of way of the Northern Pacific Railway Company, being the same premises described as Parcel No. 1 in deeds recorded in Book 109 of Deeds on Pages 526 and 528, as Document Nos. 186157 and 186158 respectively, records of said county.” (Document No. 840739)

Parcel No. 08-808-10047-00.

TRACT H:

The Southeast Quarter of Block 30 on West Nineteenth Street, Townsite of Superior, Douglas County, Wisconsin. (Document No. 840739)

Parcel No. 02-802-00830-00.

TRACT I:

North Half (N 1/2) of Fractional Block Thirteen (13), West Thirty-fifth (35th) Street, Townsite of Superior, according to the recorded plat or plats thereof on file and of record in the Office of the Register of Deeds in and for Douglas County, Wisconsin; together with that part of West 34th Street which accrued thereto by reason of the vacation thereof.

Block 18, West 21st Street, Townsite of Superior, Douglas County, Wisconsin.

(Doc. Nos. 522304, 528677 & 777319).
Parcel Nos. 08-808-09743-00 & 01-801-03304-00.

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TRACT J:

The Southwest Quarter (SW 1/4) of Block Twenty-five (25), Townsite of Superior West 31st Street, according to the recorded plat or plats thereof on file and of record in the Office of the Register of Deeds in and for Douglas County, Wisconsin.

The Southeast Quarter (SE 1/4) of Block Fifteen (15), Townsite of Superior West 37th Street, according to the recorded plat or plats thereof on file and of record in the Office of the Register of Deeds in and for Douglas County, Wisconsin.

The Southeasterly One Hundred Seventy-five feet (SEly 175') of the Southwesterly Half (SWly 1/2) of Block Twenty (20), West Eleventh Street, Township of Superior (Southwestern Division), in the City of Superior, Douglas County, Wisconsin.

The Northwesterly One Hundred Twenty-five feet (NWly 125') of the Southwesterly One-Half (SWly 1/2) of Block Twenty (20), West Eleventh Street, Townsite of Superior, in the City of Superior, Douglas County, Wisconsin, being that part of said Block 20 which is bound on the Southwest by West Twelfth Street (now East Twelfth Street); on the Northeast by a line running midway between and parallel with West Eleventh Street and West Twelfth Street (now East Eleventh and Twelfth Streets); on the Northwest by Nettleton Avenue (now Twenty-first Avenue East); and the Southeast by a line One Hundred Twenty-five feet (125') Southeasterly from, and parallel to the Northwesterly boundary of Block 20.

The Southerly One Hundred feet (Sly 100') of Northwesterly Two Hundred Twenty-five feet (NWly 225') of Southwesterly one-half (SWly 1/2) of Block Twenty (20), on West Eleventh Street, Townsite of Superior, in the City of Superior, Douglas County, Wisconsin.

Lots 450 through 480, Even Numbers inclusive, Subdivision of North 1/2 & SE 1/4 Block 30 on West 15th Street, Lots on West 15th Street, Douglas County, Wisconsin.

Lots 449 through 463, Odd Numbers inclusive, Subdivision of North 1/2 & SE 1/4 Block 30 on West 15th Street, Lots on West 16th Street, Douglas County, Wisconsin.

Lots 386 through 416 Even Numbers inclusive, Chrisfield Johnson's Subdivision of Block 26, West 17th Street, Douglas County, Wisconsin.

Lots 385 through 415 Odd Numbers inclusive, Chrisfield Johnson's Subdivision of Block 26, West 17th Street, Douglas County, Wisconsin.

Lots 226 through 256, Even Numbers inclusive, West 17th Street, Subdivision of Block 16 West 17th Street, Douglas County, Wisconsin.

Lots 225 through 255, Odd Numbers inclusive, Southwest 18th Street, Subdivision of Block 16 West 17th Street, Douglas County, Wisconsin.

The Northeast Quarter (NE 1/4) and the East Half of the East Half of the Northwest Quarter (E 1/2 E 1/2 NW 1/4), Block Seventeen (17), West Fifteenth Street, in Townsite of Superior, City of Superior, Douglas County, Wisconsin.

