State of Wisconsin Department of Natural Resources PO Box 7921, Madison WI 53707-7921 dnr.wi.gov

Technical Assistance, Environmental Liability Clarification or Post-Closure Modification Request

Form 4400-237 (R 9/15)

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Notice: Use this form to request a written response (on agency letterhead) from the Department of Natural Resources (DNR) regarding technical assistance, a post-closure change to a site, a specialized agreement or liability clarification for Property with known or suspected environmental contamination. A fee will be required as is authorized by s. 292.55, Wis. Stats., and NR 749, Wis. Adm. Code., unless noted in the instructions below. 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.].

Definitions

- "Property" refers to the subject Property that is perceived to have been or has been impacted by the discharge of hazardous substances.
- "Liability Clarification" refers to a written determination by the Department provided in response to a request made on this form. The response clarifies whether a person is or may become liable for the environmental contamination of a Property, as provided in s. 292.55. Wis. Stats.
- "Technical Assistance" refers to the Department's assistance or comments on the planning and implementation of an environmental investigation or environmental cleanup on a Property in response to a request made on this form as provided in s. 292.55, Wis. Stats.
- "Post-closure modification" refers to changes to Property boundaries and/or continuing obligations for Properties or sites that received closure letters for which continuing obligations have been applied or where contamination remains. Many, but not all, of these sites are included on the GIS Registry layer of RR Sites Map to provide public notice of residual contamination and continuing obligations.

Select the Correct Form

This from should be used to request the following from the DNR:

- Technical Assistance
- Liability Clarification
- Post-Closure Modifications
- Specialized Agreements (tax cancellation, negotiated agreements, etc.)

Do not use this form if one of the following applies:

- Request for an off-site liability exemption or clarification for Property that has been or is perceived to be contaminated by one
 or more hazardous substances that originated on another Property containing the source of the contamination. Use DNR's Off-Site
 Liability Exemption and Liability Clarification Application Form 4400-201.
- Submittal of an Environmental Assessment for the Lender Liability Exemption, s 292.21, Wis. Stats., if no response or review by DNR is requested. Use the Lender Liability Exemption Environmental Assessment Tracking Form 4400-196.
- Request for an exemption to develop on a historic fill site or licensed landfill. Use DNR's Form 4400-226 or 4400-226A.
- Request for closure for Property where the investigation and cleanup actions are completed. Use DNR's Case Closure GIS Registry Form 4400-202.

All forms, publications and additional information are available on the internet at: dnr.wi.gov/topic/Brownfields/Pubs.html.

Instructions

- 1. Complete sections 1, 2, 6 and 7 for all requests. Be sure to provide adequate and complete information.
- 2. Select the type of assistance requested: Section 3 for technical assistance or post-closure modifications, Section 4 for a written determination or clarification of environmental liabilities; or Section 5 for a specialized agreement.
- 3. Include the fee payment that is listed in Section 3, 4, or 5, unless you are a "Voluntary Party" enrolled in the Voluntary Party Liability Exemption Program **and** the questions in Section 2 direct otherwise. Information on to whom and where to send the fee is found in Section 8 of this form.
- 4. Send the completed request, supporting materials and the fee to the appropriate DNR regional office where the Property is located. See the map on the last page of this form. A paper copy of the signed form and all reports and supporting materials shall be sent with an electronic copy of the form and supporting materials on a compact disk. For electronic document submittal requirements see: http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf"

The time required for DNR's determination varies depending on the complexity of the site, and the clarity and completeness of the request and supporting documentation.

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Section 1. Contact and Recip	lent information					
Requester Information						
This is the person requesting tech specialized agreement and is idea	This is the person requesting technical assistance or a post-closure modification review, that his or her liability be clarified or a specialized agreement and is identified as the requester in Section 7. DNR will address its response letter to this person.					
Last Name	First	MI	MI Organization/ Business Name			
Smith	Jason	Ì	Tecumseh Products Company LLC			
Mailing Address		•	City	State	ZIP Code	
2700 West Wood Street			Paris	TN	38242	
Phone # (include area code)	Fax # (include area code)		Email			
(731) 644-8127	(731) 644-8184		jason.smith@tecumseh.com			
The requester listed above: (selec	ct all that apply)					
Is currently the owner		[Is considering selling the Property			
Is renting or leasing the Pro	pperty	[Is considering acquiring the Property			
Is a lender with a mortgage	e interest in the Property					
Other. Explain the status of	the Property with respect to	the a	pplicant:			
Tecumseh is the previous o associated with the historic		aintains responsibility for certain envir	onment	al conditions		
Contact Information (to be c				ect if sar	ne as requester	
Contact Last Name	First	MI	Organization/ Business Name			
Sellwood	Alyssa		TRC Environmental Corporation	15	1915 6 1	
Mailing Address			City	State	ZIP Code	
708 Heartland Trail, Suite 300			Madison	WI	53717	
Phone # (include area code)	Fax # (include area code)		Email			
(608) 826-3677	(if a muli a alala)		ASellwood@trccompanies.com			
Environmental Consultant Contact Last Name	(ir applicable) First	MI	Organization/ Business Name			
Sellwood	Alyssa		TRC Environmental Corporation			
Mailing Address			City	State	ZIP Code	
708 Heartland Trail, Suite 3000			Madison	WI	53717	
Phone # (include area code) Fax # (include area code)			Email			
(608) 826-3677			ASellwood@trccompanies.com			
		_	ASellwood@trccompanies.com			
Property Owner (if differen		МІ				
Property Owner (if different Contact Last Name	First	МІ	Organization/ Business Name			
Property Owner (if differen		MI		State	ZIP Code	
Property Owner (if different Contact Last Name Jones	First	MI	Organization/ Business Name Heus Acquisitions, LLC	State IN	ZIP Code 47201	
Property Owner (if different Contact Last Name Jones Mailing Address	First	MI	Organization/ Business Name Heus Acquisitions, LLC City	1		

