



November 6, 2023

Mark Franz Jr.
421 Barstow Street
Horicon WI 53032

SENT BY ELECTRONIC MAIL ONLY
KEEP THIS LEGAL DOCUMENT WITH YOUR PROPERTY RECORDS

SUBJECT: Case Closure with Continuing Obligations
Frei Oil Co. (Former), 207 Highway Street, Horicon WI 53032
Parcel numbers 236-1116-0633-111 and 236-1116-0633-112
BRRTS # 02-14-287206

Dear Mr. Franz:

The Wisconsin Department of Natural Resources (DNR) is pleased to inform you that the Frei Oil Co. (Former) case identified above met the requirements of Wisconsin Administrative (Wis. Admin.) Code chs. NR 700 to 799 for case closure with continuing obligations (COs). COs are legal requirements to address potential exposure to remaining contamination. No further investigation or remediation is required at this time for the reported hazardous substance discharge and/or environmental pollution.

However, you, future property owners and occupants of the property must comply with the COs as explained in this letter, which may include maintaining certain features and notifying the DNR and obtaining approval before taking specific actions. You must provide this letter and all enclosures to anyone who purchases, rents or leases this property from you. Some COs also apply to other properties or rights-of-way (ROWs) affected by the contamination as identified in the Summary of Continuing Obligations section of this letter.

This case closure decision is issued under Wis. Admin. Code chs. NR 700 to 799 and is based on information received by the DNR to date. The DNR reviewed the case closure request for compliance with state laws and standards and determined the case closure request met the notification requirements of Wis. Admin. Code ch. NR 725, the response action goals of Wis. Admin. Code § NR 726.05(4), and the case closure criteria of Wis. Admin. Code §§ NR 726.05, 726.09 and 726.11, and Wis. Admin. Code ch. NR 140.

The former Frei Oil site on Highway Street was investigated for a discharge of hazardous substances and/or environmental pollution from bulk petroleum storage and the associated loading rack. The site investigation and/or remedial action addressed soil and groundwater. An excavation in the bulk petroleum storage area and loading rack area removed approximately 1481 tons of contaminated soil. Case closure is granted for the petroleum volatile organic compounds and polycyclic aromatic hydrocarbons as documented in the case file. Contamination remains in soil and groundwater in the bulk

petroleum storage area; two additional areas of soil contamination remain in the Highway Street right-of-way. Further details are found later in this letter.

The case closure decision and COs required were based on the current use of the site for industrial purposes. The site is currently zoned industrial. Based on the land use and zoning, the site meets the industrial land use classification under Wis. Admin. Code § NR 720.05(5) for application of residual contaminant levels in soil.

SUMMARY OF CONTINUING OBLIGATIONS

COs are applied at the following locations:

ADDRESS	CONTINUING OBLIGATIONS APPLIED	DATE OF MAINTENANCE PLAN(S)
Source Property: 207 Highway Street, Horicon, WI (Parcel number 236-1116-0633-111) and 203 Highway Street, Horicon, WI (Parcel number 236-1116-0633- 112)	<ul style="list-style-type: none"> • Residual Soil Contamination • Residual Groundwater Contamination • NR 720 industrial direct contact soil residual contaminant levels • Future vapor intrusion concern 	Not applicable
Highway Street right-of-way (City of Horicon)	<ul style="list-style-type: none"> • Residual Soil Contamination • Structural Impediment 	Not applicable

CLOSURE CONDITIONS

Closure conditions are legally required conditions which include both COs and other requirements for case closure (Wis. Stat. § 292.12(2)). Under Wis. Stat. § 292.12(5), you, any subsequent property owners and occupants of the property must comply with the closure conditions as explained in this letter. The property owner must notify occupants for any condition specified in this letter under Wis. Admin. Code §§ NR 726.15(1)(b) and NR 727.05(2). If an occupant is responsible for maintenance of any closure condition specified in this letter, you and any subsequent property owner must include the condition in the lease agreement under Wis. Admin. Code § NR 727.05(3) and provide the maintenance plan to any occupant that is responsible.

SOIL

Continuing Obligations to Address Soil Contamination

Residual Soil Contamination (Wis. Admin. Code chs. NR 718, NR 500 to 599, and § NR 726.15(2)(b) and Wis. Stat. ch. 289)

Soil contamination remains in the areas around B-8, DP-9, and DP-4 and in the Highway Street right-of-way as indicated on the enclosed map (Attachment B.2.b., Residual Soil Contamination, 5/10/2023). If soil in the location(s) shown on the map is excavated in the future, the property owner or right-of-way holder at the time of excavation must sample and analyze the excavated soil. If sampling confirms that contamination is present, the property owner or right-of-way holder at the time of excavation will need to determine if the material is considered solid waste and ensure that any storage, treatment or disposal complies with applicable standards and rules. Contaminated soil may be managed under Wis. Admin. Code ch. NR 718 with prior DNR approval.

In addition, all current and future property owners, occupants and right-of-way holders need to be aware that excavation of the contaminated soil may pose an inhalation and direct contact hazard; special precautions may be needed to prevent a threat to human health.

Industrial Soil Standards (Wis. Stat. § 292.12(6), Wis. Admin. Code §§ NR 726.15(2)(g), NR 720.05(5), NR 727.07(5))

Industrial soil standards (i.e., RCLs) for direct contact apply where soil contamination remains at the areas near the bulk fuel storage excavation and near B-8 as shown on the enclosed map (Attachment B.2.b., Residual Soil Contamination, 5/10/2023). Samples contained petroleum volatile organic compounds and arsenic in concentrations that were less than the industrial direct contact RCLs but exceeded the non-industrial direct contact RCLs. **This continuing obligation applies only to the Source Property; soil exceeding industrial direct contact RCLs remains in the Highway Street right-of-way near DP-9 and under the sidewalk (additional information in the structural impediment section below).**

The land use of the property is restricted to industrial use and may not be used or developed for a residential, commercial, agricultural or other non-industrial use until soil contaminant levels no longer exceed non-industrial direct contact RCLs as the result of additional remediation or natural attenuation and the DNR has reviewed and approved a request to modify this condition of closure.

Structural Impediment (Wis. Stat. § 292.12(2)(b), Wis. Admin. Code §§ NR 726.15(2)(f), NR 727.07(2))

This continuing obligation applies to the Highway Street right-of-way. The remaining sidewalk shown on the enclosed map (Attachment B.2.b., Residual Soil Contamination, 5/10/2023) and in the attached photographs made complete site investigation and remediation of the contamination on this property impracticable. Soil contaminated at levels exceeding the industrial direct contact RCLs remains in the ROW in the DP-9 area as indicated on Attachment B.2.b. Upon removal of the structural impediment, the property owner shall investigate the degree and extent of petroleum contamination obstructed by the structural impediment. If contamination is found at that time, the property owner shall remediate the contamination in accordance with Wis. Admin. Code chs. NR 700 to 799.

