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 12/18)

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 Re	ecipient information						
Requester Information							
This is the person requesting specialized agreement and is	technical assistance or a post- identified as the requester in S	closure	e modification review 7. DNR will address	that his or her its response let	liability be ter to this	clarifi persor	ed or a n.
Last Name	First	MI	Organization/ Busi	ness Name			
Wahl	Scott		Tyco Fire Products LP				
Mailing Address			City State ZIP Code				
2700 Industrial Parkway S	Marinette			WI	54143		
Phone # (include area code)	Fax # (include area code)		Email				
The requester listed above: (s	select all that apply)						
x Is currently the owner	Is considering selling the Property						
Is renting or leasing the	Property		Is considering a	equiring the Prop	erty		
Is a lender with a mortg	gagee interest in the Property						
Other. Explain the statu	us of the Property with respect t	to the a	applicant:				
Contact Information (to b	e contacted with questions	ahout	this request)		Selec	t if san	ne as requester
Contact Information (to b	First	MI	Organization/ Busi	ness Name	00.00	t II Juli	no do requester
Milionis	Peter		Arcadis				
Mailing Address			City State ZIP Code				
10 Friends Lane, Suite 2	200		Newtown			РΑ	18940
Phone # (include area code)	Fax # (include area code)		Email				
267-685-1815			peter.milionis@arcadis.com				
Environmental Consult							
Contact Last Name	First	MI	l ~				
Milionis	Peter		Arcadis			<u> </u>	I=:= a :
Mailing Address			City State ZIP Code				
10 Friends Lane, Suite 2	Newtown PA 18940						
Phone # (include area code)	Fax # (include area code)		Email				
267-685-1815			peter.milionis@	arcadis.com			
Section 2. Property Inform	ation			I	ID N	1	-)
Property Name	FID No. (if known)						
Tyco Fire Technology Cer BRRTS No. (if known)	Darcol Identification		3800559) ()			
	Parcel Identification Number						
0238580694 Street Address			City		1	State	ZIP Code
2700 Industrial Parkway S County	Marinette						
Marinette		Single tax	Multiple to				
iviaiiiicuc	City Town Village or	· ivial	mette	✓ narcel	narcels	1200	j

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1. Is a response plan according	e needed by a specific date? (e.g., Property closing date) Note: Most requests are completed within 60 days. Please ngly.
O No	Yes
	Date requested by:
	Reason:
No. Inclu	ester" enrolled as a Voluntary Party in the Voluntary Party Liability Exemption (VPLE) program? Ide the fee that is required for your request in Section 3, 4 or 5. not include a separate fee. This request will be billed separately through the VPLE Program.
Fill out the Section 3	information in Section 3, 4 or 5 which corresponds with the type of request: Technical Assistance or Post-Closure Modifications; Liability Clarification; or Section 5. Specialized Agreement.
	equest for Technical Assistance or Post-Closure Modification
	of technical assistance requested: [Numbers in brackets are for WI DNR Use]
to an	urther Action Letter (NFA) (Immediate Actions) - NR 708.09, [183] - Include a fee of \$350. Use for a written response immediate action after a discharge of a hazardous substance occurs. Generally, these are for a one-time spill event.
	ew of Site Investigation Report - NR 716.15, [137] - Include a fee of \$1050.
=	oval of a Site-Specific Soil Cleanup Standard - NR 720.10 or 12, [67] - Include a fee of \$1050.
=	ew of a Remedial Action Options Report - NR 722.13, [143] - Include a fee of \$1050.
Revie	ew of a Remedial Action Design Report - NR 724.09, [148] - Include a fee of \$1050.
Revie	ew of a Remedial Action Documentation Report - NR 724.15, [152] - Include a fee of \$350
Revie	ew of a Long-term Monitoring Plan - NR 724.17, [25] - Include a fee of \$425.
Revie	ew of an Operation and Maintenance Plan - NR 724.13, [192] - Include a fee of \$425.
Other Tech	nical Assistance - s. 292.55, Wis. Stats. [97] (For request to build on an abandoned landfill use Form 4400-226)
Sche	dule a Technical Assistance Meeting - Include a fee of \$700.
Haza	rdous Waste Determination - Include a fee of \$700.
Othe	r Technical Assistance - Include a fee of \$700. Explain your request in an attachment.
Post-Closui	re Modifications - NR 727, [181]
☐ sites	-Closure Modifications: Modification to Property boundaries and/or continuing obligations of a closed site or Property; may be on the GIS Registry. This also includes removal of a site or Property from the GIS Registry. Include a fee of .0, and:
Ir	clude a fee of \$300 for sites with residual soil contamination; and
	nclude a fee of \$350 for sites with residual groundwater contamination, monitoring wells or for vapor intrusion continuing bligations.
to a F	h a description of the changes you are proposing, and documentation as to why the changes are needed (if the change Property, site or continuing obligation will result in revised maps, maintenance plans or photographs, those documents be submitted later in the approval process, on a case-by-case basis).
	ons 4 and 5 if the technical assistance you are requesting is listed above and complete Sections 6 and 7 of this fo
	ner Information Submitted
•	naterials that are included with this request. a paper copy of the signed form and all reports and supporting materials, and an electronic copy of the form
	orts, including Environmental Site Assessment Reports, and supporting materials on a compact disk.
request. Th	e copy of any document from any state agency files that you want the Department to review as part of this ne person submitting this request is responsible for contacting other state agencies to obtain appropriate information.
Phase I	Environmental Site Assessment Report - Date:
Phase I	Environmental Site Assessment Report - Date:
	