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Property Name	nation			FID No. (i	f known	1)
Former Tecumseh Produc		772010470				
BRRTS No. (if known)		Parcel Identificat	ion Number		<u> </u>	
02-08-363333		18450, 18464,	18465, 18568,	18569, 18	8919, 1	8920, 18921
Street Address		City				ZIP Code
1604 Michigan Avenue		New Holstein			WI	53061
County	Municipality where the Property is Id	ocated	Property is con			perty Size Acres
Calumet	City Town Village of Ne	w Holstein	Single tax (Multiple because	tax 38	
Is a response needed by a plan accordingly. No Yes Date reques Reason:	a specific date? (e.g., Property closin	g date) Note: Most r	equests are com	ipleted with	hin 60 d	ays. Please
 No. Include the fee the Yes. Do not include a Fill out the information Section 3. Technical A 	d as a Voluntary Party in the Voluntainat is required for your request in Sa separate fee. This request will be been Section 3, 4 or 5 which corresponds sistance or Post-Closure Modification; or Section 5. Specialize	Section 3, 4 or 5. billed separately throughout with the type ocations;	ugh the VPLE P	-		
Section 3. Request for To	echnical Assistance or Post-Clost	ure Modification				
Select the type of technical	assistance requested: [Numbers in I	brackets are for WI	DNR Use]			·
to an immediate a Review of Site Inv. Review of Site Inv. Approval of a Site. Review of a Reme Review of a Reme Review of a Reme Review of a Long- Review of an Oper	Letter (NFA) (Immediate Actions) - Iction after a discharge of a hazardou estigation Work Plan - NR 716.09, [1:estigation Report - NR 716.15, [137] Specific Soil Cleanup Standard - NR dial Action Options Report - NR 722. dial Action Design Report - NR 724.0 dial Action Documentation Report - Nterm Monitoring Plan - NR 724.17, [2:ration and Maintenance Plan - NR 72	s substance occurs. 35] - Include a fee - Include a fee of 720.10 or 12, [67] 13, [143] - Include 09, [148] - Include NR 724.15, [152] - I 5] - Include a fee of 4.13, [192] - Include	Generally, these of \$700. \$1050. Include a fee of a fee of \$1050. a fee of \$1050. Include a fee of of \$425. de a fee of \$425	e are for a of \$1050. \$350	one-tim	e spill event.
Schedule a Techn	nce - s. 292.55, Wis. Stats. [97] (For rical Assistance Meeting - Include a	fee of \$700.	n abandoned lar	idfill use F	orm 440)0-226)
	Determination - Include a fee of \$7		in on attachm			
U Other rechnical A	ssistance - Include a fee of \$700. E	Apiairi your request	m an allachmen			
Post-Closure Modificatio	ns - NR 727, [181]					
	ifications: Modification to Property bo e GIS Registry. This also includes re					
☐ Include a fee o	f \$300 for sites with residual soil con	tamination; and				
Include a fee of obligations.	of \$350 for sites with residual ground	water contamination	, monitoring well	s or for var	por intru	ision continuing
to a Property, site	on of the changes you are proposing, or continuing obligation will result in I later in the approval process, on a ca	revised maps, maint	as to why the ch enance plans or	ianges are photograp	needed hs, thos	d (if the change se documents

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Skip Sections 4 and 5 if the technical assistance you are requesting is listed above and complete Sections 6 and 7 of this form.