GROUNDWATER

Continuing Obligations to Address Groundwater Contamination and/or Monitoring Wells

Residual Groundwater Contamination (Wis. Admin. Code ch. NR 140 and § NR 812.09(4)(w))

Groundwater contamination which equals or exceeds the enforcement standards for petroleum volatile organic compounds and polycyclic aromatic hydrocarbons are present in the former bulk fuel storage area, as shown on the enclosed map (Attachment B.3.b., Groundwater Isoconcentration (August 2022), dated 10/17/2022). To construct a new well or reconstruct an existing well, the property owner must obtain prior DNR approval. Additional casing may be necessary to prevent contamination of the well.

VAPOR

Continuing Obligations to Address Vapor Contamination

Vapor intrusion is the movement of vapors coming from volatile chemicals in the soil or groundwater or within preferential pathways into buildings where people may breathe air contaminated by the vapors.

Vapor Intrusion - Future Concern: (Wis. Stat. § 292.12(2), Wis. Admin. Code § NR 726.15(2)(L) or (m), as applicable.

Petroleum volatile organic compounds remain in shallow groundwater at former bulk fuel storage location, as shown on the enclosed map, (Attachment B.3.b., Groundwater Isoconcentration (August 2022), dated 10/17/2022), at concentrations that may be of concern for vapor intrusion in the future, if a building is constructed, renovated or expanded in an area where no building currently or if an existing building is remodeled. Currently the site is mostly vacant and used for storage; there is an approximately 3000 sq. ft. building on the northern portion of parcel 236-1116-0633-112.

Vapor control technologies are required for new construction or for modification of occupied buildings on the property unless the property owner assesses the vapor pathway and the DNR agrees that vapor control technologies are not needed. The property owner shall maintain the current building use and layout.

OTHER CLOSURE REQUIREMENTS

Pre-Approval Required for Well Construction (Wis. Admin. Code § NR 812.09(4)(w))

DNR approval is required before well construction or reconstruction for all sites identified as having residual contamination and/or COs. This requirement applies to private drinking water wells and high capacity wells. To obtain approval, the property owner is required to complete and submit Form 3300-254, Continuing Obligations/Residual Contamination Well Approval Application, to the DNR Drinking and Groundwater program's regional water supply specialist. A well driller can help complete this form. The form is available at dnr.wi.gov (search "3300-254"). Additional casing may be necessary to help prevent contamination of the well.

General Wastewater Permits for Construction-related Dewatering Activities (Wis. Admin. Code ch. NR 200)

The DNR's Water Quality Program regulates point source discharges of contaminated water, including discharges to surface waters, storm sewers, pits, or to the ground surface. This includes discharges from construction-related dewatering activities, including utility work and building construction.

If the property owner or any other person plans to conduct such activities, that person must contact the Water Quality Program and, if necessary, apply for the required discharge permit. If residual soil or

groundwater contamination is likely to affect water collected in a pit/trench that requires dewatering, a general permit for discharge of *Contaminated Groundwater from Remedial Action Operations* may be needed. If water collecting in a pit/trench that requires dewatering is expected to be free of pollutants other than suspended solids, oil and grease, a general permit for pit/trench *Dewatering Operations* may be needed. Additional information can be obtained at dnr.wi.gov (search “wastewater general permits”).

DNR NOTIFICATION AND APPROVAL REQUIREMENTS

Certain activities are limited at closed sites to maintain protectiveness to human health and the environment. The property owner is required to notify the DNR at least 45 days before and obtain approval from the DNR prior to taking the following actions (Wis. Admin. Code §§ NR 727.07, NR 726.15(2), Wis. Stat. § 292.12(6)):

- Before changing the use of the property to a non-industrial use, when industrial soil standards were applied for closure.
- Before constructing a building and/or modifying use of or the construction of an existing building or changing property use. Certain activities are limited at closed sites to reduce the risk of exposure to residual contamination via vapor intrusion. For properties with a continuing obligation for addressing the future risk of vapor intrusion when buildings exist at the time of closure approval, changes to the current building use and layout are prohibited without prior DNR approval. This includes any change in building construction, reconstruction or partial demolition. The DNR may require additional actions may be required at that time to re-assess for vapor intrusion and mitigate, as appropriate.

The DNR may require additional investigation and/or cleanup actions if necessary, to be protective of human health and the environment. The case may be reopened under Wis. Admin. Code § NR 727.13 if additional information indicates that contamination on or from the site poses a threat, or for a lack of compliance with a CO or closure requirement.

SUBMITTALS AND CONTACT INFORMATION

Site, case-related information and DNR contacts can be found online in the Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web (BOTW); go to dnr.wi.gov and search “BOTW.” Use the BRRTS ID # found at the top of this letter. The site can also be found on the Remediation and Redevelopment Sites Map by searching “RRSM.”

Send written notifications to the DNR using the RR Program Submittal Portal at dnr.wi.gov (search “RR submittal portal”) or use the direct link <https://dnr.wi.gov/topic/Brownfields/Submittal.html>. Questions on using this portal can be directed to the Project Manager noted below or to the environmental program associate (EPA) for the regional DNR office. Visit dnr.wi.gov, search “RR contacts” and select the EPA tab (<https://dnr.wi.gov/topic/Brownfields/Contact.html>).

CLOSING

The DNR appreciates your efforts to restore the environment at this site. If you have any questions regarding this letter, please contact DNR project manager Cindy Koepke at 608-219-2181 or cynthia.koepke@wisconsin.gov.

Sincerely,



Issac A. Ross
South Central Region Team Supervisor
Remediation & Redevelopment Program
Fitchburg DNR Service Center – Fitchburg, WI

Attachments:

Attachment B.3.b., Groundwater Isoconcentration (August 2022), dated 10/17/2022
Attachment B.2.b., Residual Soil Contamination, 5/10/2023
Structural Impediment Photos, 10/19/2023
Attachment A.1, Groundwater Analytical Table
Attachment A.3, Residual Soil Contamination Table

cc.

Mark Fryman – True North, mfryman@consulttruenorth.com

Additional Resources:

The DNR fact sheets listed below can be obtained at dnr.wi.gov and searching the DNR publication number.
Guidance for Electronic Submittals for the Remediation and Redevelopment Program (RR-690)
Continuing Obligations for Environmental Protection (RR-819)
Environmental Contamination and Your Real Estate (RR-973)
Post-Closure Modifications: Changes to Property Conditions after a State-Approved Cleanup (RR-987)



November 6, 2023

Cody Vanderhei
City of Horicon
404 E. Lake Street
Horicon WI 53032

SUBJECT: Notice of Closure Approval with Continuing Obligations for Rights-of-Way Holders at
207 Highway Street, Horicon
Case Closure for Frei Oil Co. (Former), 207 Highway St., Horicon WI 53032
BRRTS # 02-14-287206

Dear Mr. Vanderhei:

The Wisconsin Department of Natural Resources (DNR) recently approved the completion of the response actions conducted at the site identified above (the Site). This letter describes how that approval applies to the right-of-way (ROW) at 207 Highway Street. As the ROW holder, you are responsible for complying with continuing obligations for any work you conduct in the ROW.

