The Chemours Company
c/o AECOM
500 West Jefferson Street
Suite 1600
Louisville, KY 40202

502-569-2301 t
chemours.com

March 5, 2021

Mr. Phil E. Richard
Hydrogeologist
Wisconsin Department of Natural Resources
W 5011 Aspen Lane
Park Falls, WI 54552

RE: Soil Grading Plan
Former DuPont Barksdale Works
72315 State Highway 13
Town of Barksdale, Bayfield County, Wisconsin
FID No.: 804009140
EPA ID No.: WIR000133447
BRRTS No. 02-04-00156

Dear Mr. Richard:

The Chemours Company FC, LLC is pleased to provide the attached Soil Grading Plan (Figure 1) for soil imported onto the Former DuPont Barksdale Works site from the adjacent Wisconsin Department of Transportation Boyd Creek Bridge replacement project. The plan details the general elevation changes proposed to address seasonal flooding, planned future surface water flow direction(s), and the area in which the imported soil will be applied. This Soil Grading Plan was developed in accordance with the Interim Action Report and Soil Management Plan dated September 18, 2020.

The Wisconsin Department of Natural Resources Form 4400-315, *Recommended Template for Request to Manage Materials under Wis. Admin. Code § NR 718.12 or NR 718.15,* was reviewed for inclusion with this submittal; however, the information required on the form has been included in previous submittals. For your convenience, previous submittals that support this plan are attached. We appreciate your January 25, 2021 email acknowledgement that the check in the amount of $700 for the off-site management fee was received by the WDNR on January 25, 2021.

If you have any questions or comments, please feel free to contact me or Cary Pooler with AECOM. I can be reached by telephone at (812) 923-1136 or by email at Bradley.S.Nave@chemours.com. Cary Pooler can be reached by telephone at (502) 252-5878 or by email at Cary.Pooler@aecom.com.

Sincerely,

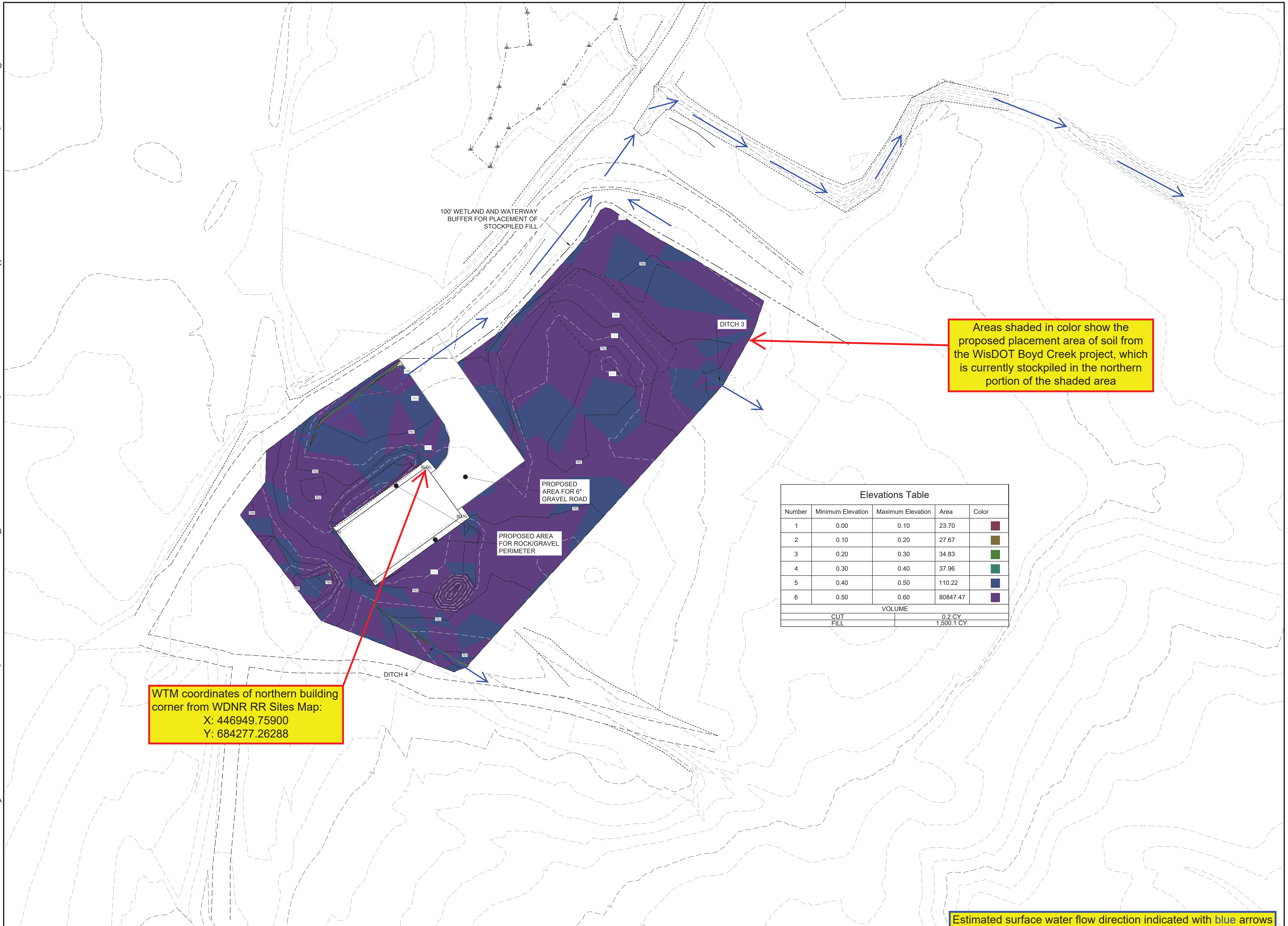
Bradley S. Nave
Chemours Corporate Remediation Group

Attachments: Figure 1: Soil Grading Plan
Interim Action Report and Soil Management Plan dated September 18, 2020
COVID-19 Related Project Impacts – Addendum letter dated May 18, 2020
COVID-19 Related Project Impacts letter dated April 23, 2020
Request for WDNR Concurrence of Conceptual Soil Management Plan dated April 26, 2019

cc: Chris Saari, WDNR
Cary Pooler, AECOM
Eric Schmidt, AECOM

Attachment 1

Figure 1: Soil Grading Plan



Elevations Table

Number	Minimum Elevation	Maximum Elevation	Area	Color
1	0.00	0.10	23.70	
2	0.10	0.20	27.67	
3	0.20	0.30	34.83	
4	0.30	0.40	37.96	
5	0.40	0.50	110.22	
6	0.50	0.60	80847.47	

VOLUME	
CUT	0.2 CY
FILL	1,500.1 CY

PROJECT

BARKSDALE GRADING PLAN

FORMER DUPONT BARKSDALE WORKS,
BARKSDALE, WISCONSIN 54806

CLIENT

CHEMOURS

CONSULTANTS

AECOM
www.aecom.com

REGISTRATION

ISSUE/REVISION

I/R	DATE	DESCRIPTION
1	2/17/2021	

SHEET TITLE

SOIL GRADING PLAN

SHEET NUMBER

Figure 1

Attachment 2

Interim Action Report and Soil Management Plan dated September 18, 2020

The Chemours Company
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Suite 1600
Louisville, KY 40202

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September 18, 2020

Mr. Philip E. Richard
Hydrogeologist
Wisconsin Department of Natural Resources
Park Falls Service Center
875 4th Avenue South
Park Falls, WI 54554-1130

RE: Interim Action Report and Soil Management Plan
Imported Soil from WisDOT Highway 13 Boyd Creek Bridge Project
Former DuPont Barksdale Works
72315 State Highway 13
Town of Barksdale, Bayfield County, Wisconsin
FID No.: 804009140
EPA ID No.: WIR000133447
BRRTS No. 02-04-00156

Dear Mr. Richard:

The Chemours Company FC, LLC (Chemours) is pleased to provide this Interim Action Plan/Soil Management Plan (IAP/SMP) for soil imported onto the former DuPont Barksdale Works site from the adjacent Wisconsin Department of Transportation (WisDOT) Boyd Creek Bridge replacement project (Figure 1). A total of 109 truckloads of soil equating to approximately 1,635 cubic yards was imported and stockpiled in a portion of the site's former sulfuric acid manufacturing area between May 26, and July 13, 2020. The soil will be used as cover material in that same area of the site at a future date.

BACKGROUND

During WisDOT's planning of the Boyd Creek Bridge replacement, soil within several wetland areas was determined to be geotechnically unsuitable for reuse in construction. Additionally, the soil was found to contain low levels of nitroaromatic and nitramine organic constituents (NNOCs) that are associated with former explosives manufacturing on the adjacent Barksdale Works site. Because Wisconsin Administrative Code (WAC) limits reuse of soil containing contamination within certain distances of waterbodies, WDNR requested that Chemours import the material onto the former Barksdale Works site. Chemours representatives agreed to do so to reduce project costs to WisDOT and to obtain soil that could be used as cover in the former sulfuric acid manufacturing area of the site.

PURPOSE

This document is intended to satisfy the requirements in Wisconsin Administrative Code (WAC) relating to the management and final disposition of the imported soil. Previous submittals that support this IAP/SMP include:

Letters to WDNR from Chemours:

- Request for WDNR Concurrence of Conceptual Soil Management Plan dated April 26, 2019
- COVID-19 Related Project Impacts letter dated April 23, 2020
- COVID-19 Related Project Impacts – Addendum letter dated May 18, 2020

WisDOT characterization reports:

- Phase 2.5 Environmental Sampling Investigation report dated November 2018
- Contaminated Soil and Groundwater Management Plan letter dated May 3, 2019
- Additional Phase 2.5 Groundwater Sampling and Analysis Report dated January 2020

IAP/SMP

The imported soil is currently stockpiled northeast of the current BDC Hay Barn (former sulfur barn) within the former Oil of Vitriol manufacturing area, which is formally identified as Use Area PAT. This location on the site was selected for reuse of the WisDOT soil because of the:

- **Similarity of detected NNOCs**: The concentrations of detected constituents in the imported soil is comparable to surface soil in the area in which the soil will be reused. This is detailed in the above referenced May 18, 2020 letter sent to WDNR.
- **Need for a vegetative cover**: The area is generally devoid of vegetation due to low soil quality from long-term effects of oxidation of residual elemental sulfur that is entrained within soil in the area. As is the case when elemental sulfur is applied for soil pH adjustment in agricultural settings, the bacterial oxidation process results in the production of sulfuric acid. The absence of vegetation has also contributed to accelerated soil erosion that has clogged culverts and resulted in periodic flooding in the area.