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The West Half of the East Half of the Northwest Quarter (W 1/2 of E 1/2 of NW 1/4) of Block Seventeen (17), West Fifteenth Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin.

The West Half of the Northwest Quarter (W 1/2 NW 1/4) of Block Seventeen (17), West Fifteenth Street, Townsite of Superior, in the City of Superior, Douglas County, Wisconsin.

The East 1/4 of SE 1/4, Block 17, Townsite of Superior West 15th Street, Douglas County, Wisconsin.

The West 3/4 of SE 1/4, Block 17, Townsite of Superior West 15th Street, Douglas County, Wisconsin.

The North Half (N 1/2) of Block Seventeen (17), West Thirteenth Street, Townsite of Superior, (Superior Division), in City of Superior, Douglas County, Wisconsin.

The South Half (S 1/2) of Block Seventeen (17), West Thirteenth Street, Townsite of Superior, (Superior Division), in City of Superior, Douglas County, Wisconsin.

Fractional Lots Two Hundred Fifty-seven (257), Two Hundred Fifty-nine (259), Two Hundred Sixty-one (261), Two Hundred Sixty-three (263) and Two Hundred Sixty-five (265), West Twelfth Street, Subdivision of Block Eighteen (18), West Eleventh Street, in Townsite of Superior, City of Superior, Douglas County, Wisconsin, together with that part of the West Half (W 1/2) of vacated Villard Street abutting said lots.

All of Block Sixteen (16), on West Twenty-First Street, in the City of Superior, Douglas County, Wisconsin.

All of Block Thirteen (13), excluding right of way, West 21st Street, Townsite of Superior, Douglas County, Wisconsin.

The Northwest Quarter (NW 1/4) and the Southwest Quarter (SW 1/4) of Block Twenty (20), Townsite of Superior West 16th Street, Douglas County, Wisconsin.

The West Half of the West Half of the Northwest Quarter (W 1/2 W 1/2 NW 1/4) of Block Nineteen (19), West Thirteenth Street, Townsite of Superior, in the City of Superior, Douglas County, Wisconsin.

The Southeast Quarter (SE 1/4) of Block Nineteen (19), West Thirteenth Street, Townsite of Superior, (Southwestern Division), in the City of Superior, Douglas County, Wisconsin.

The East One Hundred Twenty feet (E 120') of the Northeast Quarter (NE 1/4) of Block Nineteen (19), West Thirteenth Street, Townsite of Superior, (Southwestern Division), in the City of Superior, Douglas County, Wisconsin.

The Southwest Quarter (SW 1/4) of Block Nineteen (19), West 13th Street, Townsite of Superior, City of Superior, County of Douglas, Wisconsin.

The East Three-Fourths of the Northwest Quarter (E 3/4 NW 1/4), except the East Half of the East Half (E 1/2 E 1/2), Block Nineteen (19), West 13th Street, Townsite of Superior, City of Superior, County of Douglas, Wisconsin.

The East Half of the East Half of the Northwest Quarter (E 1/2 E 1/2 NW 1/4) and the West Eighty feet (W 80') of the Northeast Quarter (NE 1/4) of Block Nineteen (19), West Thirteenth Street, Townsite of superior, City of Superior, Douglas County, Wisconsin.

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The East One-half (E 1/2) of the Northeast Quarter (NE 1/4) and the East One-half (E 1/2) of the Southeast Quarter (SE 1/4) of Block Nineteen (19), West Fifteenth Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin.

The NW 1/4 & W 1/2 of NE 1/4 and W 1/4 of SE 1/4 & E 3/4 of SW 1/4, Block 19, Townsite of Superior of Superior West 15th Street, Douglas County, Wisconsin.

The W 1/2 of the W 1/4 of the SW 1/4 of Block 19, Townsite of Superior West 15th Street, Douglas County, Wisconsin.

Lots 290 through 320, Even Numbers inclusive, West 17th Street, Subdivision of Block 20 West 17th Street, Douglas County, Wisconsin.