State law—Wisconsin Statute (Wis. Stat.) ch. 292— directs parties responsible for the discharge of a hazardous substance or environmental pollution to take necessary actions to restore the environment to the extent practicable and minimize harmful effects from the discharge to the air, lands or waters of this state. The law allows some contamination to remain in the environment if it does not pose a threat to public health, safety, welfare or the environment.

On May 16, 2023, you received information from Mark Fryman, True North Consultants, about the petroleum contamination from the Site remaining in the Highway Street ROW, and about the continuing obligations (COs) necessary to limit exposure to remaining contamination. On October 12, 2023, the regional DNR closure committee imposed an additional CO that the sidewalk shown in the attached map and photographs is a structural impediment to additional sampling and/or remediation. The structural impediment CO does not require any action at this time but could affect future work along that portion of the sidewalk (see description below).

APPLICABLE CONTINUING OBLIGATIONS

The continuing obligations that apply to this ROW are described below and are consistent with Wis. Stat. § 292.12 and Wisconsin Administrative Code (Wis. Admin. Code) chs. NR 700 to 799.

Residual Soil Contamination (Wis. Admin. Code chs. NR 718, NR 500 to 599, and § NR 726.15(2)(b) and Wis. Stat. ch. 289)

Soil contamination remains in the areas around B-8, DP-9, and DP-4 as indicated on the enclosed map (Attachment B.2.b., Residual Soil Contamination, 5/10/2023). If soil in the location(s) shown on the map is excavated in the future, the property owner or right-of-way holder at the time of excavation must sample and analyze the excavated soil. If sampling confirms that contamination is present, the property owner or right-of-way holder at the time of excavation will need to determine if the material is considered solid waste and ensure that any storage, treatment or disposal complies with applicable standards and rules. Contaminated soil may be managed under Wis. Admin. Code ch. NR 718 with prior DNR approval.

Structural Impediment (Wis. Stat. § 292.12(2)(b), Wis. Admin. Code §§ NR 726.15(2)(f), NR 727.07(2))

The remaining sidewalk shown on the enclosed map (Attachment B.2.b., Residual Soil Contamination, 5/10/2023) and in the attached photographs made complete site investigation and remediation of the contamination on this property impracticable. Upon removal of the structural impediment, the property owner or right-of-way holder shall investigate the degree and extent of petroleum contamination obstructed by the structural impediment. If contamination is found at that time, the property owner shall remediate the contamination in accordance with Wis. Admin. Code chs. NR 700 to 799.

In addition, all current and future property owners, occupants and right of way holders need to be aware that excavation of the contaminated soil may pose an inhalation and direct contact hazard; special precautions may be needed to prevent a threat to human health.

DNR NOTIFICATION AND APPROVAL REQUIREMENTS

Certain activities are limited at closed sites to maintain protectiveness to human health and the environment. The property owner is required to notify the DNR at least 45 days before and obtain approval from the DNR prior to taking the following actions (Wis. Admin. Code §§ NR 727.07, NR 726.15 (2), Wis. Stat. § 292.12(6)):

- Before changing the use of the property to a non-industrial use, when industrial soil standards were applied for closure.
- Before constructing a building and/or modifying use of or the construction of an existing building or changing property use. Certain activities are limited at closed sites to reduce the risk of exposure to residual contamination via vapor intrusion. For properties with a continuing obligation for addressing the future risk of vapor intrusion when buildings exist at the time of closure approval, changes to the current building use and layout are prohibited without prior DNR approval. This includes any change in building construction, reconstruction or partial demolition. The DNR may require additional actions may be required at that time to re-assess for vapor intrusion and mitigate, as appropriate.

ADDITIONAL INFORMATION

Site, case-related information and DNR contacts can be found online in the Bureau for Remediation and Redevelopment Tracking System (BRRTS) on the Web (BOTW); go to dnr.wi.gov and search "BOTW." Use the BRRTS ID # found at the top of this letter. The site can also be found on the Remediation and Redevelopment Sites Map by searching "RRSM."

Send written notifications and inspection logs to the DNR using the RR Program Submittal Portal at dnr.wi.gov, (search “RR submittal portal”). Questions on using this portal can be directed to the Project Manager below or to the environmental program associate (EPA) for the regional DNR office. Visit dnr.wi.gov, search “RR contacts” and select the EPA tab.

If you have questions or concerns regarding this letter, please contact the DNR project manager, Cindy Koepke, at 608-219-2181 or cynthia.koepke@wisconsin.gov.