Soil Stockpile Management & Soil Reuse

The imported soil is currently stockpiled on polyethylene sheeting and being managed in the same areas previously specified in the above referenced May 18, 2020 letter (Figure 1). As you are aware, the initial moisture content in the hydric soils coupled with ongoing rainfall since the soil was placed has precluded application of a polyethylene sheeting cover. However, as has been communicated via email to you, the stockpile will be covered before the project team demobilizes for winter (estimated to be November 1, 2020). Erosion controls will be maintained until the stockpile is covered and it is estimated that the soil will remain in the stockpile until reuse occurs.

Prior to reuse of the soil, Chemours will prepare a grading plan that details the general elevation changes proposed to address ongoing flooding, planned future surface water flow direction(s), and area in which the imported soil will be applied. This proposed grading plan will be discussed with WDNR and barring any additional COVID-related delays or soil usability issues, regrading will be completed before Chemours' contractors seasonally demobilize from the site (estimated to be the first week of October 2021). Additional information required in WAC for stockpile management and soil reuse is provided in Table 1.

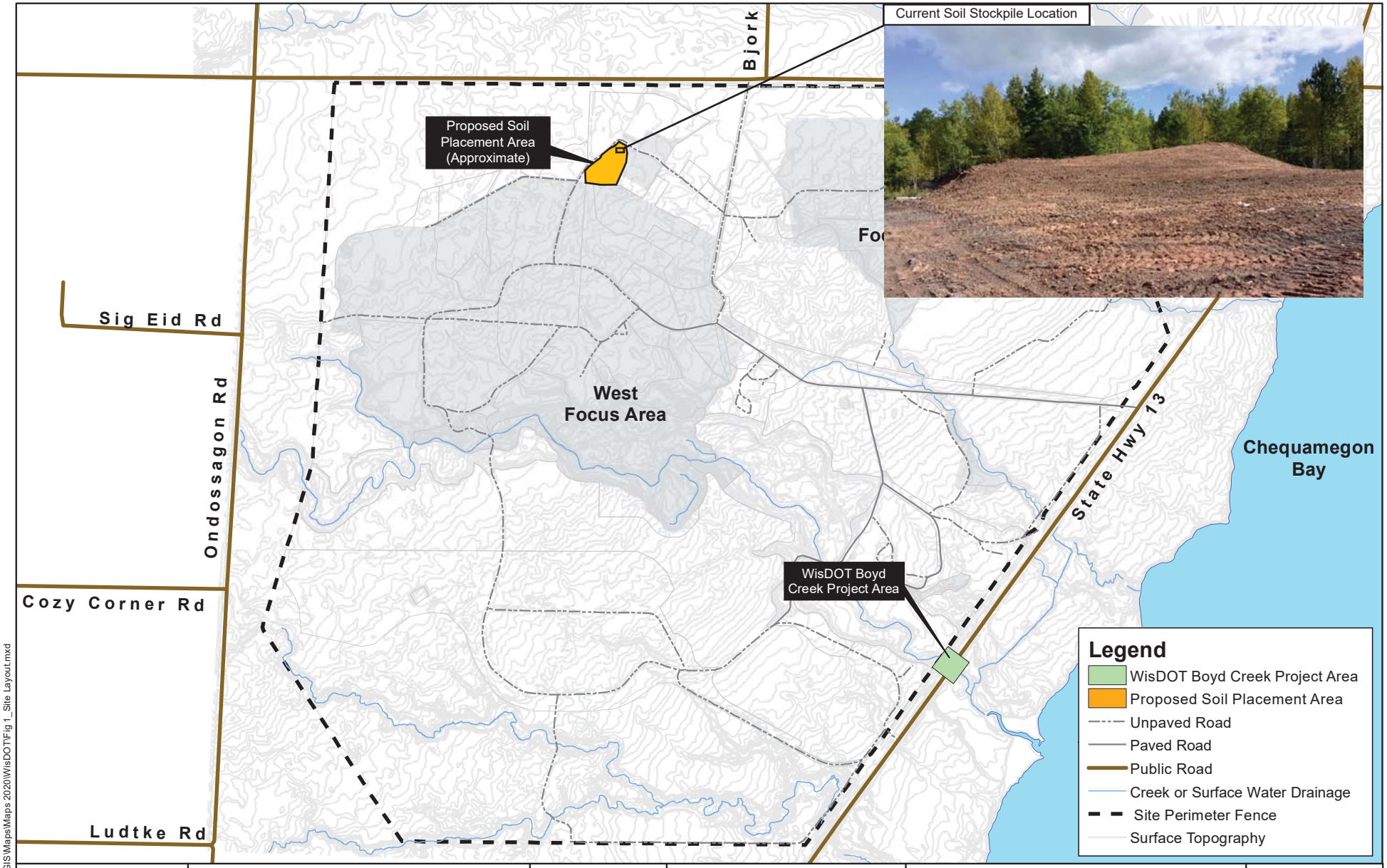
If you have any questions or comments, please feel free to contact me or Cary Pooler. I can be reached by telephone at (812) 923-1136 or by email at Bradley.S.Nave@chemours.com. Cary Pooler can be reached by telephone at (502) 252-5878 or by email at Cary.Pooler@aecom.com.

Sincerely,

Bradley S. Nave
Chemours Corporate Remediation Group

Attachments: Figure 1: Project Location Map
Table 1: Required Wisconsin Administrative Code Information Summary for IAP/SMP

cc: Chris Saari, WDNR
Cary Pooler, AECOM
Eric Schmidt, AECOM



G:\Projects\Barksdale\GIS\Maps\Maps 2020\WisDOTFig 1_Site Layout.mxd

Area Map (Optional)

N W E S

0 700 1,400 2,800

Feet

1:16,800

MAP FORMATTED FOR "A" (8.5" X 11") SIZE SHEET.
SCALE NOT VALID FOR DIFFERENT PAGE SIZE.

FILE NUMBER:	
DESIGNED BY:	ES
DRAWN BY:	VN
DATA QUALITY CHECK BY:	CP

AECOM
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Suite 1600
Louisville, Kentucky 40202

Project Location Map

Former DuPont Barksdale Works
Barksdale, Wisconsin 54806

PROJECT NUMBER:	60635957
DATE:	Sept 2020
FIGURE NUMBER:	1

Table 1
Required Wisconsin Administrative Code Information Summary for IAP/SMP
Former DuPont Barksdale Works Site
Barksdale, Wisconsin

WAC Reference	Requirement	Response/Description
708.15(3)(a) & 718.12(2)(b)1	Responsible Party	The Chemours Company, FC, LLC 500 W. Jefferson St. Suite 1600 Louisville, KY 40202 (269) 569-2301 Bradley.S.Nave@chemours.com
708.15(3)(b) 718.12(2)(c)2	Site Location	Former Barksdale Works 72315 State Highway 13 Ashland, WI 54806 Bayfield County NW ¼ of NE ¼ of Section 23, Township 48N, Range 5W Parcel ID Number: 04-002-2-48-05-23-1 01-000-10000 Approximate Parcel Corners (Wisconsin Transverse Mercator Coordinate System Obtained from WDNR RR Map): 445850, 684546; 447469, 684542; 447371, 682938; 445760, 682948 Latitude 46.62811, Longitude -90.95413 Bayfield County Parcel Description: ENTIRE SECTION 187
708.15(3)(c)	WDNR Site Identification Numbers	FID No: 804009140 BRRTS No. 02-04-000156
708.15(3)(d) 718.12(2)(b)4	Consultant	AECOM 500 W. Jefferson St. Suite 1600 Louisville, KY 40202 (502) 252-5878
708.15(3)(e) 718.12(2)(b)7	Interim Action Implemented	Soil was hauled to the site from the WisDOT Boyd Creek project and placed on 6-mil plastic sheeting within Use Area PAT. The soil was hauled to the site by WisDOT contractors between May 26, 2020 and July 13, 2020. The majority of the soil hauled to the site had very high moisture content and could not be consolidated into a larger stockpile. In an email dated May 26, 2020, the WDNR provided approval to leave the soil uncovered until it was dry enough to be sloped and graded. The soil was monitored on a weekly basis for workability and routine status updates were provided to the WDNR. Consolidation, grading, and sloping was completed on August 18, 2020.