~ Lots 289 through 319, Odd Numbers inclusive, West 18th Street, Subdivision of Block 20 West 17th Street, Douglas County, Wisconsin.

Lots 258 through 288, Even Numbers inclusive, West 20th Street, AND Lots 257 through 287, Odd Numbers inclusive, West 21st Street, all in the Subdivision of Block 17, on West 21st Street, Townsite of Superior, Douglas County, Wisconsin.

Lots 273 through 287, Odd Numbers inclusive, West Fifteenth Street, in Plat of McBean Blocks, being a Subdivision of the Southwest Quarter (SW 1/4) of Block Seventeen (17), West Fifteenth Street, Townsite of Superior, (Southwestern Division), in the City of Superior, Douglas County, Wisconsin.

Lots 258 and 260, Block 18, 15th Street, McBean Blocks, Douglas County, Wisconsin.

Lots 299, 301 & 303, Block 20, 14th Street & alley vacated, McBean Blocks, West 13th Street, Douglas County, Wisconsin.

Lots 393 through 399, Odd Numbers inclusive, Block 25, McBean Blocks, West Thirteenth Street, City of Superior, Douglas County, Wisconsin.

Lots 281 through 287, Odd Numbers inclusive, on West Twelfth Street, in Subdivision of Block Eighteen, West Eleventh Street, Townsite of Superior (Southwestern Division), City of Superior, Douglas County, Wisconsin.

Lots 267 through 279, Odd Numbers inclusive, on West Twelfth Street, in Subdivision of Block Eighteen (18), West Eleventh Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin.

Block Thirteen (13), West Twenty-third Street, except right-of-way, in Townsite of Superior, City of Superior, Douglas County, Wisconsin, together with that part of the West 23rd Street which accrued thereto by reason of vacation thereof.

E 3/4 of Block 12 on West 37th Street, Townsite of Superior, Douglas County, Wisconsin, except right of way.

E 3/4 of Block 11 on West 39th Street, Townsite of Superior, Douglas County, Wisconsin, except right of way.

E 3/4 of Block 12 on West 39th Street, Townsite of Superior, Douglas County, Wisconsin, except right of way.

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NE 1/4 of Block 12 on West 43rd Street, Townsite of Superior, Douglas County, Wisconsin.

That part of Block 10, West 41st Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin, lying north of the following described line: Beginning at the most northerly corner of Fractional Block 8, West 41st Street, Townsite of Superior, thence westerly and parallel with the south line of the Southeast Quarter of Section 35, Township Forty-Nine North, Range 14 West to the northeasterly line of Fractional Block 9, West 43rd Street, Townsite of Superior, and said line there terminating.

That part of Block 11, West 41st Street, Townsite of Superior, City of Superior, Douglas County, Wisconsin lying East of the East right of way line of the former Soo Line Railroad.

Lots 225 through 255, Odd Numbers inclusive, Lots on 16th Street, in the Subdivision of Block 16 on West 15th Street, in the City of Superior, Douglas County, Wisconsin.

Lots 226 through 256, Even Numbers inclusive, Lots on West 15th Street, in the Subdivision of Block 16 on West 15th Street, in the City of Superior, Douglas County, Wisconsin.

(Doc. Nos. 624023, 633082, 725853, 766342, 794160, 795896, 799526, 801654, 802205, 803377, 803498, 803978, 803979, 803733, 803734, 804451, 804524, 804525, 804706, 806050, 806592, 806593, 806973, 809578, 808862, 809996, 810193, 813026, 828601, 829415 & 829526).

Parcel Nos. 02-802-00947-00, 01-801-02976-01, 01-801-02976-03, 01-801-02976-05, 02-802-06614-00, 02-802-01293-00, 01-801-03987-00, 01-801-03125-00, 01-801-03131-00, 01-801-03129-00, 01-801-03128-00, 01-801-03123-00, 01-801-03042-00, 01-801-03046-00, 01-801-03805-00, 01-801-03302-00, 01-801-03294-00, 01-801-03055-00, 01-801-03047-00, 01-801-03047-01, 01-801-03047-02, 01-801-03047-03, 01-801-03047-04, 01-801-03048-00, 01-801-03136-00, 01-801-03145-00, 01-801-04051-00, 01-801-04083-00, 01-801-04706-00, 01-801-04713-00, 01-801-04679-00, 02-802-03804-00, 01-801-03807-00, 01-801-03806-00; 01-801-03326-00, 08-808-09780-00, 08-808-09821-00, 08-808-09823-00, 08-808-09892-00, 08-808-09854-00, 08-808-09856-00, 01-801-03971-00 & 01-801-03955-00.