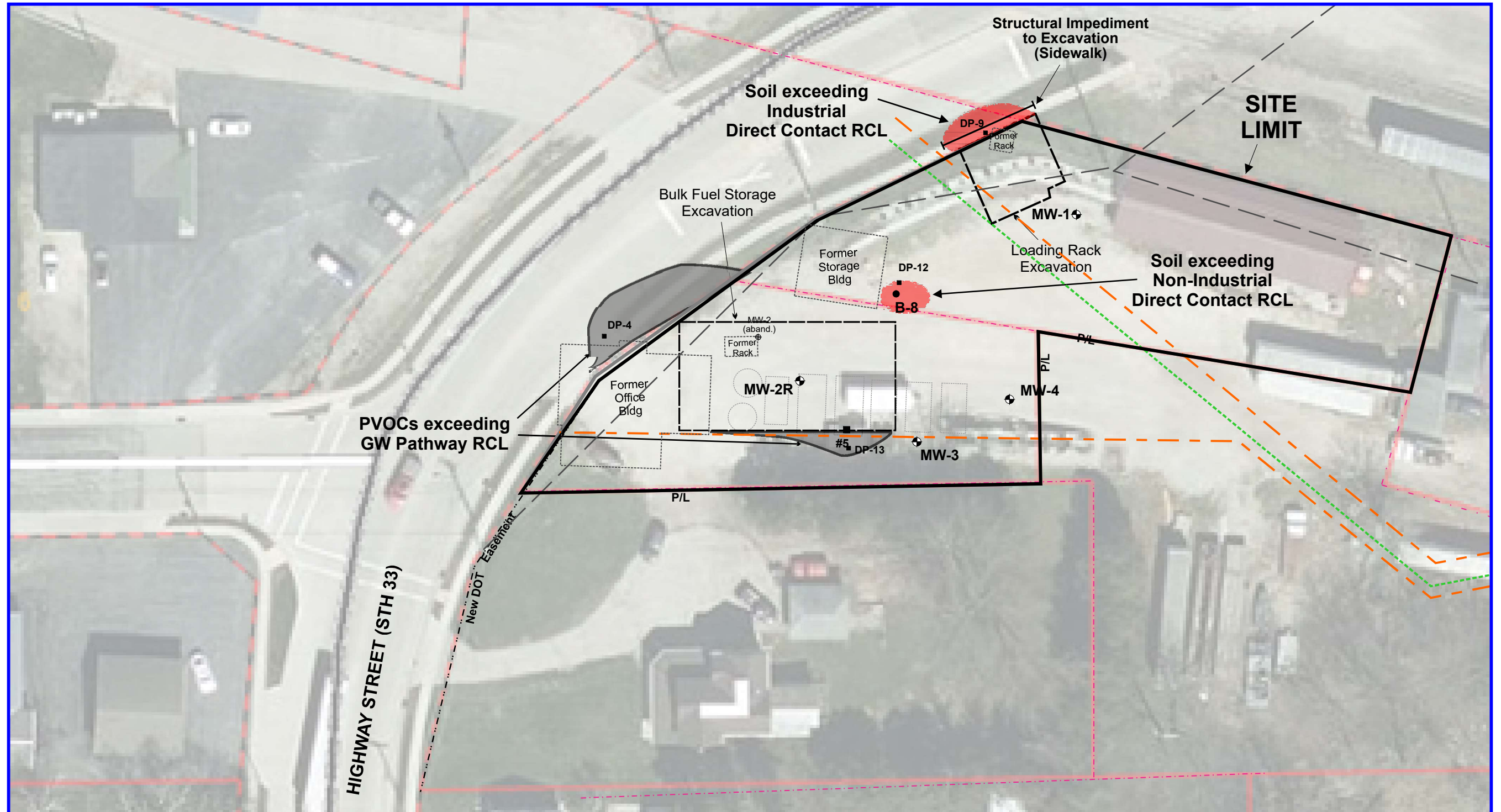
Sincerely,

A handwritten signature in black ink, appearing to read 'Issac A. Ross', with a long horizontal flourish extending to the right.

Issac A. Ross
South Central Region Team Supervisor
Remediation & Redevelopment Program
Fitchburg DNR Service Center – Fitchburg, WI

Attachment(s):
Case closure letter dated 11/6/2023
Attachment B.2.b., Residual Soil Contamination, 5/10/2023
Structural Impediment Photos, October 19, 2023

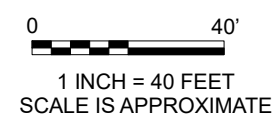
cc: Mark Franz
Mark Fryman, True North



LEGEND

- GB-8 ◆ - DOT Corridor Assessment Boring (2005)
- DP-7 ■ - Phase II Boring (2006)
- B-10 ● - Supplemental Assessment Boring (2014)
- MW-4 ◆ - Monitoring Well Location
- #4 ■ - Remedial Excavation Sample

- Overhead Electric
- Stormwater Sewer
- Sanitary Sewer



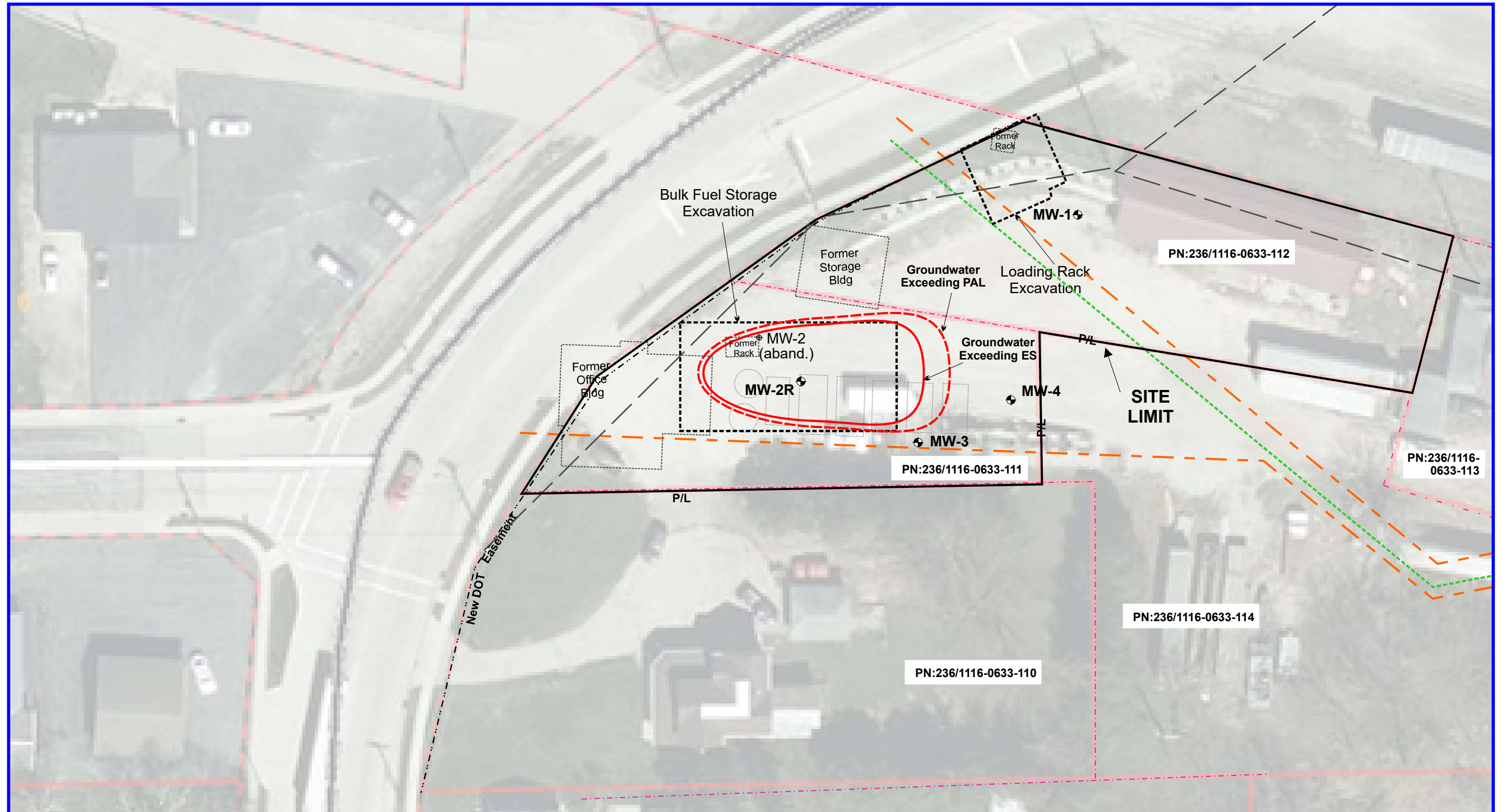
ATTACHMENT B.2.b.
RESIDUAL SOIL CONTAMINATION