Table 1
Required Wisconsin Administrative Code Information Summary for IAP/SMP
Former DuPont Barksdale Works Site
Barksdale, Wisconsin

WAC Reference	Requirement	Response/Description
708.15(3)(f) 718.12(2)(b)6	Estimated Quantity, Type of Contamination, and Analytical Results	Soil, sediment, and groundwater samples were collected in the area of the WisDOT Boyd Creek project as part of a WisDOT Phase 2.5 Environmental Sampling Investigation dated November 2018. Collected media were quantified by analytical laboratories for nitroaromatic and nitroamine organic compounds (NNOCs), which are the primary constituents associated with the historical manufacturing on the Barksdale Works site. The laboratory results indicated no NNOCs were present above detection limits in the sediment samples; however, low concentrations of NNOCs were generally detected in the soil and groundwater samples. NNOCs were detected at concentrations less than the default NR 720 non-industrial direct contact RCLs.
708.15(3)(g) 708.15(3)(h)	Permitted Discharges	The site is covered under WPDES General Permit No. WI-S067831-05 for Construction Site Storm Water Runoff. The permit was issued on August 10, 2018 and expires on August 10, 2021. Silt fence was set up in the area prior to placement of the imported soil. The silt fence is routinely inspected in accordance with the WPDES permit.
708.15(3)(i) 718.12(2)(b)2	Imported Soil Type, Quantity, and Final Disposition	A total of 109 dump truck loads (estimated volume of 1,635 cubic yards) were imported to the site from the WisDOT Highway 13 Boyd Creek bridge project. The soil type varied between saturated organic wetland soil to dry sand. The soil remains stockpiled in Use Area PAT. The soil is planned to be spread and used as a cover in a former sulfur storage area in Use Area PAT in 2021.
708.15(3)(k)	O&M Plan for Engineering Control or Barrier	Not applicable
718.12(2)(b)3	Soil Source	Highway 13 Bridge over Boyd Creek Ashland, WI 54806 Bayfield County Parcel ID Number: Not applicable, Highway right-of-way SW ¼ of the NW ¼ of Section 25, Township 48N, R5W Latitude 46.61410, Longitude -90.93989 Approximate Location (Wisconsin Transverse Mercator Coordinate System Obtained from WDNR RR Map): 448034, 682712 Parcel Description: Not applicable, Highway right-of-way
718.12(2)(c)1	Soil Placement Location Property Owner	Bretting Development Corporation 3401 Lake Park Rd Ashland, WI 54806 (715) 682-5231

Table 1
Required Wisconsin Administrative Code Information Summary for IAP/SMP
Former DuPont Barksdale Works Site
Barksdale, Wisconsin

WAC Reference	Requirement	Response/Description
718.12(2)(b)4 718.12(2)(b)5	Plan Implementation Schedule and Management Description	The soil is planned to be spread and used as a cover in a former sulfur storage area in Use Area PAT in 2021. A grading plan will be developed prior to spreading the soil.
718.12(2)(b)8	NR 726.13(1)(b) Requirements	Reuse of the soil as a cover at the site is appropriate because the NNOC concentrations in the soil imported from the Highway 13 Boyd Creek bridge project are less than the default NR 720 non-industrial direct contact RCLs. Groundwater is not expected to be adversely affected because the concentrations are much less than anticipated recreational use screening criteria that will be used for closure and there is no use of groundwater downgradient of the placement area (i.e. a municipal water supply is present and contractual restrictions exist that prevent drilling with many landowners). Surface water quality is periodically monitored at the site perimeter and has been below applicable screening criteria for some time. Due to the concentrations of NNOCs in the soil and the fact that they are semi-volatile, air/vapor quality issues are not expected.
718.12(2)(c)3	Geology and Hydrogeology	The site has three main geological units of interest: surface deposits, glacial sediments and underlying sandstone. Surface deposits include man-made features, erosional deposits, topsoil, and proglacial lake clays. Glacial deposits on-site are comprised of Pleistocene-age tills and interbedded outwash deposits. Two zones of Precambrian sandstone bedrock have been observed on site. Regionally, groundwater discharges to Lake Superior. At the site, groundwater flow in the sandstone is toward Chequamegon Bay from the west-northwest toward the east-southeast. Investigation data indicate that site is underlain by three distinct groundwater zones: a shallow zone (in the surface and glacial materials), an intermediate zone (in the upper sandstone unit), and a deep zone (in the lower sandstone unit). More complete descriptions of the site geology and hydrogeology have been provided to WDNR as part of previous reports. If additional information is needed, it can be provided upon request.

Attachment 3

COVID-19 Related Project Impacts - Addendum letter dated May 18, 2020

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May 18, 2020

Mr. Phil E. Richard
Hydrogeologist
Wisconsin Department of Natural Resources
Park Falls Service Center
875 4th Avenue South
Park Falls, WI 54554-1130

RE: COVID-19 Related Project Impacts - Addendum
Former DuPont Barksdale Works
72315 State Highway 13
Town of Barksdale, Bayfield County, Wisconsin
FID No.: 804009140
EPA ID No.: WIR000133447
BRRTS No. 02-04-00156

Dear Mr. Richard:

I appreciate you and Chris Saari taking the time on Tuesday, May 12, 2020 to discuss the proposed placement of soil at the Former DuPont Barksdale Works (site) from the Wisconsin Department of Transportation (WisDOT) Boyd Creek Bridge replacement project. As requested, this letter provides additional information to the COVID-19 Related Project Impacts letter dated April 23, 2020 (attached). The Chemours Company FC, LLC (Chemours) requested regulatory flexibility to allow for the stockpiling of WisDOT soil at the site to accommodate COVID-19 related delays in the April 23, 2020 letter. These delays affected a wetland identification field visit, field surveying, the development and design of a grading plan, and completion of an Interim Action Plan. The requests in the letter included the following:

- ***WDNR approval to stockpile WisDOT soil onsite until 2021****: The soil to be imported and placed on the site has concentrations of site-related constituents that are generally consistent with those found in soil in the proposed placement area. The concentrations found in the soil to be imported are also below screening criteria that are protective of human health for direct contact. Current Wisconsin regulations include standards for the management of contaminated soil. To allow for the stockpiling of WisDOT soil onsite until 2021, we are requesting an exemption from:*
    - *The requirement to provide an Interim Action Plan/Soil Management Plan prior to receiving and stockpiling WisDOT soil. An Interim Action Plan will be developed and submitted prior to the final placement of the WisDOT soil.*
    - *The requirements for storage of contaminated soil as specified in NR 718.05, which includes storage duration and stockpiling cover/anchor requirements. The soil is proposed to be stockpiled in the same general area as where it will be spread for final placement.*
    - *The requirement that that soil be placed more than 100 feet from wetlands. Wetland identification requests were submitted to the WDNR in March 2020 for the proposed soil placement area. Travis Holte from the WDNR indicated that there may be potential delays with the identification requests due to COVID-19 related impacts. WDNR wetland maps do not show known wetlands in proposed stockpile locations; however, wetlands are mapped within 100 feet. The proposed soil placement*

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location is located in a former production area and if any wetlands were found in the area, they would likely be considered artificial.

Based on our discussion on May 12, 2020, the following information is provided to supplement the requests above:

- The proposed stockpile area is located in the area of the former Oil of Vitriol Plant (Use Area PAT) as shown on the attached Figures.
- Several historical soil samples have been collected in the proposed stockpile location area as shown on Figure 2. As indicated previously, the soil to be imported and placed on the site has concentrations of site-related constituents that are generally consistent with those found in soil in the proposed stockpile area and are below screening criteria that are protective of human health for direct contact (see Table 1, attached). The soil-to-groundwater migration pathway is incomplete as there is no use of groundwater downgradient of the proposed soil stockpile area (i.e. municipal supply and contractual restrictions).
- The WDNR submitted the results of their wetland identification review of the area on May 7, 2020. No wetlands were identified in the proposed soil stockpile area; however, wetlands and a waterway were identified north of the area. The identified waterway (former process ditch) is intermittent and typically contains little to no water. The waterway is located upstream of the Upper Central Drainage (WBIC 5001016), which was evaluated for navigability by the WDNR in 2017. The WDNR determined that the Upper Central Drainage was considered to be non-navigable at a location about 0.5 miles southeast of the proposed stockpile location. It is not expected that the waterway identified in the in the area of proposed stockpile location is capable of floating on a regularly recurring basis the lightest boat or skiff. Based on the information above, the waterway is not considered to be navigable and therefore not subject to the 300 feet setback requirements included in NR 718. The proposed stockpile area is located more than 100 feet from the wetlands and waterway as shown on Figure 2.
- Erosion controls will be installed and maintained in the area of the stockpile(s). The site is currently covered under Wisconsin Pollutant Discharge Elimination System General Permit No. WI-S067831-05: Construction Site Storm Water Runoff, which was renewed on August 10, 2018 and expires on August 10, 2021.

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If you have any questions or comments, please feel free to contact me or Cary Pooler. I can be reached by telephone at (812) 923-1136 or by email at Bradley.S.Nave@chemours.com. Cary Pooler can be reached by telephone at (502) 252-5878 or by email at cary.pooler@aecom.com.