TRACT K:

That part of the West Half (W 1/2) of Section Thirty-six (36), Township forty-nine (49) North, Range Fourteen (14) West, Douglas County, Wisconsin, more fully described as follows: Commencing at the North quarter corner of said Section 36, Township 49 North, Range 14 West, thence due south along the north-south quarter line, said quarter line being the center line of Bardon Avenue, a distance of 1,456.64 feet to the south property line of 26th Avenue extended, thence south 48 degrees and 36 minutes west along the south property line of 26th Avenue, a distance of 481 feet to the point of beginning, thence continuing in the same straight line a distance of 1,323.53 feet to a point, thence south 89 degrees and 46 minutes west a distance of 151.91 feet to a point, thence South 48 degrees 36 minutes West a distance of 162.43 feet to a point, thence South 41 degrees 24 minutes east a distance of 751 feet to a point, thence north 48 degrees and 36 minutes East a distance of 1,463.36 feet to a point on the west line of Bardon Avenue a distance of 207.10 feet to a point, thence north 41 degrees and 24 minutes west a distance of 495.66 feet to the point of beginning.

(Doc. No. 459590 V 271 P 358)
Parcel No. 01-801-05132-00.

845763

Lots 290 through 320, even numbers inclusive, Bay Front Division, West 21st Street.
 Lots 322 through 352, even numbers inclusive, Bay Front Division, West 21st Street.
 Lots 305 through 351, odd numbers inclusive, Bay Front Division, West 22nd Street.
 Lots 314 through 352, even numbers inclusive, Bay Front Division, West 22nd Street.
 Lots 321 through 341, odd numbers inclusive, Bay Front Division, West 23rd Street.
 Lots 344 through 352, even numbers inclusive, Bay Front Division, West 23rd Street.
 Lots 347, 349 and 351, Bay Front Division, West 23rd Street.
 Lots 289 through 303, odd numbers inclusive, Nobles Subdivision of Block 20, West 21st Street.
 Block 18, Townsite of Superior, West 21st Street.
 Southwest Quarter of Block Seventeen, Townsite of Superior, West 23rd Street.
 Lots 343 through 351, odd numbers inclusive, Bay Front Division, West 24th Street.

NO



(Doc. Nos. 505366, 513195, 514949, 520340 and 528677).
 Parcel No. 01-801-03339-00.

TRACT C:

Blocks 24, 26, 28 and 30, Townsite of Superior, West 23rd Street;
 Blocks 22, 23, 24, 25, 26, 27, 28, 29 and 30, Townsite of Superior, West 25th Street;
 Block 32, Townsite of Superior, West 26th Street;
 Blocks 23, 24, 25, 26, 27, 28, 29, 30, 31 and 32, Townsite of Superior, West 27th Street, together with that part of West 27th Street which accrued thereto by reason of the vacation thereof.
 Blocks 23, 24, 25, 26, 27, 28, 29, 30 and 31, Townsite of Superior, West 29th Street, together with that part of West 29th Street which accrued thereto by reason of the vacation thereof, except those parts of Blocks 30 and 31 lying East of the East line of the Wisconsin Central Railway Company Right-of-Way.

(Doc. Nos. 453215, 405966 and 458930).
 Parcel No. 02-802-00872-00.