525 JUNCTION ROAD
SUITE 5800
MADISON, WI

CLIENT
MARK FRANZ, JR.
421 BARSTOW STREET
HORICON, WI 53032

SITE LOCATION
FREI OIL COMPANY (Former)
207 HIGHWAY STREET
HORICON, WI 53032

PROJECT NUMBER	T222-045
DATE	05/10/2023
SOURCE	Dodge County Public Mapping Field Measurements



LEGEND

MW-1 ↻ - Monitoring Well

- Overhead Electric
- Stormwater Sewer
- Sanitary Sewer

- Former Building

- Former AST
- Former UST

0 40'
1 INCH = 40 FEET
SCALE IS APPROXIMATE



ATTACHMENT B.3.b.

**GROUNDWATER ISOCONCENTRATION
(August 2022)**

525 JUNCTION ROAD
SUITE 5800
MADISON, WI
TRUENORTH
CONSULTANTS

CLIENT
MARK FRANZ, JR.
421 BARSTOW STREET
HORICON, WI 53032

SITE LOCATION
FREI OIL COMPANY (Former)
207 HIGHWAY STREET
HORICON, WI 53032

PROJECT NUMBER	T222-046
DATE	10/17/2022
SOURCE	Dodge County Public Mapping Field Measurements

**Structural Impediment Photographs
Frei Oil (former)
BRRTS: 02-14-287206**



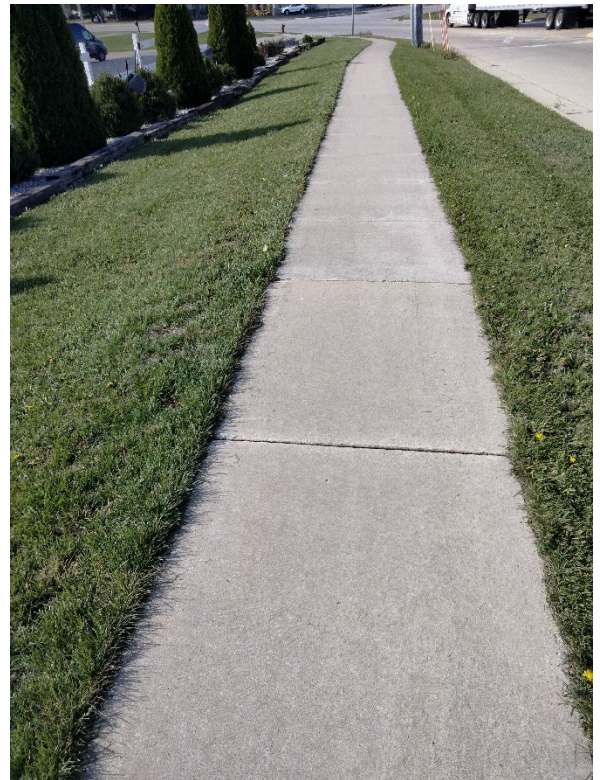
Sidewalk – Looking to North



Sidewalk – Looking to South



Remedial Excavation Area and Sidewalk



Sidewalk Condition

- All photographs were taken on October 19, 2023

Data Tables

Tables that follow are for reference only and were not included in the Department's closure documentation sent to affected parties

ATTACHMENT A.3.
RESIDUAL SOIL CONTAMINATION TABLE
Frei Oil Company (former) - 207 Highway Street - Horicon, WI

Date	WDOT Property Aquisition Investigation - January 2007					Nov. 2014			WDNR Standards		
SAMPLE	DP4	DP5	DP9	DP13	DP15	B-8	EXC2 #4	EXC2 #5	GW RCL	DC RCL	BTV
Depth (ft)	6-8	2-4	2-4	2-4	2-4	3.5	6	6			
DRO	600	2100	160	2100	400	na	na	na	ne	ne	--
GRO	na	na	na	na	na	na	na	na	ne	ne	--
VOCs											
Benzene	1300	1100	<25	<25	<25	<27.5	124	121	5.1	1600	--
1,2 Dichloroethane	nd	nd	nd	nd	nd	nd	na	na	ne	652	--
Ethylbenzene	1500	2200	<25	310	91	<27.5	883	513	1570	8020	--
Methyl-tert-butyl ether	<100	<25	<25	<25	<25	<27.5	<25.0	<25.0	27	63,800	--
Toluene	<100	96	94	<25	<25	<27.5	<25.0	<25.0	1107	818,000	--
1,3,5 Trimethylbenzenes	3500	1400	<25	510	430	<27.5	1360	627	ne	182,000	--
1,2,4 Trimethylbenzenes	11000	4600	51	5900	1300	<27.5	5330	2430	ne	219,000	--
Total Trimethylbenzenes	14500	6000	51	6410	1730	<55.0	6690	3057	1379	ne	--
Total Xylenes	6000	7100	186	1000	180	<81.4	1588.1	840	3940	260,000	--
Naphthalene	5400	790	80	1900	900	<27.5	1970	1230	658.7	5520	--
n-Butylbenzene	2200	480	<25	800	460	na	na	na	ne	108,000	--
s-Butylbenzene	5200	87	<25	150	170	na	na	na	ne	145,000	--
Isopropylbenzene	410	190	<25	120	86	na	na	na	ne	268,000	--
p-Isopropyltoluene	1400	170	<25	310	280	na	na	na	ne	162,000	--
n-Propylbenzene	1000	640	<25	460	170	na	na	na	ne	264,000	--
PAHS											
Acenaphthene	140	na	<13	na	240	<11.1	na	na	ne	3,590,000	--
Acenaphthylene	45	na	<12	na	85	33.4	na	na	ne	ne	--
Anthracene	82	na	22	na	100	35.8	na	na	196,744	17,900,000	--
Benzo(a)anthracene	<55	na	<u>1300</u>	na	<45	<u>368</u>	na	na	ne	1,140	--
Benzo(a)pyrene	<30	na	<u>940</u>	na	<24	<u>363</u>	na	na	470	115	--
Benzo(b)fluoranthene	<29	na	<u>2000</u>	na	<24	256	na	na	480	1,150	--
Benzo(g,h,i)perylene	<37	na	790	na	<30	167	na	na	ne	ne	--
Benzo(k)fluoranthene	<32	na	1000	na	<26	347	na	na	ne	11,500	--
Dibenzo(a,h)anthracene	<28	na	<u>280</u>	na	<23	75.5	na	na	ne	115	--
Chrysene	<45	na	1700	na	<37	349	na	na	145.1	115,000	--
Fluoranthene	<30	na	1100	na	27	420	na	na	88,818	2,390,000	--
Fluorene	230	na	<15	na	420	<11.1	na	na	14,815	2,390,000	--
Indeno(1,2,3-cd)pyrene	<26	na	<u>720</u>	na	<21	181	na	na	ne	1,150	--
1-Methylnaphthalene	1900	na	15	na	3200	11.9	na	na	ne	17,600	--
2-Methylnaphthalene	3200	na	18	na	3900	21.9	na	na	ne	239,000	--
Naphthalene	600	na	<17	na	340	45.9	na	na	658.7	5,520	--
Phenanthrene	710	na	100	na	770	44.8	na	na	ne	ne	--
Pyrene	<25	na	1200	na	22	422	na	na	54,772	1,790,000	--
METALS											
Arsenic	na	1.9	120	na	na	na	na	na	0.584	0.614	8