Section 4. Request for Liability Clarification

	ification requested. Use the available space given or attach information, explanations, or specific vered in DNR's reply. Complete Sections 6 and 7 of this form. [Numbers in brackets are for DNR Use]
"Lender" liability exempt	tion clarification - s. 292.21, Wis. Stats. [686]
Include a fee of \$7	00.
Provide the following do	cumentation:
(1) ownership status of	the real Property, and/or the personal Property and fixtures;
(2) an environmental as	sessment, in accordance with s. 292.21, Wis. Stats.;
(3) the date the environ	mental assessment was conducted by the lender;
(4) the date of the Prope sheriff's sale.	erty acquisition; for foreclosure actions, include a copy of the signed and dated court order confirming the
(5) documentation show	ring how the Property was acquired and the steps followed under the appropriate state statutes.
(6) a copy of the Proper	ty deed with the correct legal description; and,
(7) the Lender Liability E	Exemption Environmental Assessment Tracking Form (Form 4400-196).
	done, please provide reasoning as to why it was not conducted. Include this either in the accompanying asment or as an attachment to this form, and cite language in s. 292. 21(1)(c)2.,hi., Wis. Stats.:
contaminated base other information a materials in the gro	analysis of representative samples of soil or other materials in the ground that are suspected of being ed on observations made during a visual inspection of the real Property or based on aerial photographs, or vailable to the lender, including stained or discolored soil or other materials in the ground and including soil or bund in areas with dead or distressed vegetation. The collection and analysis shall identify contaminants in the als in the ground and shall quantify concentrations.
Property and the de	analysis of representative samples of unknown wastes or potentially hazardous substances found on the real etermination of concentrations of hazardous waste and hazardous substances found in tanks, drums or other es or lagoons on the real Property.
"Representative" liability	v exemption clarification (e.g. trustees, receivers, etc.) - s. 292.21, Wis. Stats. [686]
❖ Include a fee of \$7	00.
Provide the following do	ocumentation:
(1) ownership status of	the Property;
(2) the date of Property	acquisition by the representative;
(3) the means by which	the Property was acquired;
(4) documentation that t	the representative has no beneficial interest in any entity that owns, possesses, or controls the Property;
(5) documentation that t	the representative has not caused any discharge of a hazardous substance on the Property; and
(6) a copy of the Proper	ty deed with the correct legal description.
Clarification of local gov	rernmental unit (LGU) liability exemption at sites with: (select all that apply)
hazardous substan	ces spills - s. 292.11(9)(e), Wis. Stats. [649];
	nental contamination - [649];
	s. 292.24 (2), Wis. Stats. [649]; and/or
	2.23 (2), Wis. Stats. [649].
Include a fee of \$7	00, a summary of the environmental liability clarification being requested, and the following:
 clear supporting doc state statute(s). 	sumentation showing the acquisition method used, and the steps followed under the appropriate
(2) current and propose	d ownership status of the Property;
(3) date and means by v	which the Property was acquired by the LGU, where applicable;
(4) a map and the $\frac{1}{4}$, $\frac{1}{4}$	section location of the Property;
(5) summary of current	
(6) intended or potential	use(s) of the Property;
(7) descriptions of other	investigations that have taken place on the Property; and

(8) (for solid waste clarifications) a summary of the license history of the facility.

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Section 4	. Request for Liability Clarification (cont.)
Lea	ase liability clarification - s. 292.55, Wis. Stats. [646]
*	Include a fee of \$700 for a single Property, or \$1400 for multiple Properties and the information listed below:
(1)	a copy of the proposed lease;
(2)	the name of the current owner of the Property and the person who will lease the Property;
(3)	a description of the lease holder's association with any persons who have possession, control, or caused a discharge of a hazardous substance on the Property;
(4)	map(s) showing the Property location and any suspected or known sources of contamination detected on the Property;
(5)	a description of the intended use of the Property by the lease holder, with reference to the maps to indicate which areas will be used. Explain how the use will not interfere with any future investigation or cleanup at the Property; and
(6)	all reports or investigations (e.g. Phase I and Phase II Environmental Assessments and/or Site Investigation Reports conducted under s. NR 716, Wis. Adm. Code) that identify areas of the Property where a discharge has occurred.
Genera	al or other environmental liability clarification - s. 292.55, Wis. Stats. [682] - Explain your request below.
*	Include a fee of \$700 and an adequate summary of relevant environmental work to date.
	Action Required (NAR) - NR 716.05, [682] Include a fee of \$700.
ass	e where an environmental discharge has or has not occurred, and applicant wants a DNR determination that no further dessment or clean-up work is required. Usually this is requested after a Phase I and Phase II environmental assessment has en conducted; the assessment reports should be submitted with this form. This is not a closure letter.
☐ Cla	rify the liability associated with a "closed" Property - s. 292.55, Wis. Stats. [682]
*	Include a fee of \$700.
- Includ	le a copy of any closure documents if a state agency other than DNR approved the closure.

Use this space or attach additional sheets to provide necessary information, explanations or specific questions to be answered by the DNR

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Section 5. Red	luest for a Spec	cialized Agreem	ient	

Select the type of agreement needed. Include the appropriate draft agreements and supporting materials. Complete Sections 6 and 7 of this form. More information and model draft agreements are available at: dnr.wi.gov/topic/Brownfields/lgu.html#tabx4 .
Tax cancellation agreement - s. 75.105(2)(d), Wis. Stats. [654]
❖ Include a fee of \$700, and the information listed below:
 (1) Phase I and II Environmental Site Assessment Reports, (2) a copy of the Property deed with the correct legal description; and, (3) a draft 75.105 agreement based on the DNR's model (dnr.wi.gov/topic/brownfields/documents/mod75-105agrmt.pdf).
Agreement for assignment of tax foreclosure judgement - s.75.106, Wis. Stats. [666]
❖ Include a fee of \$700, and the information listed below:
 (1) Phase I and II Environmental Site Assessment Reports, (2) a copy of the Property deed with the correct legal description; and, (3) a draft 75.105 agreement based on the DNR's model (<u>dnr.wi.gov/topic/brownfields/documents/mod75-106agrmt.pdf</u>).
Negotiated agreement - Enforceable contract for non-emergency remediation - s. 292.11(7)(d) and (e), Wis. Stats. [630]
Include a fee of \$1400, and the information listed below:
(1) a draft schedule for remediation; and,(2) the name, mailing address, phone and email for each party to the agreement.
Section 6. Other Information Submitted Identify all materials that are included with this request.
Include one copy of any document from any state agency files that you want the Department to review as part of this request. The person submitting this request is responsible for contacting other state agencies to obtain appropriate reports or information.
Phase I Environmental Site Assessment Report - Date:
Phase II Environmental Site Assessment Report - Date:
Legal Description of Property (required for all liability requests and specialized agreements)
Map of the Property (required for all liability requests and specialized agreements)
Analytical results of the following sampled media: Select all that apply and include date of collection.
Groundwater Soil Sediment Other medium - Describe: Date of Collection:
A copy of the closure letter and submittal materials
☐ Draft tax cancellation agreement
Draft agreement for assignment of tax foreclosure judgment
Other report(s) or information - Describe:
For Property with newly identified discharges of hazardous substances only: Has a notification of a discharge of a hazardous substance been sent to the DNR as required by s. NR 706.05(1)(b), Wis. Adm. Code?
Yes - Date (if known):
○ No