Sincerely,

Bradley S. Nave
Chemours Corporate Remediation Group

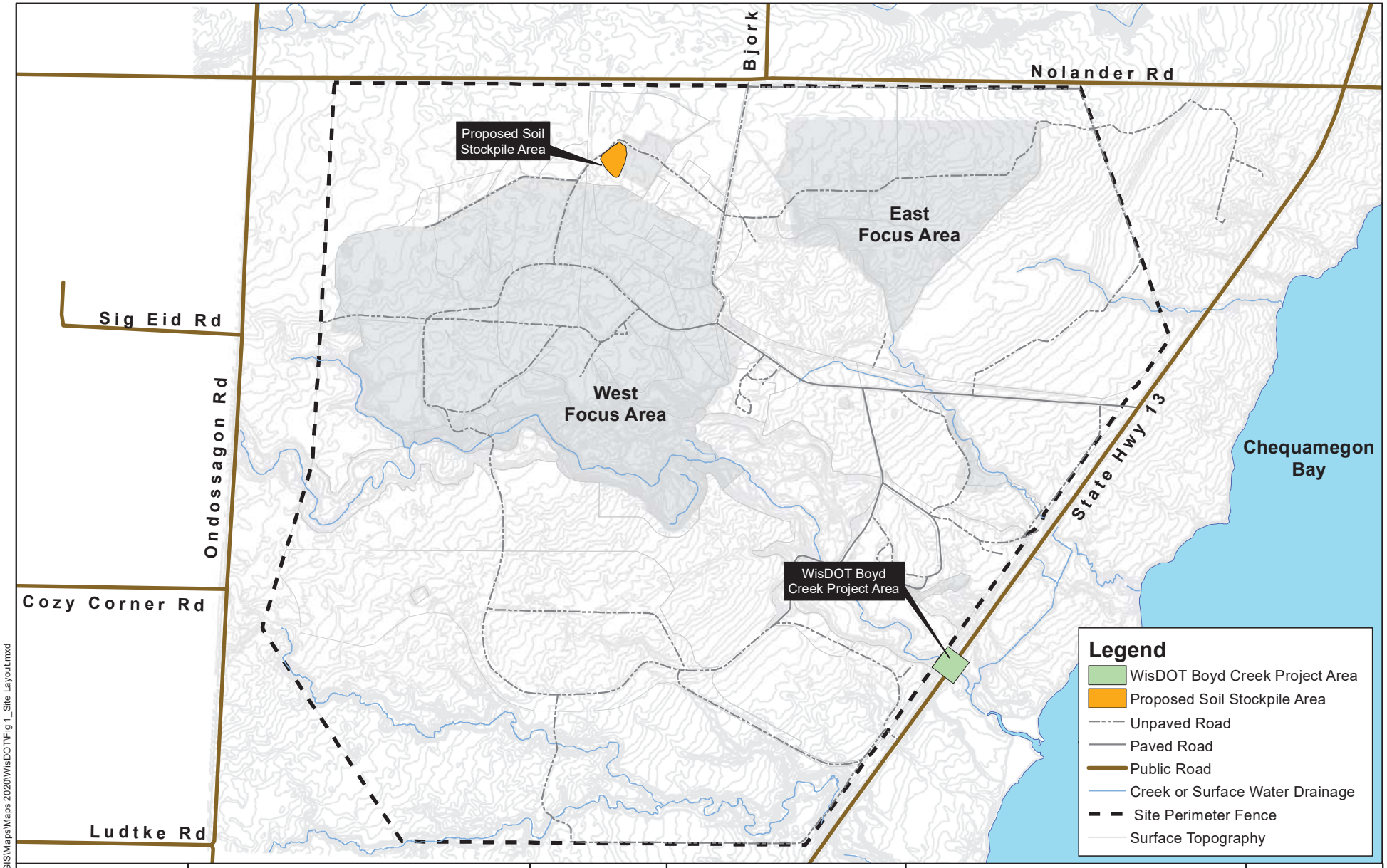
Attachments:
Figure 1: Project Location Map
Figure 2: Proposed Stockpile Area
Table 1: Soil Analytical Results - NNOCs
COVID-19 Related Project Impacts letter dated April 23, 2020

Cc:
Chris Saari, WDNR
Cary Pooler, AECOM
Eric Schmidt, AECOM

Figures

Figure 1: Project Location Map

Figure 2: Proposed Stockpile Area



G:\Projects\Barksdale\GIS\Maps\Maps 2020\WisDOTFig 1_Site Layout.mxd

Area Map (Optional)

N W E S

0 700 1,400 2,800

Feet

1:16,800

MAP FORMATTED FOR "A" (8.5" X 11") SIZE SHEET.
SCALE NOT VALID FOR DIFFERENT PAGE SIZE.

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DESIGNED BY:	NS
DRAWN BY:	VN
DATA QUALITY CHECK BY:	ES

AECOM
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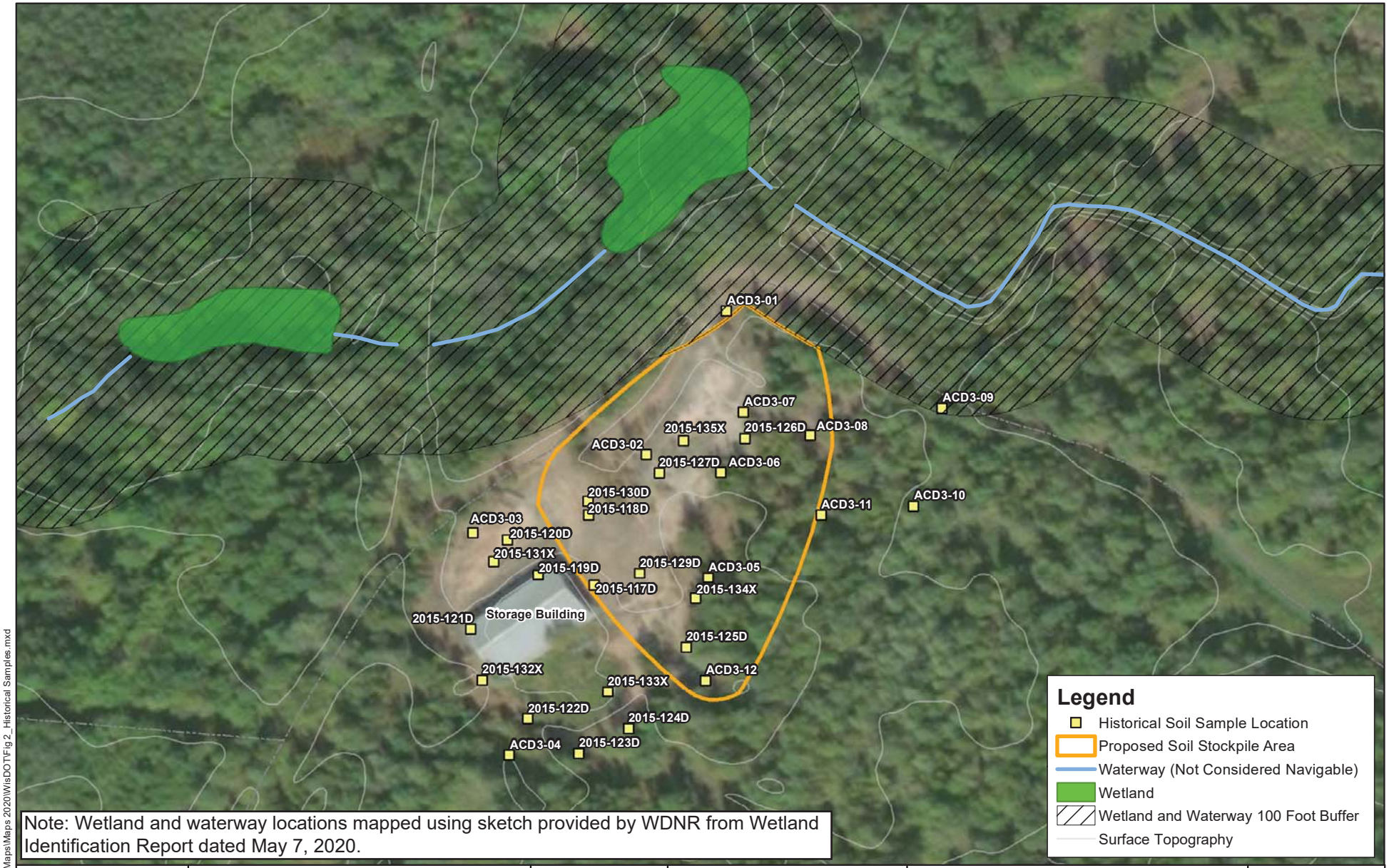
Suite 1600
Louisville, Kentucky 40202

Project Location Map

Former DuPont Barksdale Works
Barksdale, Wisconsin 54806

PROJECT NUMBER:	60505619
DATE:	May 2020
FIGURE NUMBER:	1



Note: Wetland and waterway locations mapped using sketch provided by WDNR from Wetland Identification Report dated May 7, 2020.

G:\Projects\Barksdale\GIS\Maps\Maps 2020\WisDOT\Fig 2_Historical Samples.mxd

Area Map (Optional)

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SCALE NOT VALID FOR DIFFERENT PAGE SIZE.

FILE NUMBER:

DESIGNED BY: DN

DRAWN BY: VN

DATA QUALITY CHECK BY: ES

AECOM

AECOM
500 West Jefferson Street
Suite 1600
Louisville, Kentucky 40202

Proposed Stockpile Area

Former DuPont Barksdale Works
Barksdale, Wisconsin 54806

PROJECT NUMBER: 60505619

DATE: May 2020

FIGURE NUMBER: 2

Table

Table 1: Soil Analytical Results - NNOCs

Table 1
Soil Analytical Results - NNOCs
Use Area PAT
Former Barksdale Works Site
Town of Barksdale, Bayfield County, Wisconsin