- VOC and PAH data is listed in ug/kg; DRO, GRO, and Metal data is in mg/kg
- All Detected compounds are included in the table
- na = not analyzed
- ne - no established standard

- GW RCL = Groudwater Pathway Residual Contaminant Level - (exceedances **Bold**)
- DC RCL = Direct Contact Residual Contaminant Level - non-Industrial - (Exceedances Underlined)
- Boxed values exceed Industrial Direct Contact RCL
- BTV = Background Threshold Value



ATTACHMENT A.1. (page 1 of 3)
GROUNDWATER ANALYTICAL TABLE
Frei Oil Company (former) - 207 Highway Street - Horicon, WI

Sample I.D.	B-1	B-2	B-3	B-4	B-7	B-8	B-9	B-10	NR140	
Date	11/07/14	11/07/14	11/07/14	11/07/14	11/07/14	11/07/14	11/07/14	11/07/14	ES	PAL
VOCs										
Benzene	0.46	<0.40	<u>1.5</u>	61	0.42	<0.40	<0.40	<0.40	5	0.5
1,2 Dichloroethane	na	na	na	na	na	na	na	na	5	0.5
Ethylbenzene	<0.39	<0.39	5.3	112	0.52	<0.39	<0.39	<0.39	700	140
Methyl-tert-butyl ether	<0.48	<0.48	<0.48	<2.4	<0.48	0.70	<0.48	<0.48	60	12
Toluene	0.61	0.77	0.66	3.8	0.50	<0.39	<0.39	<0.39	800	160
1,3,5 Trimethylbenzenes	<0.42	<0.42	2.9	107	2.2	<0.42	<0.42	<0.42	ns	ns
1,2,4 Trimethylbenzenes	<0.42	<0.42	11.5	384	5.9	<0.42	<0.42	<0.42	ns	ns
Total Trimethylbenzenes	<0.84	<0.84	14	491	8.1	<0.84	<0.84	<0.84	480	96
Xylenes, -m, -p	<0.80	<0.80	6.6	336	2.6	<0.80	<0.80	<0.80	ns	ns
Xylene, -o	<0.45	<0.45	0.52	7.3	<0.45	<0.45	<0.45	<0.45	ns	ns
Total Xylenes	<1.25	<1.25	7.12	343	2.6	<1.25	<1.25	<1.25	2000	400
Naphthalene	<0.42	0.49	8.0	181	3.9	<0.42	<0.42	<0.42	100	10
n-butylbenzene	na	na	na	na	na	na	na	na	ns	ns
Isopropylbenzene	na	na	na	na	na	na	na	na	ns	ns
n-propylbenzene	na	na	na	na	na	na	na	na	ns	ns
Chloroethane	na	na	na	na	na	na	na	na	400	80
PAHs										
Acenaphthrene	na	na	na	na	na	na	na	na	ns	ns
Acenaphthylene	na	na	na	na	na	na	na	na	ns	ns
Anthracene	na	na	na	na	na	na	na	na	3000	600
Benzo(a)anthracene	na	na	na	na	na	na	na	na	ns	ns
Benzo(a)pyrene	na	na	na	na	na	na	na	na	0.2	0.02
Benzo(b)fluoranthene	na	na	na	na	na	na	na	na	0.2	0.02
Benzo(g,h,i)perylene	na	na	na	na	na	na	na	na	ns	ns
Benzo(k)fluoranthene	na	na	na	na	na	na	na	na	ns	ns
Chrysene	na	na	na	na	na	na	na	na	0.2	0.02
Dibenzo(a,h)anthracene	na	na	na	na	na	na	na	na	ns	ns
Fluoranthene	na	na	na	na	na	na	na	na	400	80
Fluorene	na	na	na	na	na	na	na	na	400	80
Indeno(1,2,3-cd)pyrene	na	na	na	na	na	na	na	na	ns	ns
1-Methylnaphthalene	na	na	na	na	na	na	na	na	ns	ns
2-Methylnaphthalene	na	na	na	na	na	na	na	na	ns	ns
Naphthalene	na	na	na	na	na	na	na	na	100	10
Phenanthrene	na	na	na	na	na	na	na	na	ns	ns
Pyrene	na	na	na	na	na	na	na	na	250	50
METALS										
Arsenic	na	na	na	na	na	na	na	na	10	1
Barium	na	na	na	na	na	na	na	na	2000	400
Cadmium	na	na	na	na	na	na	na	na	5	0.5
Chromium	na	na	na	na	na	na	na	na	100	10
Lead	na	na	na	na	na	na	na	na	15	1.5
Mercury	na	na	na	na	na	na	na	na	2	0.2
Selenium	na	na	na	na	na	na	na	na	50	10
Silver	na	na	na	na	na	na	na	na	50	10

- All data is listed in ug/l
- na = not analyzed
- ns = no standard established

- J = detected below limit of quantitation
- NR140 ES = Enforcement Standard (exceedances bold)
- NR140 PAL = Preventative Action Limit (exceedances underlined)



ATTACHMENT A.1. (page 2 of 3)
GROUNDWATER ANALYTICAL TABLE
Frei Oil Company (former) - 207 Highway Street - Horicon, WI