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ecialized agreements)
agreements)
and include date of collection.
dium - Describe:
Has a notification of a discharge of a hazardous substance
y) form is available at:
_
that the information on and included with this request is e the legal authority and the applicant's permission to make
October 29, 2020
Date Signed
(267)685-1815
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 DNR regional brownfields specialist 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

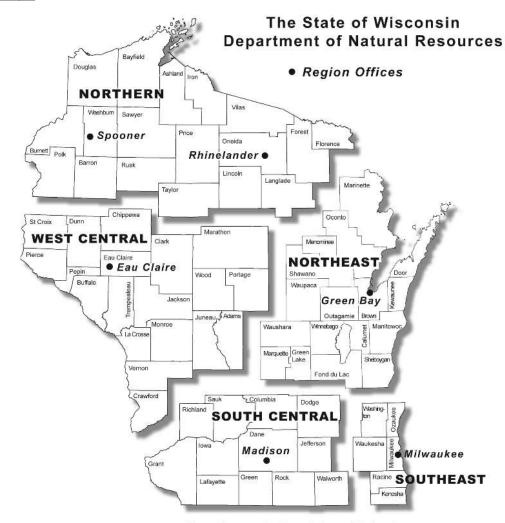
Attn: RR Program Assistant Department of Natural Resources 3911 Fish Hatchery Road Fitchburg WI 53711

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. Fau 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		Comme	ents						
Fee Enclosed?	Fee Amount		Date Additional Information Requested	Date Requested for DNR Response Letter					
◯ Yes ◯ No	\$								
Date Approved	Final Determination								



Mr. David Neste Remediation and Redevelopment Program Wisconsin Department of Natural Resources 625 E. County Road Y, Suite 700 Oshkosh, Wisconsin 54901

Subject:

Ditch B Pre-Design Investigation Work Plan Tyco Fire Technology Center, Marinette, Wisconsin BRRTS #: 02-38-580694

Dear Mr. Neste:

Arcadis U.S., Inc. (Arcadis) has prepared this Ditch B Pre-Design Investigation (PDI) Work Plan (work plan) on behalf of Tyco Fire Products LP (Tyco) for the Fire Technology Center located in the City of Marinette, Wisconsin. Tyco requests Wisconsin Department of Natural Resources (WDNR) review and approval of this work plan.

SCOPE OF WORK

The data collected during the PDI will provide information necessary to design a groundwater extraction and treatment system to intercept groundwater that contains per- and poly-fluorinated alkyl substances (PFAS) before it discharges to Ditch B. The sections that follow present the proposed scope of work for the PDI.

Focused Ditch B Monitoring

To complete the design and well siting for a groundwater extraction system, additional data are needed from Ditch B to determine where the ditch is gaining and losing, and where groundwater containing PFAS is entering the ditch. The preliminary scope of a monitoring program to meet these objectives was provided to WDNR in a scoping email from Arcadis, dated September 15, 2020. In an email response dated September 23, 2020, WDNR provided general concurrence with the scope, but also requested a modification to the sample frequency. After additional communications, Tyco provided a response to WDNR comments in an email dated October 21, 2020.