Location ID			ACD3-01	ACD3-02	ACD3-03	ACD3-04	ACD3-05	ACD3-06	ACD3-07	ACD3-08	ACD3-09	ACD3-10	ACD3-11	ACD3-12	2015-117D	2015-118D
Field Sample ID			9400331	9400540	9400749	9400958	9401167	9401376	9401585	9401794	9402003	9402212	9402421	9402630	SITG-151007-117D-0-0.5	SITG-151006-118D-0-0.5
Date Sampled			08/27/2001	08/27/2001	08/27/2001	08/27/2001	08/27/2001	08/27/2001	08/27/2001	08/27/2001	08/27/2001	08/27/2001	08/27/2001	08/27/2001	10/07/2015	10/06/2015
Start Depth - End Depth			0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 2	0 - 0.5	0 - 0.5
Parameter Name	**Units**	**BAR RCL (mg/kg)**	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result
2,4,6-trinitrotoluene	mg/kg	124	<0.018	<0.016	<0.014	<0.017	<0.015	**0.065**	**0.031**	**0.033**	**0.029**	**0.05**	**0.054**	**0.03**	**0.43**	<0.2
2-amino-4,6-dinitrotoluene	mg/kg	900	<0.038	<0.034	<0.031	<0.036	<0.033	<0.037	<0.035	<0.031	<0.032	<0.031	<0.033	<0.034	<0.21	<0.2
4-amino-2,6-dinitrotoluene	mg/kg	893	<0.025	<0.022	<0.02	<0.023	<0.021	**0.025**	<0.023	<0.02	<0.021	**0.023**	**0.025**	<0.022	<0.21	<0.2
1,3,5-trinitrobenzene	mg/kg	13100	<0.016	<0.015	<0.013	<0.015	<0.014	<0.016	<0.015	<0.013	<0.014	<0.013	<0.014	<0.014	<0.21	<0.2
1,3-dinitrobenzene	mg/kg	36.9	<0.03	<0.027	<0.024	<0.028	<0.026	<0.029	<0.028	<0.025	<0.025	<0.025	<0.026	<0.026	<0.21	<0.2
2-nitrotoluene	mg/kg	18.4	<0.026	<0.023	<0.021	<0.025	<0.022	<0.025	<0.024	<0.021	<0.022	<0.021	<0.023	<0.023	<0.21	<0.2
3-nitrobenzene	mg/kg	36.9	<0.033	<0.029	<0.027	<0.031	<0.028	<0.031	<0.03	<0.027	<0.028	<0.027	<0.029	<0.029	<0.21	<0.2
4-nitrobenzene	mg/kg	198	<0.1	<0.091	<0.083	<0.097	<0.088	<0.098	<0.094	<0.084	<0.087	<0.084	<0.089	<0.09	<0.21	<0.2
nitrobenzene	mg/kg	43.2	<0.016	<0.015	<0.013	<0.015	<0.014	<0.016	<0.015	<0.013	<0.014	<0.013	<0.014	<0.014	<0.21	<0.2
HMX	mg/kg	22500	<0.021	<0.018	<0.017	<0.019	<0.018	<0.02	<0.019	<0.017	<0.017	<0.017	<0.018	<0.018	--	--
PETN	mg/kg	737	<0.1	<0.091	<0.083	<0.097	<0.088	<0.098	<0.094	<0.084	<0.087	<0.084	<0.089	<0.09	--	--
RDX	mg/kg	48.6	<0.027	<0.024	<0.022	<0.026	<0.023	<0.026	<0.025	<0.022	<0.023	<0.022	<0.024	<0.024	--	--
Tetryl	mg/kg	911	<0.03	<0.027	<0.024	<0.028	<0.026	<0.029	<0.028	<0.025	<0.025	<0.025	<0.026	<0.026	--	--
nitroglycerin	mg/kg	36.9	**0.21**	<0.073	<0.066	<0.077	<0.07	<0.078	<0.075	<0.067	<0.069	<0.067	<0.071	<0.072	--	--
2,4-dinitrotoluene	mg/kg	7.03	<0.047	**0.042**	<0.038	<0.044	<0.04	<0.044	**0.12**	<0.038	<0.039	**0.18**	<0.04	<0.041	<0.21	<0.2
2,6-dinitrotoluene	mg/kg	7.03	<0.016	**0.018**	<0.013	<0.015	<0.014	<0.016	<0.015	<0.013	<0.014	**0.064**	<0.014	<0.014	<0.21	<0.2
2,3-dinitrotoluene	mg/kg	7.03	--	--	--	--	--	--	--	--	--	--	--	--	<0.21	<0.2
2,5-dinitrotoluene	mg/kg	7.03	--	--	--	--	--	--	--	--	--	--	--	--	<0.21	<0.2
3,4-dinitrotoluene	mg/kg	7.03	--	--	--	--	--	--	--	--	--	--	--	--	<0.21	<0.2
3,5-dinitrotoluene	mg/kg	7.03	--	--	--	--	--	--	--	--	--	--	--	--	<0.21	<0.2
2,4,6-trinitro-3-xylene	mg/kg	124	--	--	--	--	--	--	--	--	--	--	--	--	<0.21	<0.2
1,2-dimethyl-3,4-dinitrobenzene	mg/kg	111	--	--	--	--	--	--	--	--	--	--	--	--	<0.21	<0.2
1,2-dimethyl-3,5-dinitrobenzene	mg/kg	111	--	--	--	--	--	--	--	--	--	--	--	--	<0.21	<0.2
1,2-dimethyl-3,6-dinitrobenzene	mg/kg	111	--	--	--	--	--	--	--	--	--	--	--	--	<0.21	<0.2
1,2-dimethyl-4,5-dinitrobenzene	mg/kg	111	--	--	--	--	--	--	--	--	--	--	--	--	<0.21	<0.2
1,3-dimethyl-2,4-dinitrobenzene	mg/kg	111	--	--	--	--	--	--	--	--	--	--	--	--	<0.21	<0.2
1,3-dimethyl-2,5-dinitrobenzene	mg/kg	111	--	--	--	--	--	--	--	--	--	--	--	--	<0.21	<0.2
1,4-dimethyl-2,3-dinitrobenzene	mg/kg	111	--	--	--	--	--	--	--	--	--	--	--	--	<0.21	<0.2
1,4-dimethyl-2,5-dinitrobenzene	mg/kg	111	--	--	--	--	--	--	--	--	--	--	--	--	<0.21	<0.2
1,4-dimethyl-2,6-dinitrobenzene	mg/kg	111	--	--	--	--	--	--	--	--	--	--	--	--	<0.21	<0.2
1,5-dimethyl-2,3-dinitrobenzene	mg/kg	111	--	--	--	--	--	--	--	--	--	--	--	--	<0.21	<0.2
1,5-dimethyl-2,4-dinitrobenzene	mg/kg	111	--	--	--	--	--	--	--	--	--	--	--	--	<0.21	<0.2

Notes:

[1]: Maximum concentration of on-site samples included on this table

[2]: Maximum concentration of WisDOT soil/sediment samples per results submitted to WDNR on 7/16/18 by WisDOT

2001 results are from QES-DEN using lab method 8321

2015 results are from ECCS using lab method 8270

mg/kg: milligrams per kilogram

BAR RCL: Site Specific Recreational Residual Contaminant Level for direct contact

ND: Not detected

Table 1
Soil Analytical Results - NNOCs
Use Area PAT
Former Barksdale Works Site
Town of Barksdale, Bayfield County, Wisconsin

			Location ID	2015-119D	2015-120D	2015-121D	2015-122D	2015-123D	2015-124D	2015-125D	2015-126D	2015-127D	2015-129D	2015-130D
			Field Sample ID	SITG-151006-119D-0-0.5	SITG-151006-120D-0-0.5	SITG-151006-121D-0-0.5	SITG-151006-122D-0-0.5	SITG-151006-123D-0-0.5	SITG-151007-124D-0-0.5	SITG-151007-125D-0-0.5	SITG-151007-126D-0-0.5	SITG-151007-127D-0-0.5	SITG-151007-129D-0-0.5	SITG-151007-130D-0-0.5
			Date Sampled	10/06/2015	10/06/2015	10/06/2015	10/06/2015	10/06/2015	10/07/2015	10/07/2015	10/07/2015	10/07/2015	10/07/2015	10/07/2015
			Start Depth - End Depth	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5	0 - 0.5
Parameter Name		**Units**	**BAR RCL (mg/kg)**	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result
2,4,6-trinitrotoluene		mg/kg	124	<0.2	**0.2**	**0.2**	**0.36**	**0.28**	<0.2	**0.44**	<0.21	<0.21	**0.23**	**0.31**
2-amino-4,6-dinitrotoluene		mg/kg	900	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
4-amino-2,6-dinitrotoluene		mg/kg	893	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
1,3,5-trinitrobenzene		mg/kg	13100	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
1,3-dinitrobenzene		mg/kg	36.9	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
2-nitrotoluene		mg/kg	18.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
3-nitrobenzene		mg/kg	36.9	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
4-nitrobenzene		mg/kg	198	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
nitrobenzene		mg/kg	43.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
HMX		mg/kg	22500	--	--	--	--	--	--	--	--	--	--	--
PETN		mg/kg	737	--	--	--	--	--	--	--	--	--	--	--
RDX		mg/kg	48.6	--	--	--	--	--	--	--	--	--	--	--
Tetryl		mg/kg	911	--	--	--	--	--	--	--	--	--	--	--
nitroglycerin		mg/kg	36.9	--	--	--	--	--	--	--	--	--	--	--
2,4-dinitrotoluene		mg/kg	7.03	<0.2	<0.2	<0.2	<0.2	**0.65**	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
2,6-dinitrotoluene		mg/kg	7.03	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
2,3-dinitrotoluene		mg/kg	7.03	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
2,5-dinitrotoluene		mg/kg	7.03	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
3,4-dinitrotoluene		mg/kg	7.03	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
3,5-dinitrotoluene		mg/kg	7.03	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
2,4,6-trinitro-3-xylene		mg/kg	124	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
1,2-dimethyl-3,4-dinitrobenzene		mg/kg	111	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
1,2-dimethyl-3,5-dinitrobenzene		mg/kg	111	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
1,2-dimethyl-3,6-dinitrobenzene		mg/kg	111	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
1,2-dimethyl-4,5-dinitrobenzene		mg/kg	111	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
1,3-dimethyl-2,4-dinitrobenzene		mg/kg	111	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
1,3-dimethyl-2,5-dinitrobenzene		mg/kg	111	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
1,4-dimethyl-2,3-dinitrobenzene		mg/kg	111	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
1,4-dimethyl-2,5-dinitrobenzene		mg/kg	111	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
1,4-dimethyl-2,6-dinitrobenzene		mg/kg	111	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
1,5-dimethyl-2,3-dinitrobenzene		mg/kg	111	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21
1,5-dimethyl-2,4-dinitrobenzene		mg/kg	111	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.21	<0.21	<0.21	<0.21	<0.21

Notes:

[1]: Maximum concentration of on-site samples included on this table

[2]: Maximum concentration of WisDOT soil/sediment samples per results submitted to WDNR on 7/16/18 by WisDOT

2001 results are from QES-DEN using lab method 8321

2015 results are from ECCS using lab method 8270

mg/kg: milligrams per kilogram

BAR RCL: Site Specific Recreational Residual Contaminant Level for direct contact

ND: Not detected

Table 1
Soil Analytical Results - NNOCs
Use Area PAT
Former Barksdale Works Site
Town of Barksdale, Bayfield County, Wisconsin