Sample I.D.	MW-1								MW-2				MW-2R				NR140		
	Date	09/11/15	01/28/16	08/10/16	11/29/16	07/22/19	09/26/19	03/03/20	08/18/22	09/11/15	01/28/16	08/10/16	11/29/16	07/22/19	09/26/19	03/03/20	08/18/22	ES	PAL
VOCs																			
Benzene	<0.50	<0.50	<0.40	<0.40	<0.25	<0.25	<0.25	<0.30	252	432	177	87.9	461	250	258	50.2	5	0.5	
1,2 Dichloroethane	<0.17	<0.17	na	na	na	na	na	na	<0.17	<0.34	na	na	na	na	na	na	5	0.5	
Ethylbenzene	<0.50	<0.50	<0.39	<0.39	<0.22	<0.22	<0.32	<0.33	63.8	139	13.7	9.1	581	212	<u>249</u>	18.6	700	140	
Methyl-tert-butyl ether	<0.17	<0.17	<0.48	<0.48	<1.2	<1.2	<1.2	<1.1	<0.17	1.4 J	2.4	1.7	<12.5	<3.1	<3.1	<1.1	60	12	
Toluene	<0.50	<0.50	<0.39	<0.39	<0.17	<0.17	<0.27	<0.29	4.5	5.0	1.8	1.5	9.2 J	2.8 J	1.9 J	0.55 J	800	160	
1,3,5 Trimethylbenzenes	<0.50	<0.50	<0.42	<0.42	<0.87	<0.87	<0.87	<0.36	7.0	<1.0	0.78 J	1.6	117	55.4	14.3	1.2	ns	ns	
1,2,4 Trimethylbenzenes	<0.50	<0.50	<0.42	<0.42	<0.84	<0.84	<0.84	<0.45	26.0	15.3	7.2	10.3	698	271	170	15.4	ns	ns	
Total Trimethylbenzenes	<1.00	<1.00	<0.84	<0.84	<1.71	<1.71	<1.71	<0.81	33.0	15.3	7.98	11.9	815	<u>326.4</u>	<u>184.3</u>	16.6	480	96	
Xylenes, -m, -p	<1.0	<1.0	<0.80	<0.80	<0.47	<0.47	<0.47	na	141	54.7	28.5	27.7	866	240	171	na	ns	ns	
Xylene, -o	<0.50	<0.50	<0.45	<0.45	<0.26	<0.26	<0.26	na	1.6	<1.0	<0.45	<0.45	12.8	3.4	1.6 J	na	ns	ns	
Total Xylenes	<1.5	<1.5	<1.25	<1.25	<0.73	<0.73	<0.73	<1.0	142.6	54.7	28.5	27.7	878.8	243.4	172.6	10.8	2000	400	
Naphthalene	<2.5	<2.5	<0.42	<0.42	<1.2	<1.2	<1.2	<1.1	4.5	<u>14.8</u>	1.5	3.5	107	<u>74.7</u>	<u>54.3</u>	3.8 J	100	10	
n-butylbenzene	<0.50	<0.50	na	na	na	na	na	na	<0.50	1.1 J	na	na	na	na	na	na	ns	ns	
Isopropylbenzene	<0.14	<0.14	na	na	na	na	na	na	1.4	1.4 J	na	na	na	na	na	na	ns	ns	
n-propylbenzene	<0.50	<0.50	na	na	na	na	na	na	2.9	10.3	na	na	na	na	na	na	ns	ns	
Chloroethane	<0.37	<0.37	na	na	na	na	na	na	<0.37	2.4	na	na	na	na	na	na	400	80	
PAHs																			
Acenaphthrene	<0.0048	<0.0045	na	na	na	na	na	na	0.072	0.066	na	na	na	na	na	na	ns	ns	
Acenaphthylene	<0.0048	<0.0045	na	na	na	na	na	na	0.033 J	0.014 J	na	na	na	na	na	na	ns	ns	
Anthracene	<0.0039	<0.0037	na	na	na	na	na	na	0.012 J	0.021 J	na	na	na	na	na	na	3000	600	
Benzo(a)anthracene	<0.0050	<0.0047	na	na	na	na	na	na	<0.0048	0.0073 J	na	na	na	na	na	na	ns	ns	
Benzo(a)pyrene	<0.0043	0.0044 J	na	na	na	na	na	na	<0.0041	<0.0040	na	na	na	na	na	na	0.2	0.02	
Benzo(b)fluoranthene	<0.0052	0.0071 J	na	na	na	na	na	na	<0.0049	<0.0048	na	na	na	na	na	na	0.2	0.02	
Benzo(g,h,i)perylene	<0.0034	0.0082 J	na	na	na	na	na	na	<0.0032	<0.0032	na	na	na	na	na	na	ns	ns	
Benzo(k)fluoranthene	<0.0055	<0.0051	na	na	na	na	na	na	<0.0052	<0.0051	na	na	na	na	na	na	ns	ns	
Chrysene	0.010 J	0.017 J	na	na	na	na	na	na	0.0060 J	<0.0038	na	na	na	na	na	na	0.2	0.02	
Dibenzo(a,h)anthracene	<0.0054	<0.0051	na	na	na	na	na	na	<0.0051	<0.0050	na	na	na	na	na	na	ns	ns	
Fluoranthene	<0.0091	0.011 J	na	na	na	na	na	na	<0.0087	<0.0085	na	na	na	na	na	na	400	80	
Fluorene	<0.0039	0.0043 J	na	na	na	na	na	na	0.029 J	0.054	na	na	na	na	na	na	400	80	
Indeno(1,2,3-cd)pyrene	<0.0035	<0.0033	na	na	na	na	na	na	<0.0033	<0.0032	na	na	na	na	na	na	ns	ns	
1-Methylnaphthalene	0.010 J	0.019 J	na	na	na	na	na	na	0.033 J	0.95	na	na	na	na	na	na	ns	ns	
2-Methylnaphthalene	0.0051 J	0.0078 J	na	na	na	na	na	na	0.034 J	0.36	na	na	na	na	na	na	ns	ns	
Naphthalene	0.0070 J	<0.0041	na	na	na	na	na	na	0.071	1.9	na	na	na	na	na	na	100	10	
Phenanthrene	0.016 J	0.041 J	na	na	na	na	na	na	0.014 J	0.049	na	na	na	na	na	na	ns	ns	
Pyrene	0.0079 J	0.022 J	na	na	na	na	na	na	0.0092 J	<0.0069	na	na	na	na	na	na	250	50	
METALS																			
Arsenic	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	10	1
Barium	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	2000	400
Cadmium	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	5	0.5
Chromium	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	100	10
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	15	1.5
Mercury	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	2	0.2
Selenium	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	50	10
Silver	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	50	10

- All data is listed in ug/l
- na = not analyzed
- ns = no standard established

- J = detected below limit of quantitation
- NR140 ES = Enforcement Standard (exceedances bold)
- NR140 PAL = Preventative Action Limit (exceedances underlined)

ATTACHMENT A.1. (page 3 of 3)
GROUNDWATER ANALYTICAL TABLE
Frei Oil Company (former) - 207 Highway Street - Horicon, WI