To meet tentative goals for completion of the design and implementation of the groundwater extraction and treatment system, field activities started in October 2020. The monitoring program, described below, is anticipated to last three months and will be completed by December 2020 before freezing conditions set in, and monitoring equipment must be removed.

Arcadis U.S., Inc.

126 North Jefferson Street

Suite 400 Milwaukee Wisconsin 53202 Tel 414 276 7742 Fax 414 276 7603 www.arcadis.com

ENVIRONMENT

Date:

October 29, 2020

Contact:

Peter Milionis

Phone:

267.685.1815

Email:

Peter.Milionis@arcadis.com

Our ref: 30062361

The specific scope of the focused Ditch B monitoring work includes the following:

- Thirty temporary stream-bed mini-piezometers were installed along an approximately 10,000-foot long portion of Ditch B between Industrial Parkway South and the outlet to Green Bay (Figure 1). Each temporary mini-piezometer consists of a ¾ inch inner-diameter well-point with a stainless steel 6-inch long 50-mesh (297 micrometer) well screen attached to galvanized metal standpipe. The mini-piezometers were manually driven into the sediment until the top of the screened interval was approximately 3 feet below the ditch bottom. The locations of each mini-piezometer was recorded using a hand-held global positioning system device.
- Up to three monthly monitoring events will be completed, starting in October 2020. Each event will consist of collocated groundwater and surface water samples at each mini-piezometer location. Piezometer samples will be collected as grab samples using dedicated bailers. Surface water sample will be collected adjacent to the mini-piezometer by dipping a sample bottle below the surface of the water. All samples will be analyzed for PFAS. During each event, relative groundwater and surface water level measurements will be taken at each mini-piezometer (i.e., depth to groundwater inside mini-piezometer and depth to surface water adjacent to mini-piezometer, both referencing a common point on the top of the standpipe).
- During the 3-month monitoring period, supplemental surface water samples will be collected two
 weeks after each monthly event (i.e., in between the monthly events). The supplemental surface
 water samples will be collected adjacent to TPZ-L06, directly upstream of the Ditch B treatment
 system intake and at sample Location SW-39, directly downstream of the Ditch B treatment system
 effluent. These two surface water samples will be coordinated with that week's Wisconsin Pollutant
 Discharge Elimination System effluent sampling, if possible.
- After the third monthly monitoring event, the temporary mini-piezometers will be removed from the ditch.

The groundwater and surface sampling activities and depth-to-water measurements along Ditch B are designed to more thoroughly delineate where PFAS-impacted groundwater is discharging to the ditch. The understanding of where groundwater containing PFAS is discharging to Ditch B is an important step in developing a groundwater extraction system to minimize discharge of this groundwater to the ditch.

Installation and Aquifer Testing of Groundwater Extraction Well

Concurrent with the focused Ditch B monitoring work described above, Arcadis will identify a location upgradient (west) of the ditch to install a groundwater extraction well for the purpose of evaluating aquifer characteristics, specifically the proof of yield from the well. This task will involve several subtasks including:

- Siting and clearing the proposed drilling location.
- Advancing a pilot borehole to evaluate geology and collect vertical aquifer profiling (VAP) samples to evaluate PFAS concentrations in groundwater.
- Installation of an observation well.
- Drilling the borehole for the extraction well.
- Construction and development of the extraction well.

Mr. David Neste WDNR October 29, 2020

• Testing of the extraction well.

The preliminary well location is shown on **Figure 3**. The actual location may be adjusted based on accessibility and the findings of the focused Ditch B monitoring program.

Planning, Site Access and Site Preparation

The initial task associated with the groundwater extraction test well installation consists of upfront planning activities prior to the actual field work. The planning will include well siting/location selection, obtaining property owner access, conceptual well design, and contractor and logistics coordination. After obtaining access to the property from the appropriate owner, the proposed test well site will be prepared for field work associated with the pilot boring and well drilling.

Pilot Boring and Observation Well Installation

Prior to installation of the production well, Tyco will conduct a preliminary investigation of the test site comprising:

- Completion of a soil boring to approximately 50 feet below ground surface (ft bgs), to evaluate the geology and collect soil samples for grain-size analysis.
- Completion of VAP sampling at up to 5 depths between the water table and 50 ft bgs. Samples will
 be collected approximately every 10 feet but will be biased toward more permeable zones.
- Construction of an observation well for use as a water-level monitoring point associated with the pumping test at the test well.