Location ID			2015-130D	2015-131X	2015-131X	2015-132X	2015-133X	2015-134X	2015-135X	Maximum Soil Concentration From Use Area PAT[1]	Maximum Soil Concentration From Samples Collected as Part of WisDOT Boyd Creek Project[2]
Field Sample ID			SITG-151007-130D-0-0.5-D	SITG-151007-131X-0-1	SITG-151007-131X-0-1-D	SITG-151007-132X-0-1	SITG-151007-133X-0-1	SITG-151007-134X-0-1	SITG-151007-135X-0-1		
Date Sampled			10/07/2015	10/07/2015	10/07/2015	10/07/2015	10/07/2015	10/07/2015	10/07/2015		
Start Depth - End Depth			0 - 0.5	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1	0 - 1		
Parameter Name	**Units**	**BAR RCL (mg/kg)**	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result		
2,4,6-trinitrotoluene	mg/kg	124	<0.2	**0.23**	**0.32**	<0.2	**0.33**	**0.35**	**0.25**	0.44	0.48
2-amino-4,6-dinitrotoluene	mg/kg	900	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	0.41
4-amino-2,6-dinitrotoluene	mg/kg	893	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	0.025	0.41
1,3,5-trinitrobenzene	mg/kg	13100	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	ND
1,3-dinitrobenzene	mg/kg	36.9	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	ND
2-nitrotoluene	mg/kg	18.4	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	0.078
3-nitrobenzene	mg/kg	36.9	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	ND
4-nitrobenzene	mg/kg	198	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	ND
nitrobenzene	mg/kg	43.2	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	ND
HMX	mg/kg	22500	--	--	--	--	--	--	--	ND	ND
PETN	mg/kg	737	--	--	--	--	--	--	--	ND	ND
RDX	mg/kg	48.6	--	--	--	--	--	--	--	ND	ND
Tetryl	mg/kg	911	--	--	--	--	--	--	--	ND	ND
nitroglycerin	mg/kg	36.9	--	--	--	--	--	--	--	0.21	0.031
2,4-dinitrotoluene	mg/kg	7.03	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	0.65	0.055
2,6-dinitrotoluene	mg/kg	7.03	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	0.064	ND
2,3-dinitrotoluene	mg/kg	7.03	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	ND
2,5-dinitrotoluene	mg/kg	7.03	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	ND
3,4-dinitrotoluene	mg/kg	7.03	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	ND
3,5-dinitrotoluene	mg/kg	7.03	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	ND
2,4,6-trinitro-3-xylene	mg/kg	124	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	ND
1,2-dimethyl-3,4-dinitrobenzene	mg/kg	111	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	ND
1,2-dimethyl-3,5-dinitrobenzene	mg/kg	111	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	ND
1,2-dimethyl-3,6-dinitrobenzene	mg/kg	111	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	ND
1,2-dimethyl-4,5-dinitrobenzene	mg/kg	111	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	ND
1,3-dimethyl-2,4-dinitrobenzene	mg/kg	111	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	ND
1,3-dimethyl-2,5-dinitrobenzene	mg/kg	111	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	ND
1,4-dimethyl-2,3-dinitrobenzene	mg/kg	111	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	ND
1,4-dimethyl-2,5-dinitrobenzene	mg/kg	111	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	ND
1,4-dimethyl-2,6-dinitrobenzene	mg/kg	111	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	ND
1,5-dimethyl-2,3-dinitrobenzene	mg/kg	111	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	ND
1,5-dimethyl-2,4-dinitrobenzene	mg/kg	111	<0.2	<0.21	<0.21	<0.2	<0.22	<0.21	<0.21	ND	ND

Notes:

[1]: Maximum concentration of on-site samples included on this table

[2]: Maximum concentration of WisDOT soil/sediment samples per results submitted to WDNR on 7/16/18 by WisDOT

2001 results are from QES-DEN using lab method 8321

2015 results are from ECCS using lab method 8270

mg/kg: milligrams per kilogram

BAR RCL: Site Specific Recreational Residual Contaminant Level for direct contact

ND: Not detected

Attachment 4

COVID-19 Related Project Impacts letter dated April 23, 2020

The Chemours Company
500 West Jefferson Street
Suite 1600
Louisville, KY 40202

502-569-2301 t
chemours.com

April 23, 2020

Mr. Phil E. Richard
Hydrogeologist
Wisconsin Department of Natural Resources
Park Falls Service Center
875 4th Avenue South
Park Falls, WI 54554-1130

RE: COVID-19 Related Project Impacts
Former DuPont Barksdale Works
72315 State Highway 13
Town of Barksdale, Bayfield County, Wisconsin
FID No.: 804009140
EPA ID No.: WIR000133447
BRRTS No. 02-04-00156

Dear Mr. Richard:

I appreciate you and Chris Saari taking the time on Friday, April 17, 2020 to discuss work The Chemours Company FC, LLC's (Chemours) will undertake at the Former DuPont Barksdale Works (site) during the 2020 field season. As we discussed, Chemours plans to continue to focus on high priorities at the site in 2020, which will include:

- Ongoing investigation of former manufacturing areas, including identification and removal of residual solid product;
- Sampling surface water/sediment at the site perimeter;
- Maintaining existing biopilot test cells;
- Holding a public meeting;
- Requesting modification of the existing hazardous remediation variance (HWRV) to allow a soil heating pilot;
- Fulfilling reporting commitments associated with site investigation and hazardous remediation variance (HWRV) work; and,
- Fulfilling obligations associated with the WisDOT soil relocation project.

Unfortunately, Chemours is experiencing several COVID-19 related impacts that will prevent completion of some of our previously planned work at the site this field season. This work includes:

- **Soil Heating Field Pilot Testing:** Based on successful benchtop testing and thermal modeling in late 2019 and early 2020, Chemours was planning to conduct a field pilot to test the scalability of soil heating as a means to reduce larger pieces of residual solid product (RSP) in soil to a size that could be treated using the current alkaline hydrolysis techniques that have been successful elsewhere on the site (see attached HWRV Modification Request letter from Chemours to WDNR dated February 6, 2020). Addressing larger pieces of RSP is an integral part of the design of the final site remedy. Ongoing COVID-19 related delays will not allow Chemours enough time this summer to adequately complete design, construction, and initial testing of the heating field pilot in what is an already short field season in northern Wisconsin.

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500 West Jefferson Street
Suite 1600
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chemours.com

- **Final Placement of WisDOT Soil**: Soil to be imported from the WisDOT Boyd Creek Bridge replacement project was going to be used as final cover in a former sulfur storage area in 2020. However, COVID-19 related delays are affecting identification of wetlands by WDNR staff (see attached requests submitted on March 17, 2020 and further information below), field surveying, the development and design of a grading plan, and completion of an Interim Action Plan as requested by WDNR. The delays will mean that WDNR approval of the requested Interim Action Plan will not occur prior the start of the WisDOT Boyd Creek Bridge project, which is currently targeted for mid-May 2020.

We are requesting the following regulatory flexibility to accommodate these disruptions:

- **WDNR extension of existing HWRV permit**: An extension of the HWRV permit from May 18, 2022 to May 18, 2023 will allow additional time to refine a full site remedial approach. The design of the remedial approach has been impacted due to the delay of the soil heating pilot testing that was planned from 2020 to 2021.

- **WDNR approval to stockpile WisDOT soil onsite until 2021**: The soil to be imported and placed on the site has concentrations of site-related constituents that are generally consistent with those found in soil in the proposed placement area. The concentrations found in the soil to be imported are also below screening criteria that are protective of human health for direct contact. Current Wisconsin regulations include standards for the management of contaminated soil. To allow for the stockpiling of WisDOT soil onsite until 2021, we are requesting an exemption from:

    - The requirement to provide an Interim Action Plan/Soil Management Plan prior to receiving and stockpiling WisDOT soil. An Interim Action Plan will be developed and submitted prior to the final placement of the WisDOT soil.
    - The requirements for storage of contaminated soil as specified in NR 718.05, which includes storage duration and stockpiling cover/anchor requirements. The soil is proposed to be stockpiled in the same general area as where it will be spread for final placement.
    - The requirement that that soil be placed more than 100 feet from wetlands. Wetland identification requests were submitted to the WDNR in March 2020 for the proposed soil placement area. Travis Holte from the WDNR indicated that there may be potential delays with the identification requests due to COVID-19 related impacts. WDNR wetland maps do not show known wetlands in proposed stockpile locations; however, wetlands are mapped within 100 feet. The proposed soil placement location is located in a former production area and if any wetlands were found in the area, they would likely be considered artificial.

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Louisville, KY 40202

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If you have any questions or comments, please feel free to contact me by telephone at (812) 923-1136 or by email at Bradley.S.Nave@chemours.com.

Sincerely,

Bradley S. Nave
Chemours Corporate Remediation Group

Attachments: Hazardous Waste Remediation Variance Modification Request letter dated February 6, 2020
Wetland Identification Requests dated March 17, 2020

Cc: Chris Saari, WDNR
Cary Pooler, AECOM
Eric Schmidt, AECOM

Attachment 1

Hazardous Waste Remediation Variance Modification Request Letter dated February 6, 2020

The Chemours Company
500 West Jefferson Street
Suite 1600
Louisville, KY 40202

502-569-2301 t
chemours.com

February 6, 2020

Mr. Phil E. Richard
Hydrogeologist
Wisconsin Department of Natural Resources
Park Falls Service Center
875 4th Avenue South
Park Falls, WI 54554-1130

RE: Hazardous Waste Remediation Variance Modification Request
Former DuPont Barksdale Explosives Plant
72315 State Highway 13
Town of Barksdale, Bayfield County, Wisconsin
FID No.: 804009140
EPA ID No.: WIR000133447
BRRTS No. 02-04-00156

Dear Mr. Richard:

This letter comprises The Chemours Company FC, LLC's (Chemours') request for modification to the May 2015 Hazardous Waste Remediation Variance (HWRV) issued for the Former DuPont Barksdale Works site in Barksdale, Wisconsin (site). The modification will allow for the use of thermal heating methods to enhance degradation of nitroaromatic and nitramine organic constituents (NNOCs) in pilot test cells at the site. This modification request is being submitted as a condition of issuance (Condition 6) of the HWRV, which specifies the following:

- *Any changes in hazardous waste remediation activities which are not identified in the Revised Remediation Variance Request for Removal of Residual Product and Debris, dated February 17, 2012, or the Remediation Variance Renewal Request, dated February 22, 2017, will constitute a remediation variance modification. Modifications to this remediation variance shall be submitted as a Class 1 modification request requiring Department review and approval in accordance with s. NR 670.042(1), Wis. Admin. Code. The submittal shall include the appropriate fee stated in ch. NR 670, Wis. Adm. Code, Appendix II.*

Background

Chemours has been conducting in-situ pilot testing of bioremediation methods within test cells at the site as permitted in the May 2015 HWRV to study NNOC degradation processes in soil. As allowed in the permit, the in-situ mechanisms of constituent reduction within the test cells involve a combination of aerobic degradation via indigenous microorganisms and transformation via pH adjustment using lime amendments to promote alkaline hydrolysis (AH). Elevating the soil pH allows for degradation of high concentrations of 2,4,6-trinitrotoluene (TNT) and other NNOCs, which can limit biodegradation. The transformation via AH occurs in the soil pore water through dissolution of the NNOCs. It has been observed in lab and field studies that TNT particle size limits mass transfer to the aqueous phase.