Sample I.D.	MW-3								MW-4								NR140		
	Date	09/11/15	01/28/16	08/10/16	11/29/16	07/22/19	09/26/19	03/03/20	08/18/22	09/11/15	01/28/16	08/10/16	11/29/16	07/22/19	09/26/19	03/03/20	08/18/22	ES	PAL
VOCs																			
Benzene	<u>1.1</u>	<u>1.2</u>	<0.40	<0.40	<0.25	<0.25	0.29 J	<0.30	<0.50	<0.50	<0.40	<0.40	<0.25	<0.25	<0.25	<0.30	5	0.5	
1,2 Dichloroethane	<0.17	<0.17	na	na	na	na	na	na	<0.17	<0.17	na	na	na	na	na	na	5	0.5	
Ethylbenzene	2.2	2.1	<0.39	<0.39	<0.22	<0.22	<0.32	<0.33	<0.50	<0.50	<0.39	<0.39	<0.22	<0.22	<0.32	<0.33	700	140	
Methyl-tert-butyl ether	<0.17	<0.17	<0.48	<0.48	<1.2	<1.2	<1.2	<1.1	0.50 J	0.36 J	0.76 J	<0.48	<1.2	<1.2	<1.2	<1.1	60	12	
Toluene	<0.50	<0.50	<0.39	<0.39	<0.17	<0.17	<0.27	<0.29	<0.50	<0.50	<0.39	<0.39	<0.17	<0.17	<0.27	<0.29	800	160	
1,3,5 Trimethylbenzenes	1.3	<0.50	<0.42	<0.42	<0.87	<0.87	<0.87	<0.36	<0.50	<0.50	<0.42	<0.42	<0.87	<0.87	<0.87	<0.36	ns	ns	
1,2,4 Trimethylbenzenes	4.5	0.84 J	<0.42	<0.42	<0.84	<0.84	<0.84	<0.45	<0.50	<0.50	<0.42	<0.42	<0.84	<0.84	<0.84	<0.45	ns	ns	
Total Trimethylbenzenes	5.8	0.84 J	<0.84	<0.84	<1.71	<1.71	<1.71	<0.81	<1.00	<1.00	<0.84	<0.84	<1.71	<1.71	<1.71	<0.81	480	96	
Xylenes, -m, -p	4.5	1.0 J	<0.80	<0.80	<0.47	<0.47	<0.47	na	<1.0	<1.0	<0.80	<0.80	<0.47	<0.47	<0.47	na	ns	ns	
Xylene, -o	<0.50	<0.50	<0.45	<0.45	<0.26	<0.26	<0.26	na	<0.50	<0.50	<0.45	<0.45	<0.26	<0.26	<0.26	na	ns	ns	
Total Xylenes	4.5	1.0 J	<1.25	<1.25	<0.73	<0.73	<0.73	<1.0	<1.5	<1.5	<1.25	<1.25	<0.73	<0.73	<0.73	<1.0	2000	400	
Naphthalene	8.3	5.9	<0.42	<0.42	<1.2	<1.2	<1.2	<1.1	<2.5	<2.5	<0.42	<0.42	<1.2	<1.2	<1.2	<1.1	100	10	
n-butylbenzene	0.64	<0.50	na	na	na	na	na	na	<0.50	<0.50	na	na	na	na	na	na	ns	ns	
Isopropylbenzene	0.52	<0.14	na	na	na	na	na	na	<0.14	<0.14	na	na	na	na	na	na	ns	ns	
n-propylbenzene	0.68	1.3	na	na	na	na	na	na	<0.50	<0.50	na	na	na	na	na	na	ns	ns	
Chloroethane	<0.37	<0.37	na	na	na	na	na	na	<0.37	<0.37	na	na	na	na	na	na	400	80	
PAHs																			
Acenaphthrene	0.076	0.10	na	na	na	na	na	na	<0.0052	<0.0046	na	na	na	na	na	na	ns	ns	
Acenaphthylene	0.026 J	0.014 J	na	na	na	na	na	na	<0.0052	<0.0046	na	na	na	na	na	na	ns	ns	
Anthracene	<0.0037	0.0048 J	na	na	na	na	na	na	<0.0043	0.0062 J	na	na	na	na	na	na	3000	600	
Benzo(a)anthracene	<0.0048	<0.0047	na	na	na	na	na	na	<0.0054	<0.0048	na	na	na	na	na	na	ns	ns	
Benzo(a)pyrene	<0.0041	<0.0040	na	na	na	na	na	na	<0.0047	<0.0041	na	na	na	na	na	na	0.2	0.02	
Benzo(b)fluoranthene	<0.0049	<0.0048	na	na	na	na	na	na	<0.056	<0.0050	na	na	na	na	na	na	0.2	0.02	
Benzo(g,h,i)perylene	<0.0032	<0.0032	na	na	na	na	na	na	<0.037	0.0035 J	na	na	na	na	na	na	ns	ns	
Benzo(k)fluoranthene	<0.0052	<0.0051	na	na	na	na	na	na	<0.0059	<0.0053	na	na	na	na	na	na	ns	ns	
Chrysene	0.0066 J	<0.0039	na	na	na	na	na	na	0.010 J	<u>0.021 J</u>	na	na	na	na	na	na	0.2	0.02	
Dibenzo(a,h)anthracene	<0.0051	<0.0051	na	na	na	na	na	na	<0.059	<0.0052	na	na	na	na	na	na	ns	ns	
Fluoranthene	<0.0087	<0.0085	na	na	na	na	na	na	<0.0099	<0.0088	na	na	na	na	na	na	400	80	
Fluorene	0.042 J	0.078	na	na	na	na	na	na	<0.0043	<0.0038	na	na	na	na	na	na	400	80	
Indeno(1,2,3-cd)pyrene	<0.0033	<0.0033	na	na	na	na	na	na	<0.0038	<0.0033	na	na	na	na	na	na	ns	ns	
1-Methylnaphthalene	0.052	0.76	na	na	na	na	na	na	0.017 J	0.0088 J	na	na	na	na	na	na	ns	ns	
2-Methylnaphthalene	0.045 J	0.076	na	na	na	na	na	na	0.0083 J	0.0074 J	na	na	na	na	na	na	ns	ns	
Naphthalene	0.028 J	0.17	na	na	na	na	na	na	0.0084 J	0.0058 J	na	na	na	na	na	na	100	10	
Phenanthrene	0.013 J	0.029 J	na	na	na	na	na	na	0.022 J	0.017 J	na	na	na	na	na	na	ns	ns	
Pyrene	<0.0071	<0.0070	na	na	na	na	na	na	0.013 J	0.011 J	na	na	na	na	na	na	250	50	
METALS																			
Arsenic	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	10	1
Barium	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	2000	400
Cadmium	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	5	0.5
Chromium	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	100	10
Lead	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	15	1.5
Mercury	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	2	0.2
Selenium	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	50	10
Silver	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	50	10

- All data is listed in ug/l
- na = not analyzed
- ns = no standard established

- J = detected below limit of quantitation
- NR140 ES = Enforcement Standard (exceedances bold)
- NR140 PAL = Preventative Action Limit (exceedances underlined)