Note: The Notification for Hazardous Substance Discharge (non-emergency) form is available at: dnr.wi.gov/files/PDF/forms/4400/4400-225.pdf.

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Section 7. Certification by the Per	son who completed this form	
I am the person submitting this	s request (requester)	
I prepared this request for: Ja	son Smith	_
	Requester Name	•
•	st of my knowledge. I also certify I have	nat the information on and included with this request is the legal authority and the applicant's permission to make $\frac{9/30//9}{\text{Date Signed}}$
Project Manager Title		U08-826-3677 Telephone Number (include area code)

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Section 8. DNR Contacts and Addresses for Request Submittals

Send or deliver one paper copy and one electronic copy on a compact disk of the completed request, supporting materials, and fee to the region where the property is located to the address below. Contact a <u>DNR regional brownfields specialist</u> with any questions about this form or a specific situation involving a contaminated property. For electronic document submittal requirements see: http://dnr.wi.gov/files/PDF/pubs/rr/RR690.pdf.

DNR NORTHERN REGION

Attn: RR Program Assistant Department of Natural Resources 223 E Steinfest Rd Antigo, WI 54409

DNR NORTHEAST REGION

Attn: RR Program Assistant Department of Natural Resources 2984 Shawano Avenue Green Bay WI 54313

DNR SOUTH CENTRAL REGION

Attn: RR Program Assistant Department of Natural Resources 3911 Fish Hatchery Road Fitchburg WI 53711

DNR SOUTHEAST REGION

Attn: RR Program Assistant Department of Natural Resources 2300 North Martin Luther King Drive Milwaukee WI 53212

DNR WEST CENTRAL REGION

Attn: RR Program Assistant Department of Natural Resources 1300 Clairemont Ave. Eau Claire WI 54702



Note: These are the Remediation and Redevelopment Program's designated regions. Other DNR program regional boundaries may be different.

DNR Use Only					
Date Received	Date Assigned	BRRTS Activity Code	BRRTS No. (if used)		
DNR Reviewer		Comments:			
Fee Enclosed?	Fee Amount	Date Additional Information Re	equested Date Requested for DNR Response Letter		
Date Approved	Final Determination				

708 Heartland Trl. Suite 3000 Madison, WI 53717 **T** 608.826.3600 TRCcompanies.com

September 30, 2019

Mr. Kevin McKnight Wisconsin Department of Natural Resources Remediation and Redevelopment Program 625 E CTY Y, Suite 700 Oshkosh, WI 54901-9731

Subject: Per- and Polyfluoroalkyl Substances (PFAS) Groundwater Sampling Plan

Former Tecumseh Facility, New Holstein, Wisconsin

BRRTS #02-08-363333

Dear Kevin:

Enclosed is the Site Investigation Work Plan for evaluating if Per- and Polyfluoroalkyl Substances (PFAS) are present in groundwater at the former Tecumseh Products Company (TPC) facility in New Holstein, Wisconsin. TRC Environmental Corporation has prepared this Work Plan on behalf of TPC in response to the Wisconsin Department of Natural Resources' (DNR) letter dated July 11, 2019, in which the DNR requested TPC complete groundwater sampling to test for PFAS compounds in groundwater near the areas associated with the former chromium plating lines at the facility.

Also enclosed are Form 4400-237 and a check with the Wis. Admin. Code NR 749 review fee for \$700. Please feel free to contact me with any questions at 608-826-3677 or ASellwood@trccompanies.com.

Sincerely,

TRC

Alyssa Sellwood, PE Project Manager

Augsser Sellice

Enclosure: Site Investigation Work Plan

DNR Form 4400-237

Review Fee Check for \$700

cc: Jason Smith, TPC



Site Investigation Work Plan

PFAS Groundwater Sampling

September 30, 2019

Former Tecumseh Facility New Holstein, Wisconsin

BRRTS #02-08-363333

Prepared For:

Tecumseh Products Company LLC

Prepared By:

TRC 708 Heartland Trail, Suite 3000 Madison, WI 53717

Lydia Auner Project Geologist

Alyssa Sellwood, PE (WI)

Project Manager

John Rice, PH Hydrogeologist



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FIGURES

Figure 1: Site Location Map

Figure 2: Site Map

Figure 3: Proposed Initial PFAS Sampling



1.0 Project Management

As required by NR 716.09(2), the following information is provided:

1. Site Address and Location:

1604 Michigan Avenue New Holstein, Wisconsin, 53061 Calumet County NE & SE ¼ of SE ¼, Section 10, T17N R20E

2. Responsible Party:

Tecumseh Products Company LLC (TPC) 2700 West Wood Street Paris, TN 38242

Attention: Mr. Jason Smith, Corporate Director of Environmental Control / Legal

Support

3. Environmental Consultant of Responsible Party:

TRC Environmental Corporation (TRC) 708 Heartland Trail, Suite 3000 Madison, WI 53717

Attention: Alyssa Sellwood, P.E., Project Manager

608.826.3677

ASellwood@trcsolutions.com

I, John Rice, 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.

ignature and Title

10-10-19 Date



2.0 Introduction

2.1 Site Location

Tecumseh Products Company LLC (TPC) previously owned and operated a manufacturing facility located at 1604 Michigan Avenue, New Holstein, Wisconsin (site), as shown on Figure 1. The property is located north of Michigan Avenue between Jefferson Street and the Canadian National Railway.

The property consists of approximately 39 acres (8 total parcels) that includes a developed section and an undeveloped lot. The former manufacturing building occupies approximately 404,700 square feet, and there are several outbuildings along the western portion of the site. Immediately north of the site are agricultural fields, which are divided by a north-flowing storm water drainage ditch (Figure 2).

2.2 Background

TPC formerly owned the New Holstein facility and operated as a small engine manufacturer at the site from 1956 to 2006. TPC's operations included two chromium plating lines on the south end of the property (Figure 2). The former chromium plating line has chromium impacts to soil and groundwater that are being addressed under Bureau for Remediation and Redevelopment Tracking System (BRRTS) #02-08-363333.

Per- and polyfluoroalkyl substances (PFAS) were known to be used in some chromium plating processes to suppress the formation of chromium vapors. PFAS are an emerging class of contaminants and clean-up of PFAS impacts to the environment is subject to regulation under Wis. Stat. s. 292 and Wis. Admin. Code NR 700.

Because TPC historically performed chromium plating at the site, there is potential that these historical operations resulted in PFAS impacts to the environment. Therefore, on July 11, 2019, the Wisconsin Department of Natural Resources (DNR) issued a letter to TPC requiring that a Site Investigation (SI) Work Plan be submitted to DNR by September 30, 2019 to assess the site for PFAS contamination. This letter specified that the Work Plan include a review and summary of historical manufacturing processes where PFAS may have been used at the site and a groundwater sampling program to test for PFAS compounds in areas identified in the historical review.

2.3 Purpose and Scope

In response to the DNR's letter, TRC Environmental Corporation (TRC) has prepared this SI Work Plan on behalf of TPC. TRC proposes an initial site assessment (one round of groundwater sampling in existing monitoring wells) to evaluate if PFAS impacts to the environment are present at the site and the relative magnitude and distribution of these impacts. If PFAS are detected, a separate BRRTS number for the PFAS impacts can be opened with the DNR, and a SI Work Plan Addendum can be prepared based on the findings and conclusions from the initial sampling.



3.0 Site Information

3.1 Current and Historical Use of the Site and Vicinity

The site is currently unoccupied and zoned as heavy industrial. Adjacent zoning includes heavy industrial to the north; heavy industrial, light industrial, and multi-family residential to the east; heavy industrial and commercial to the south; and heavy industrial and light industrial to the west.

Manufacturing activities began on site around 1895, when Lauson Brothers Implement Company began manufacturing motors and tractors. TPC purchase the property in 1956 and operated a small engine manufacturing facility on site until 2006. After TPC ceased operations in 2006, Heus Acquisitions, LLC (Heus) purchased the eight parcels comprising the property and manufacturing and production activities related to machine shop parts continued at the site under the ownership of Heus until 2009, when Heus went into bankruptcy. The site has remained unoccupied since manufacturing operations ceased in 2009.

3.2 Review of Historical Operations

During TPC's ownership, the facility housed offices, production, testing, and storage areas. Procedures/structures previously identified as environmental concerns included the chromium plating, painting, engine testing, foundry work, a wastewater treatment plant sludge pit, a coolant pit, fuel oil tanks, and hazardous waste storage. The environmental impacts in these areas were addressed under the previous and on-going site investigations (see Section 3.3).

PFAS is an emerging contaminant class, which was not previously assessed at the site. Currently, the only known historical manufacturing process with potential for PFAS impacts is the former chromium plating lines. The locations of the historical chromium plating lines ("former plating line" and the "former northern plating line") are shown on Figures 2 and 3.

TPC will review site historical records for other information indicating potential PFAS impacts to the environment at the site. Results from the records review will be included with the SI Report summarizing the results of the groundwater sampling. It is assumed that the review of historical records will indicate that the former plating lines are the only historical manufacturing process with potential for PFAS; therefore, the investigation described herein is focused on the monitoring wells surrounding the former chromium plating area.