Chemours' investigation of the site has identified that TNT is present in soil over a range of particle sizes from fine, sand grain sized to several inches or greater. The field process appears to address most fine-grained particles in soil. However, it has been determined that attrition (i.e. size reduction of residual solid product [RSP]) of the larger particles is necessary to increase

The Chemours Company
500 West Jefferson Street
Suite 1600
Louisville, KY 40202

502-569-2301 t
chemours.com

transfer to the aqueous phase by reducing particle size and increasing surface area of larger pieces of RSP in soil.

Several techniques to reduce RSP size have been evaluated to date. Based on the results of these evaluations, the project team has identified low temperature, thermally assisted particle size reduction as a focus area for further evaluation. The approach developed for this technique included pre-treatment of soil with hydrated lime to reduce soil plasticity, followed by heating of the soil to the melt temperature of TNT. Once the desired temperature is reached, the soil and molten TNT would be mixed. Initial melt and mixing tests were performed by the United States Army Corps of Engineers (USACE) at their Engineer Research and Development Center in Vicksburg, Mississippi under a Cooperative Research and Development Agreement. The results of the testing indicated that:

- TNT can be safely melted and mixed with soil without risk of fire or explosion,
- TNT particle size after melting and mixing was small enough to allow AH to occur, and,
- The AH process is accelerated at elevated temperatures, with a general twofold increase in rate for every 10 degrees Celsius (° C) that temperature was increased. This rate increase is primarily because the solubility of the NNOCs was observed to increase with elevated temperature, and degradation via AH occurs in the aqueous phase.

Proposed Pilot Test at Site

Based on the results of the work completed to date, Chemours requests a modification to include in-situ heating, in addition to, water and pH amendments currently being used. Chemours proposes to conduct a pilot test at the site to evaluate the feasibility of heating soil, RSP, hydrated lime, and water mix in a test cell. Cell contents will be heated to temperatures above the TNT melt temperature of 176° Fahrenheit (F) (80° C). After heating, the contents of the cell will be mixed using a rotary mix-head attached to an excavator.

Chemours is currently evaluating soil heating mechanisms and conceptual designs for heating the soil at the Barksdale site. Although the specific heating process, duration and temperatures utilized during the pilot test has not yet been determined, the addition of heat will be the only change to the current field pilot testing. All other pilot work, permitted as part of the current HWRV, will remain the same, with the exception of cell configuration/construction. In order to efficiently distribute heat evenly, slight modification of the cell design may be required.

One of the conceptual designs being considered includes the use of a closed loop system of pipes installed in a treatment cell as shown on Figure 1. Heat to the pipes would be supplied by a fluid heating system positioned outside the test cell and heat would be transferred from the pipes to the soil through conduction. The test cells will be constructed with a clay base, berms, and a stormwater/sediment containment basin as described in the HWRV. An insulating layer may be added to retain heat in the cell.

Chemours may also evaluate small ex-situ batch treatment systems performed in a small closed container, such as a 55-gallon drum.

The findings of the soil heating pilot test are anticipated to be incorporated into an interim action and/or remedial action plan(s) for the site, which is due to the WDNR prior to the expiration of the HWRV on May 18, 2022.

The Chemours Company
500 West Jefferson Street
Suite 1600
Louisville, KY 40202

502-569-2301 t
chemours.com

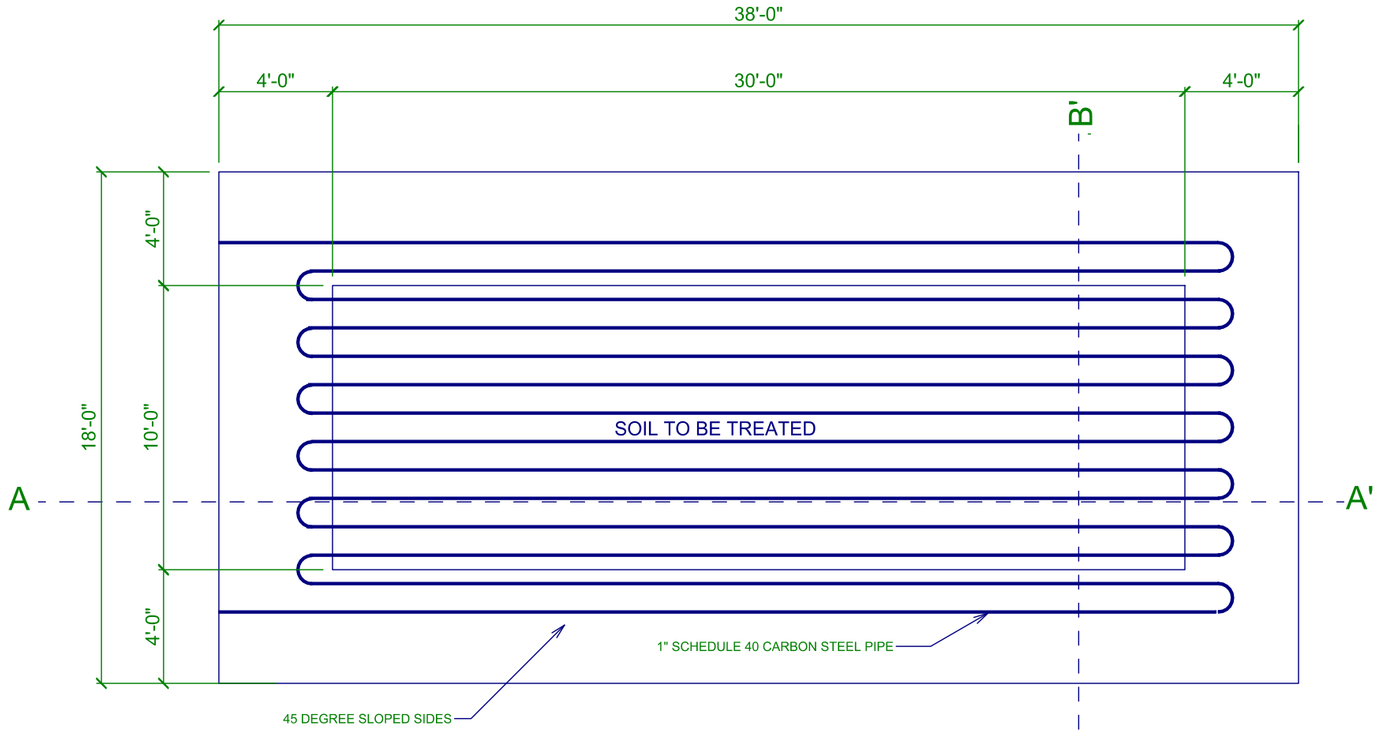
If you have any questions or comments, please feel free to contact me by telephone at (812) 923-1136 or by email at Bradley.S.Nave@chemours.com.

Sincerely,

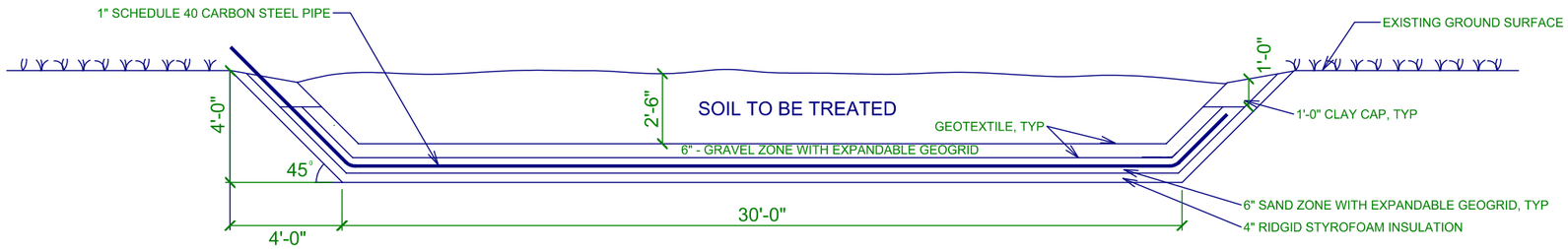
Bradley S. Nave
Chemours Corporate Remediation Group

Attachments: Figure 1 – Modular Closed Loop Steam Conductive Soil Heating Concept
Check for $400 (NR 670 Review of Class 1 Modification Fee)

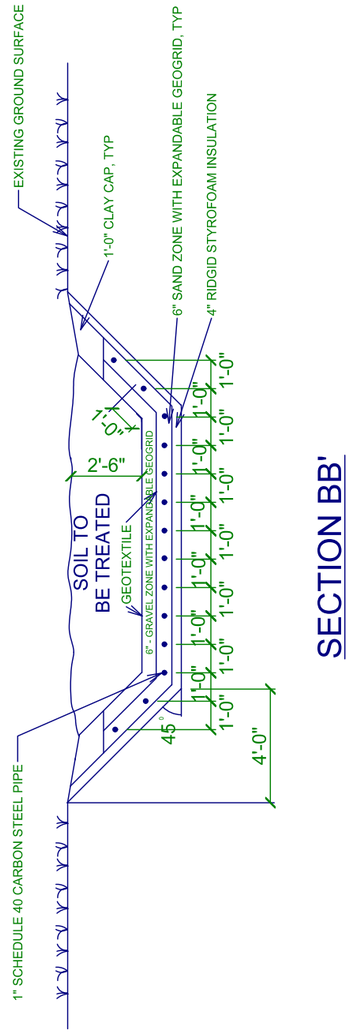
Cc: Chris Saari, WDNR
Jill Schoen, WDNR
Cary Pooler, AECOM
Eric Schmidt, AECOM



PLAN VIEW



SECTION AA'



SECTION BB'

Notes:
Conceptual arrangement; actual layout may be modified as needed.