Blocks 15, 16, 18, and 20, Townsite of Superior, West 23rd Street.
 The North Half and the Southeast Quarter of Block 17, Townsite of Superior, West 23rd Street.
 Blocks 19 and 22, Townsite of Superior, West 23rd Street, except Lots 314, 316, 318 and 320, Bay Front Division, West 22nd Street, and Lots 343 through 352, inclusive, Bay Front Division.
 Blocks 13, 14, 15, 16, 17, 18, 19, 20, 21 and 22, Townsite of Superior, West 25th Street.
 Blocks 13, 14, 15, 16, 17, 18, 19, 20, 21 and 22, Townsite of Superior, West 27th Street.
 Blocks 13, 15, 17, 19 and 21, Townsite of Superior, West 29th Street.
 Together with that part of the streets and avenues which accrued thereto by reason of the vacation thereof.



(Doc. Nos. 405966 and 453215).
 Parcel No. 01-801-03339-00.

TRACT D:

Lots 354 through 384, even numbers inclusive, Bay Front Division, West 23rd Street. (Doc. No. 453215).
 Parcel No. 02-802-00872-00.

Lots 330 through 342, even numbers inclusive, Bay Front Division, West 23rd Street.
 Lots 337, 339 and 341, Bay Front Division, West 24th Street.

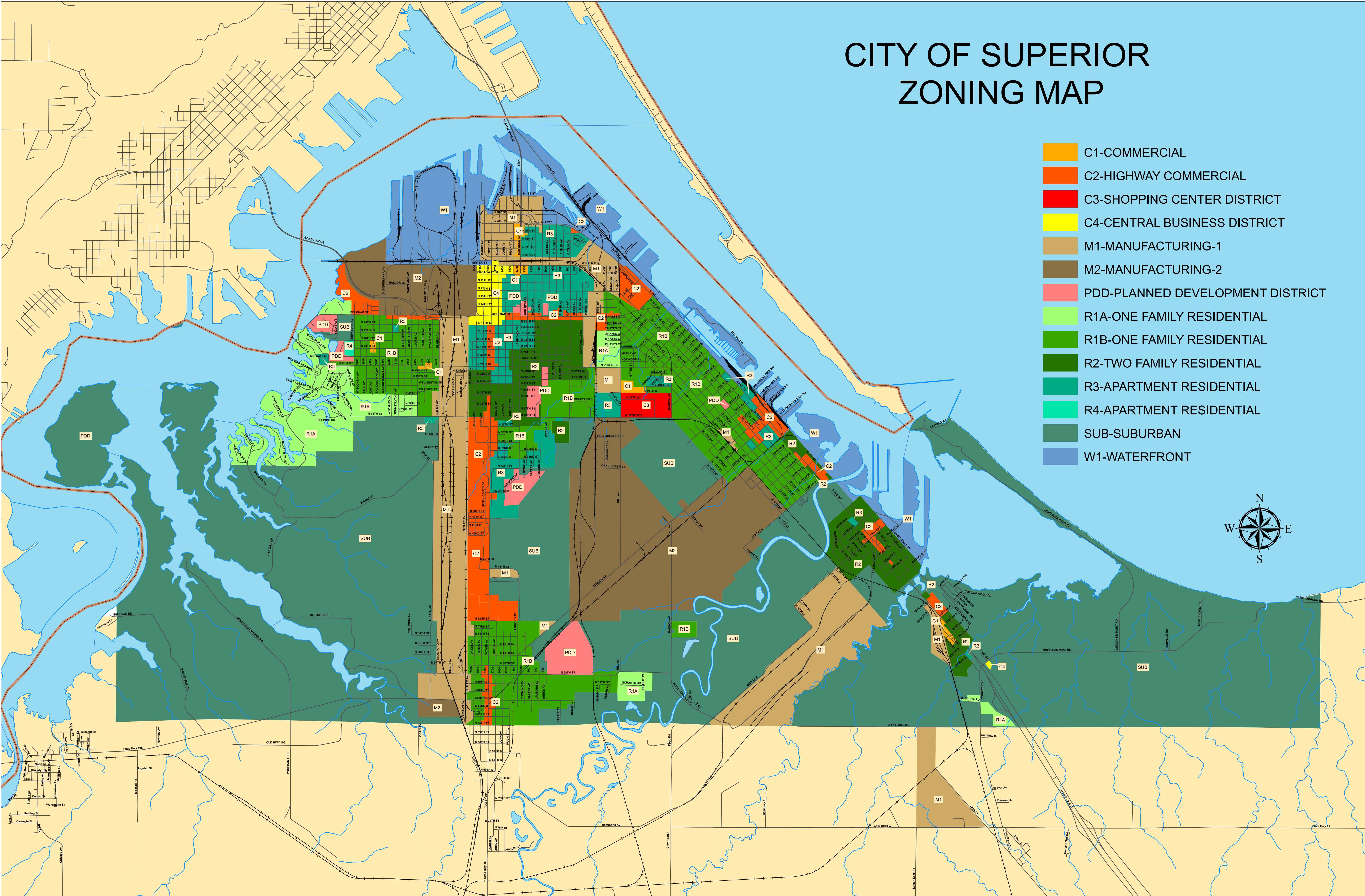
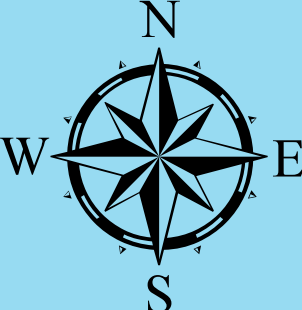
NO