3.3 Previous Environmental Investigations

The former TPC facility in New Holstein has been the subject of environmental investigations and response since the early 1990s. Several environmental case numbers (BRRTS) have been opened with the Wisconsin DNR, and most of these cases have been fully addressed and closed out, including several cases related to underground storage tanks (USTs). The bulk of the environmental work performed at the site has been done under BRRTS cases related to volatile organic compounds (VOCs) (BRRTS #02-08-100332 and #03-08-001070), and chromium (BRRTS #02-08-363333). The BRRTS cases related to VOCs have all been closed, and the chromium BRRTS case is the only BRRTS case open at the site at this time. The DNR's letter requesting PFAS sampling is currently associated with the chromium BRRTS number.



3.3.1 Relevant Geology and Hydrogeology

Fill material extends from the surface to approximately 5 to 10 feet bgs. The fill is predominantly gray silty coarse sand and gravel (crushed limestone). Fill material becomes darker with increased amounts of cinders and slag approaching the Canadian National Railroad property. The fill overlies a native silty sand with some clay (glacial till). Due to the nature of glacial till, there are lateral and vertical variations in soil types across the extent of the site. The silty sand unit extends approximately 25 to 45 feet below ground surface (bgs) and overlies fractured dolomitic bedrock. Bedrock consists of fractured Silurian-age dolomite encountered approximately 25 to 45 feet bgs. Bedrock was encountered at deep, nested wells to the northeast of the site.

TRC has defined two hydrostratigraphic units - the unconsolidated materials (silty sand till aquifer) and the Silurian dolomite bedrock aquifer. The water table occurs in the unconsolidated unit (silty sands and gravel) at depths of 5 to 11 feet bgs.

3.3.2 Current Groundwater Monitoring Network

The site previously had an extensive set of monitoring wells and piezometers; however, most of these wells were abandoned once closure was achieved for their associated BRRTS cases. The current (remaining) monitoring well network is focused on the area near the former chromium plating line and is shown on Figure 3.

Based on water elevation measurements from site monitoring wells, the local groundwater flow direction near the former plating line is toward the south, west, and north (Figure 3). The work completed for the other BRRTS cases found that on the broader site-wide scale, the groundwater flows to the northeast towards Jordan Creek. Although the elevation of the water table varies seasonally, the general flow direction and horizontal hydraulic gradient are consistent site-wide and locally near the former plating line.



4.0 Site Investigation Work Plan

This work plan is designed to assess if PFAS are present in groundwater near the former chromium plating line source area. This initial assessment will include one round of groundwater sampling using five wells in the existing monitoring well network.

4.1 Scope and Rationale

The site has been extensively characterized during the previous and ongoing site investigation activities. The existing monitoring wells that are in place to monitor the chromium impacts from the former plating lines are well-positioned to assess groundwater conditions for other potential contaminants of concern from this same source area (i.e. other groundwater contaminants are expected to follow same flow path). Therefore, TRC proposes to use five of the existing monitoring wells for this PFAS investigation. The proposed wells are highlighted on Figure 3, and the basis for selecting each well is summarized below:

- MW-D: Background (upgradient from former plating line)
- TEC-4: Former plating line source area
- MW-E: Downgradient from former plating line
- NH-26: Former northern plating line source area
- **NW-7:** Downgradient from former northern plating line

With the exception of the background well, the proposed wells have been documented to contain hexavalent chromium, which demonstrates that their locations are in the appropriate groundwater flow path to assess impacts from the former plating lines. Because of the age of the former chromium plating line and the general mobility of PFAS in the environment, groundwater samples alone (i.e. no soil samples) can be used to assess if there was a historical discharge of PFAS in this area of the site.

4.2 Groundwater Sampling Methods

Groundwater sampling is proposed using low flow sampling methods with a peristaltic pump. The following sections describe the specific equipment and methods that will be utilized to perform the scope of work.

4.2.1 Water Level Measurements

Depth to water measurements will be obtained prior to any purging or sampling activities. Water level measurements will be collected using an electronic water level indicator (e.g. Slope Indicator Model 51453 or equivalent). The water level indicator consists of a spool of small-diameter insulated steel cable with a probe attached to the end. Depth is recorded to the nearest 0.01 foot. Measurements will be taken from the established reference point marked on the casing, or if such a marking is not present, then from the high point of the well casing.



4.2.2 Groundwater Sampling Procedures

Groundwater samples will be collected from the selected monitoring wells using a low flow purge method. Samples will be collected according to TRC's Standard Operating Procedure ECR 009 (with modifications as needed to accommodate site-specific conditions).

4.2.3 Considerations for PFAS Sampling

The following procedures will be observed during PFAS sampling in order to prevent sample contamination by PFAS compounds originating from sampling equipment or sampling personnel:

- Sampling staff will be directed to avoid using equipment or materials containing PTFE or LDPE during sample handling or mobilization/demobilization. This includes tubing, waterproof/water resistant paper products, post-it notes, aluminum foil, certain personal protective equipment (PPE), and PTFE tape.
- Equipment decontamination will include a final rinse with laboratory certified PFAS-free water in a new, clean 5-gallon bucket, or dispensed from an HDPE spray bottle.
- Sampling staff will wash hands with Alconox/Liquinox and deionized water after leaving the field vehicle and before setting up to sample a well.
- Sampling staff will wear nitrile gloves at all times while prepping sample containers, collecting samples, or handling samples. Avoid handling unnecessary items between donning gloves and handling or collecting the sample/sample containers, including pens, field forms/clipboards, and field tablet computer. Don new gloves at any time during the sampling process if unnecessary items are contacted.
- Field notes will be recorded on loose paper field forms maintained in aluminum or Masonite clipboards, or on a field tablet computer. Waterproof field books, plastic clipboards and spiral bound notebooks will not be used. Don new nitrile gloves between contacting the note-taking materials and handling the samples or sample containers.
- Boots and other field clothing containing Gore-Tex[™] or other waterproof/resistant material should not be worn (including rain gear). Polyurethane and polyvinyl chloride (PVC) are acceptable.
- Staff should avoid wearing clothing laundered with fabric softeners, new clothing, stain resistant clothing, or clothing treated with insect repellant chemicals. Clothing made of cotton is preferred.
- Staff should avoid using cosmetics, moisturizers, hand creams, or other related products as part of cleaning/showering on the day of sampling.
- Staff should avoid using sunscreens or insect repellants that are not natural.



4.3 Parameters and Analytical Method

Wisconsin DNR anticipates completing a laboratory certification program for 36 PFAS compounds in 2019. These 36 compounds are the same PFAS compounds that the DNR anticipates establishing groundwater cleanup standards for in the next few years – this list is summarized below and is herein referred to as the "Wisconsin 36 PFAS List".

Samples will be submitted to Eurofins TestAmerica for laboratory analysis of the Wisconsin 36 PFAS list using Modified Method 537.

13 Carboxylic Acids	12 Sulfonic Acids	4 Replacement Chemicals
PFBA	PFBS	HFPO-DA
PFPeA	PFPeS	DONA
PFHxA	PFHxS	9CI-PF3ONS
PFHpA	PFHpS	11CL-PF3OUdS
PFOA	PFOS	3 Sulfonamides
PFNA	PFNS	FOSA
PFDA	PFDS	NMeFOSA
PFUnA	PFDoS	NEtFOSA
PFDoA	4:2 FTSA	2 Sulfonamidoethanols
PFTriA	6:2 FTSA	NMeFOSE
PFTeA	8:2 FTSA	NEtFOSE
PFHxDA	10:2 FTSA	2 Sulfomidoacetic acids
PFODA		NMeFOSAA

Wisconsin 36 PFAS List

4.4 Quality Assurance and Quality Control (QA/QC)

4.4.1 Chain-of custody documentation

The sampler is responsible for sample custody from the time of sample collection to receipt at the laboratory or until samples are shipped by commercial carrier. A sample is considered under custody if:

- the sample is in a person's possession,
- the sample is in that person's view after being in his or her possession,
- the sample was in that person's possession and then placed in a secured location, or
- the sample is in a designated secure area.

Sample containers within the same shipment will be assigned a Chain-of-Custody form, which will travel with the sample containers to the analytical laboratory. A copy of the Chain-of-Custody form will be kept by the field team to help identify samples that might become separated from the

NEtFOSAA



discrete sample delivery group. When shipped by a commercial carrier, custody seals will be attached to each cooler to ensure that the samples are not tampered with during transit, and the shipment airbill will be kept as Chain-of-Custody documentation.

4.4.2 Sample shipping and maximum hold time

Samples will be stored on ice immediately following sample collection. Samples will be shipped via FedEx or with a courier arranged through Eurofins TestAmerica. The hold time for PFAS analysis is 14 days.

4.4.3 Field notes

Daily field activities and sampling data will be recorded on paper field forms, or electronically on a field tablet computer. Entries into the field forms will be legibly written and will provide a clear record of field activities. Entries will be made in waterproof ink, in language that is objective, factual, and generally free of personal opinions, or terminology that might later prove unclear or ambiguous. No field notes may be destroyed or discarded, even if they are illegible, or known to contain inaccuracies. Errors in the field notes will be indicated by drawing a single line through the text, such that the text in error remains legible. Errors addressed in this manner will be initialed by the person making the correction. The person filling out the field forms will sign and date each page and will identify the date, the time, the location on-site, the field personnel present, and the weather conditions observed.

4.4.4 Decontamination procedures

An appropriately-developed, executed, and documented equipment decontamination procedure is an integral and essential part of environmental site investigations. The benefits include minimizing the spread of contaminants and improved data quality and reliability.

4.4.4.1 Single-Use Sampling Equipment

To the extent practicable, single-use sampling equipment and materials will be used for the collection of samples. The single-use materials used will be new and clean and will be placed in plastic for transport to the site. Once used, single-use equipment will be placed in plastic bags and managed as investigation-derived waste material. Single-use equipment includes, but is not limited to, high-density polyethylene (HDPE) and silicon tubing. Single-use equipment and materials will not require field decontamination.

4.4.4.2 Non-dedicated Equipment

Proper decontamination of equipment is essential to minimize the possibility of cross-contamination of samples. Non-dedicated equipment such as a water level indicator will be cleaned before its initial use in the field and again before use at each subsequent sampling location.



Non-dedicated equipment will be decontaminated prior to its initial use on-site and in between sampling points, unless new and transported to the site in a protected and decontaminated condition. Decontamination procedures will include the following steps:

- Wash the equipment in a non-phosphate detergent.
- Rinse with potable tap water.
- Rinse with laboratory-certified PFAS-free water.