The groundwater samples from the VAP boring will be analyzed for PFAS. Results of grain size analyses will be used to select of an appropriate well screen and well sand pack material.

The pilot borehole will be advanced by sonic drilling techniques. VAP sampling will be completed following the procedures described in the Revised Site Investigation Work Plan (Arcadis 2018¹). Well construction and development will be completed following the procedures described in Supplemental Site Investigation Work Plan (Arcadis 2020²).

Test Well Installation and Development

Drilling of the test well will be completed by a mud-rotary rig. The test well will be installed as a permanent extraction well, as it likely will be used for that purpose. Well construction details will be finalized after analysis of the pilot boring details, but are anticipated to include the following:

 A 20- to 30-foot long, 6-inch diameter wire-wrapped stainless-steel well screen with a polyvinyl chloride riser.

arcadis.com

¹ Arcadis. 2018. Revised Site Investigation Work Plan, Tyco Fire Technology Center, Marinette, Wisconsin, BRRTS No. 02-38-580694. April 2018.

² Arcadis. 2020. Supplemental Site Investigation Work Plan, Tyco Fire Technology Center, Marinette, Wisconsin. BRRTS No. 02-38-580694. August 2020.

Mr. David Neste WDNR October 29, 2020

- Screen opening size and filter pack designed based on result of pilot borehole grain-size analyses.
- The extraction will be constructed with screen and sand pack in accordance with the results of the grain size analysis.
- Flush-to-grade surface completion, constructed to permit future connection to piping and power-supply, if needed.

After construction, the well will be developed by the driller using standard development techniques (e.g., double surge block with air lift pumping). The well development will continue until the trend in short-term (15 minutes) specific capacity tests no longer indicates further increase in the ratio of the pumping rate (Q) divided by the drawdown (s). In other words, development will be discontinued when the specific capacity (Q/s) levels off (i.e., plateaus).

Aquifer Pumping Test

Upon completion and development of the groundwater extraction well, a step drawdown test will be conducted to confirm aquifer yield. The step drawdown test will be conducted based on the following parameters:

- The test will consist of an estimated 3 steps at different pumping rates.
- Each step will be 1 hour in duration.
- Subsequent steps will begin immediately following the completion of the prior step.
- After completion of the 3 steps, a sustainable rate will be determined from the data collected during the 3 steps.
- The flow rate will be adjusted (i.e., reduced) to the sustainable rate and pumping will continue for 2 hours.

The proof of yield of the extraction well will be determined based on the analysis of the step drawdown test. During the test, water-levels will be recorded in the test well and observation well using pressure transducers. Water-level recovery after the step drawdown test will be monitored using transducers.

Data Analysis and Reporting

The data collected during the work described above will be presented in data summary letter reports for WDNR and the extraction well property owner. Data will also be incorporated into the Remedial Design Report under development for the potential groundwater extraction and treatment system to intercept groundwater that contains PFAS before it discharges to Ditch B.

Waste Characterization and Disposal

Drill cuttings, development water, and water generated during the pump test will be collected into appropriate containers pending characterization and disposal. Waste characterization analysis will be coordinated with the disposal facility and characterization data will be provided to the WDNR.

Wetlands Delineation

Ditch B flows through three land parcels between Pierce Avenue and Edwin Street. Arcadis delineated wetlands along the west side of Ditch B on these two properties (one owned by the City of Marinette, and the other two privately owned). Arcadis also delineated wetlands along the south side of Ditch B where it flows through the Marinette High School property owned by the Marinette School District. The wetlands delineation was conducted by two WDNR-certified Assured Wetland Delineators.

Wetland Delineation Report

Preparation of a Wetland Delineation Report will be led by the Assured Wetland Delineator. Upon completion of the Wetland Delineation Report, Tyco will review permitting considerations and potential wetlands mitigation with the WDNR.

CLOSING

We look forward to WDNR approval of this plan. Should you have any questions, please do not hesitate to contact us.

Sincerely,

Arcadis U. S., Inc.

Peter Milionis

Principal Scientist

Christopher S. Peters, PG

Principal Geologist

Scott Potter

Project Lead/Technical Expert

Copy:

Jeff Danko, Tyco

Alyssa Sellwood, WDNR

Enclosures:

Figures

- 1 Proposed Ditch B Mini-Piezometer and Sample Collection Locations
- 2 Proposed Groundwater Extraction Well Location

FIGURES