Attachment F.2 – Certified Survey Map

Not Applicable - A certified survey map is not referenced in the deed.

CITY OF SUPERIOR ZONING MAP

- C1-COMMERCIAL
- C2-HIGHWAY COMMERCIAL
- C3-SHOPPING CENTER DISTRICT
- C4-CENTRAL BUSINESS DISTRICT
- M1-MANUFACTURING-1
- M2-MANUFACTURING-2
- PDD-PLANNED DEVELOPMENT DISTRICT
- R1A-ONE FAMILY RESIDENTIAL
- R1B-ONE FAMILY RESIDENTIAL
- R2-TWO FAMILY RESIDENTIAL
- R3-APARTMENT RESIDENTIAL
- R4-APARTMENT RESIDENTIAL
- SUB-SUBURBAN
- W1-WATERFRONT





March 26, 2020

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

RE: Signed Statement for Property Legal Description
Case Closure Request – BRRTS No. 02-16-585474

Dear Mr. Sager,

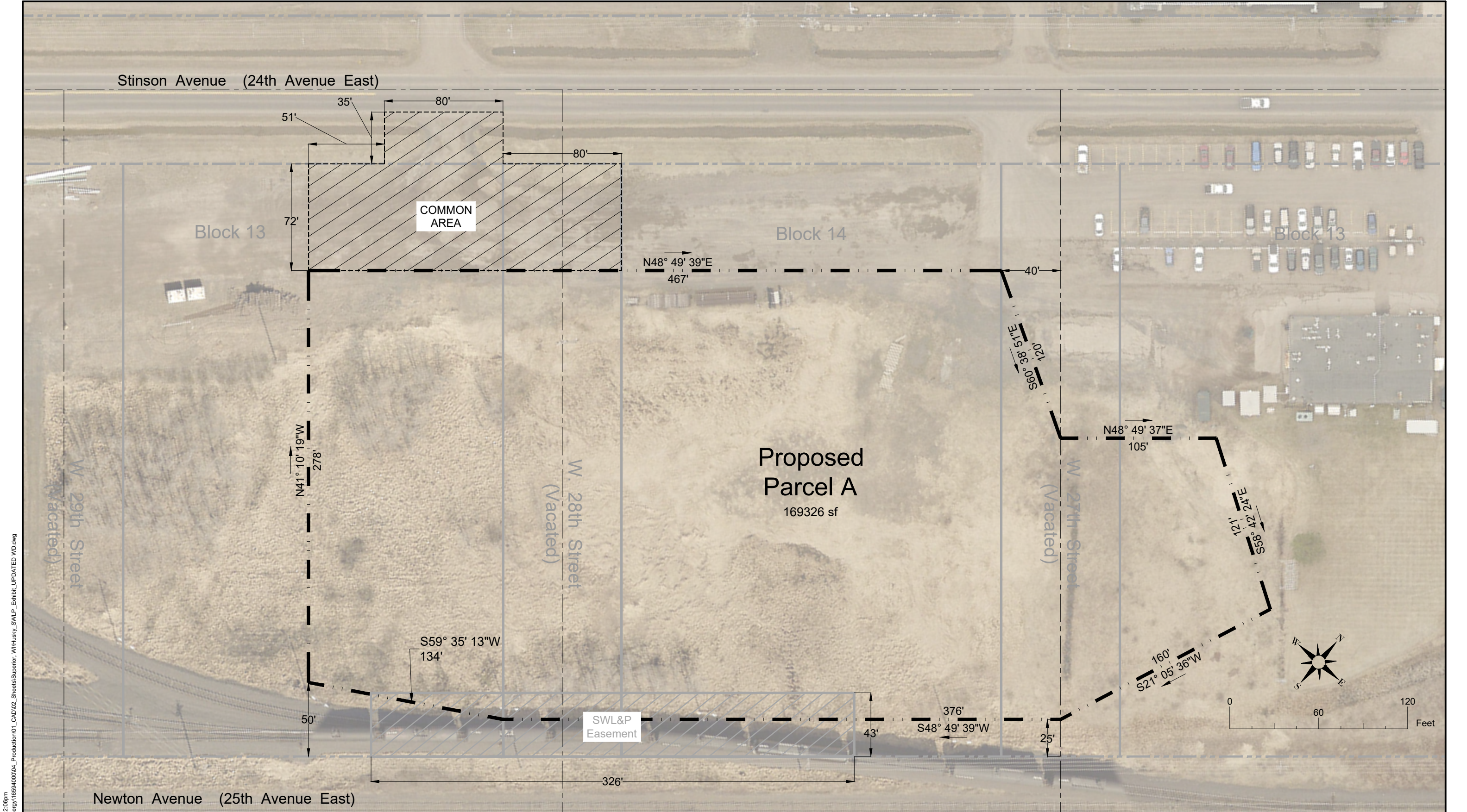
Pertaining to the above referenced Superior Refining Company release site located at 2407 Stinson Avenue, Superior, WI 54880 (WTM Coordinates X361726, Y692621), the following legal description and attached surveyor's figure accurately describe the property:

That part of Block 13, Townsite of Superior, West 27th Street, together with that part of the streets and avenues which accrued thereto by reason of the vacation thereof; that part of Block 14, Townsite of Superior, West 27th Street, together with that part of the streets and avenues which accrued thereto by reason of the vacation thereof; and that part of