Equipment used for purging monitoring wells that is not introduced into a monitoring well and does not contact the sample, such as the groundwater flow through cell and multi-parameter sensors, will be rinsed with deionized water before use at each subsequent sampling location.

Field decontamination of equipment may take place at the sampling location. Decontamination water will be collected in 5-gallon buckets or similar container(s) and managed as described in Section 4.5.

4.4.5 Blanks: Equipment Blank and Reagent Blank

Blanks are an important component of any PFAS site investigation to ensure that field procedures, staff, or equipment are not introducing PFAS contamination into the groundwater samples. Laboratory certified PFAS-free water will be used for the collection of blanks for PFAS analysis.

4.4.5.1 Equipment Blanks

Field equipment blanks are analyzed to check that equipment coming into contact with the samples is not causing sample contamination. An equipment blank will be collected in the field by running PFAS-free water through new HDPE tubing in the peristaltic pump and any non-dedicated (decontaminated) sampling equipment that comes into contact with the samples. The equipment blank will be transferred into the proper sample bottles for PFAS-analysis.

4.4.5.2 Reagent Blanks

Reagent blanks are analyzed to check for procedural contamination at the site that may cause sample contamination. A reagent blank will be collected in the field by pouring PFAS-free water into the sample containers and submitting for PFAS-analysis.

4.5 Management of Waste Materials from Fieldwork

4.5.1 Investigative Derived Waste

Purge water and water from decontamination will be containerized and stored at the Hayton Dam building (owned by TPC), until the lab results have been received. Materials will be properly disposed based on the lab results.



4.5.2 Used Personal Protective Equipment and Uncontaminated Refuse

Used personal protective equipment and other types of general uncontaminated debris or waste materials produced during the fieldwork will be collected in sealed plastic bags and placed in a waste dumpster at the TRC Madison office.

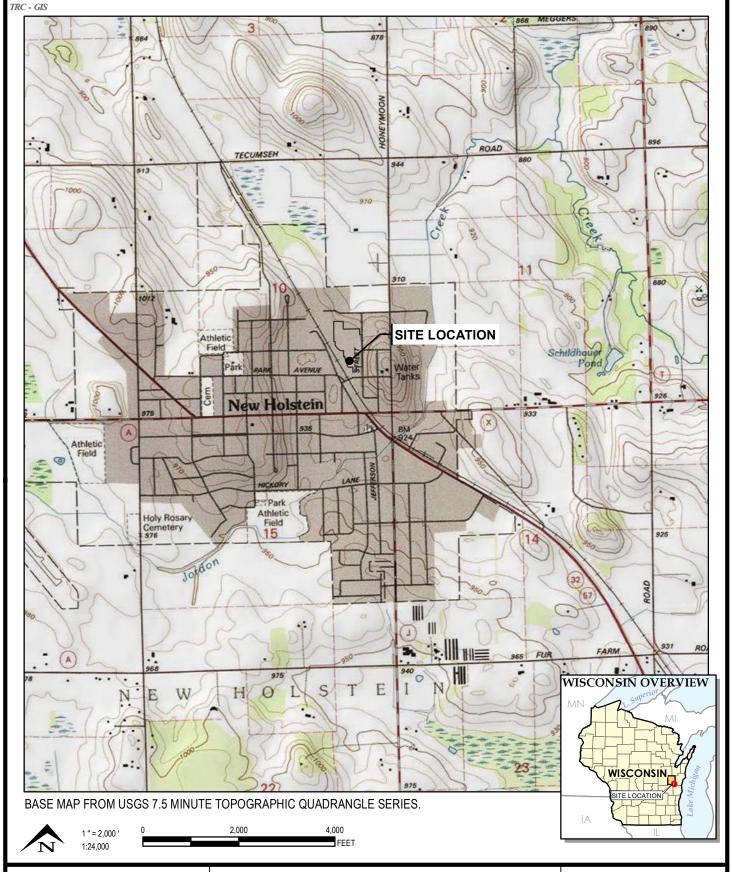


5.0 Schedule and Reporting

Site investigation activities will be initiated within 60 days after DNR's approval of this work plan. TPC will advise DNR if extension is needed to this schedule because of winter weather conditions. Once sampling has been completed, the lab results will be provided to the WDNR within 10 business days of receipt, per NR 716.14(2).

TRC will evaluate the results and provide DNR with a report that summarizes the conclusions and recommendations from this PFAS sampling within 60 days after receipt of the data. The results will determine the next steps, but general options may include one of the following:

- PFAS are not-detected in the groundwater samples. Recommend no further action for PFAS investigation.
- PFAS detected in groundwater but at levels that do not indicate a release (e.g. low-level detections that are similar to the concentrations of PFAS in background well MW-D).
 Recommend no further action, or limited action to confirm findings.
- PFAS detected at levels that indicate a historical release of PFAS. Recommend DNR open a separate BRRTS number for the PFAS impacts at the site and prepare a SI Work Plan Addendum based on the findings and conclusions from the initial sampling.





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BRRTS #02-08-363333 TECUMSEH PRODUCTS CO. (FORMER) NEW HOLSTEIN, WISCONSIN

FIGURE 1 SITE LOCATION MAP

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FILE NO.	355608_001_SLM.mxd
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