Block 13, Townsite of Superior, West 29th Street, together with that part of the streets and avenues which accrued thereto by reason of the vacation thereof; as described and shown in detail on the attached surveyor's map titled "PARCEL A – SUPERIOR WI EXHIBIT 1" generated by TKDA Engineering of Duluth, MN.

Sincerely,

A handwritten signature in blue ink, appearing to read "Mark Darby", with a long horizontal flourish extending to the right.

Mark Darby
Environmental Manager
Husky Energy
Superior, Wisconsin Refinery



Apr 17, 2018 - 12:06pm
K:\gml\HuskyEnergy\1659400004_Production01_CAD02_Sheets\Superior_WI\Husky_SWLP_Exhibit_UPDATED WD.dwg

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED
DRAWN
CHECKED

TKDA
11 E. Superior Street, Suite 420
Duluth, MN 55802
218.724.8578
tkda.com

**PARCEL A - SUPERIOR WI
EXHIBIT 1**

ALL CONTRACTORS AND SUBCONTRACTORS SHALL VERIFY ALL DIMENSIONS BY MEASUREMENT AT THE BUILDING AND/OR SITE

0 60 120 Feet
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS DRAWING ADJUST SCALES ACCORDINGLY.

PROJ. NO.
DRAWING NO.

Attachment G – Source Legal Documents

G.1 Deeds – Source Property (Not Applicable)*

G.2 Certified Survey Map (Not Applicable)*

G.3 Verification of Zoning (Not Applicable)*

G.4 Signed Statement (Not Applicable)*

*** There are no affected property owners to notify**