Scale: 3/16" = 1'
MAP FORMATTED FOR "B" (11" X 17") SIZE SHEET.
SCALE NOT VALID FOR DIFFERENT PAGE SIZE.

FILE NUMBER:	
DESIGNED BY:	RL
DRAWN BY:	VN
DATA QUALITY CHECK BY:	ES

Conductive Soil Heating Concept

Former DuPont Barksdale Works
Barksdale, Wisconsin 54806

PROJECT NUMBER:	60525652
DATE:	01/15/2020
FIGURE NUMBER:	1

G:\Projects\Barksdale\GIS\Maps\Maps 2020\Lan\Conductive Soil Heating Concept.mxd

Attachment 2

Wetland Identification Requests dated March 17, 2020

Wetland Identification Requests

General Information

Complete all sections, **Save** your work, **Move** between tabs, **Pay** online by credit card, debit card or e-check. (You must use this system to pay all application fees), **Include** your digital signature, **Submit** the Application to the DNR.

NOTE: Missing or incomplete fields are highlighted at the bottom of each page. You may save, close and return to your draft permit as often as necessary to complete your application. If there are **no** updates in 90 days, your draft is **deleted.**

Project Information

Wetland ID Activity:	Wetland Identification Request
Project Name:	Former Barksdale Works - PAT

Project Description and Site Narrative

In the space below, Please provide a brief reason for Determination (future development, building expansion, conservation activities, construction, etc.)

Potential Environmental Remediation

Required Attachments and Supplemental Information - Not Started - Required

Wetland Identification Requests

Please complete the contents of each tab and pay online to submit your Wetland Identification Request. The information you provide will be used to submit Form 3500-119.

- ***Site Map*** - Map of Project area and/or map indicating area to be identified. This is satisfied by completing the map on the Site page. Additional maps may be uploaded to the attachment page
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- ***Other Items*** (Optional)

Contact Information

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Requester's Information

Last Name:	Schmidt
First Name:	Eric
Title:	
Organization:	AECOM
Address:	200 Indiana Avenue
City:	Stevens Point
State:	WI
Zip Code:	54481
Email:	eric.schmidt@aecom.com
Phone Number:	920-621-3878 **xxx-xxx-xxxx**

Site Owners Information ☐ Select if same as Requester:

Last Name:	Bretting
First Name:	Paul
Title:	
Organization:	Bretting Development Corporation
Address:	3401 Lake Park Road
City:	Ashland
State:	WI
Zip Code:	54806
Email:	paulbretting@bretting.com
Phone Number:	715-682-5231 **xxx-xxx-xxxx**

Site Information - Complete

Address:	72315 Highway 13
City:	Ashland
State:	WI
Zip Code:	54806
Acreage:	4.928
Government Lot #:	

Site Map ID0725-Former-Barksdale-Works

You must include a map showing the exact location of the parcel(s) of land for your request. If you do not wish to have an entire area considered, you must indicate on the map the exact location of the area(s) for your request.

Wetland Identification Request areas must be 5 acres or less.

Legal Description

County:	Bayfield
Municipality:	○ City ○ Township ○ Village of BARKSDALE;T
Quarter-Quarter:	NW
Quarter:	NE
Section:	23
Township:	48 **N**
Range:	05 ○ **East** ○ **West**

(PLSS information filled in by the site map created on this page)

Required Attachments and Supplemental Information - Not Started - Required

A complete submittal with detailed drawings will help us make a decision about your permit application. Any applicable statutory review times do not begin until the application is received by the Department and is determined to be complete.

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- ***Other Items*** (Optional)

Upload Required Attachments (15 MB per file limit) - Help reduce file size and trouble shoot file uploads
*Required Item
Note: To replace an existing file, use the 'Click here to attach file ' link or to delete an item.

Delineation Report (written portion)

File Attachment

Delineation Data Forms

File Attachment

Narrative

File Attachment 4a_Narrative.pdf

Agricultural or Roadway Use Aerial Map

File Attachment

Wetland Delineation Map

File Attachment

Soil Survey Map

File Attachment

Wisconsin Wetland Inventory Map

File Attachment

Topographical Map

File Attachment

Other Site Maps

Select Map Type: ...Select Map Type

File Attachment

Other Attachments

File Attachment

(Click insert to add additional Other Items or Site Photos. Use your cursor to hover over the file name field. When the drop down arrow appears, select insert or remove item)

Complete Payment

Your Invoice Number: WP-00022450

Amount Due: $1,500

STEP 1:

Payment is Complete

Confirmation Number: WS2WT3004475567

Upon completing payment in STEP 1, you will receive an email confirmation from DNRFINANCEEPYMNT with a DNR-Water Div. Volume Permits subject line. Enter 15 digit transaction number into the box above.

Please note that payment is considered successful when your financial institution renders payment for this transaction. Failure of US Bank to collect and transfer funds from the permit applicant to the DNR, does not release the applicant of financial responsibility and the DNR reserves the right to collect unpaid fees.

All payments are collected by US Bank which is an external website contracted by the Wisconsin Department of Natural Resources for the sole purpose of collecting payments over the web.

Sign and Submit Your Application

Steps to Complete the signature process

1. Read and Accept the Terms and Conditions
2. Press the Submit and Send to the DNR button

NOTE: For security purposes all email correspondence will be sent to the address you used when registering your WAMS ID. This may be a different email than that provided in the application. For information on your WAMS account click HERE .

Terms and Conditions

Owner Certification: As the owner, lessee or easement holder of the property, I am requesting the Department complete an artificial wetland exemption determination and I grant access to the property for this purpose. If not the owner, I am an authorized agent for the owner, lessee or easement holder.

Authorized Signature.

☑ I accept the above terms and conditions.

Signed by : i:0#.f|wamsmembership|ericcschmidt on 2020-03-17T13:37:44

You have already signed and submitted this application to the DNR. Please contact the Wisconsin DNR for assistance.

After providing the final authorized signature, the system will send an email to the authorized party and any agents. This email will include a copy to the final read only version of this application.

PROJECT INFORMATION - Former Barksdale Works - PAT

Project Description:

Geographical Management Unit:	https://permits.dnr.wi.gov/water/Lists/Public%20Issues/Attachments/1694/GMU%20Map.pdf
Wetland Bank Service Area:	
County:	Bayfield
Municipality:	○ City ◉ Township ○ Village of BARKSDALE;T
Quarter-Quarter:	NW
Quarter:	NE
Section:	23
Township:	48 **N**
Range:	05 ○ **East** ◉ **West**
Latitude:	46.628094915
Longitude:	-90.953904379

(PLSS information filled in by the site map created on this page)

PROPOSED UNAVOIDABLE WETLAND IMPACTS BY COVER TYPE AND DELINEATED ACREAGE

Wetland Cover Type	*Acreage (to nearest 0.01)*
Shallow, Open Water:	
Deep and Shallow Marshes:	
Sedge Meadows:	
Fresh (Wet) Meadow:	
Wet to Wet - Mesic Prairie:	
Calcareous Fens:	
Bogs (Open or Coniferous):	
Shrub - Carr or Alder Thicket:	
Hardwood or Coniferous Swamps:	
Floodplain Forests:	
Seasonally Flooded Basins	

Wetland Identification Requests

General Information

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Project Information

Wetland ID Activity:	Wetland Identification Request
Project Name:	Former Barksdale Works - PAT (Northwest)

Project Description and Site Narrative

In the space below, Please provide a brief reason for Determination (future development, building expansion, conservation activities, construction, etc.)

Potential Environmental Remediation

Required Attachments and Supplemental Information - Not Started - Required

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Requester's Information

Last Name:	Schmidt
First Name:	Eric
Title:	
Organization:	AECOM
Address:	200 Indiana Avenue
City:	Stevens Point
State:	WI
Zip Code:	54481
Email:	eric.schmidt@aecom.com
Phone Number:	920-621-3878 **xxx-xxx-xxxx**

Site Owners Information ☐ Select if same as Requester:

Last Name:	Bretting
First Name:	Paul
Title:	
Organization:	Bretting Development Corporation
Address:	3401 Lake Park Road
City:	Ashland
State:	WI
Zip Code:	54806
Email:	paulbretting@bretting.com
Phone Number:	715-682-5231 **xxx-xxx-xxxx**

Site Information - Complete

Address:	72315 Highway 13
City:	Ashland
State:	WI
Zip Code:	54806
Acreage:	4.985
Government Lot #:	

Site Map ID4038-Former-Barksdale-Works--PAT-

You must include a map showing the exact location of the parcel(s) of land for your request. If you do not wish to have an entire area considered, you must indicate on the map the exact location of the area(s) for your request.

Wetland Identification Request areas must be 5 acres or less.

Legal Description

County:	Bayfield
Municipality:	○ City ○ Township ○ Village of BARKSDALE;T
Quarter-Quarter:	NW
Quarter:	NE
Section:	23
Township:	48 **N**
Range:	05 ○ **East** ○ **West**

(PLSS information filled in by the site map created on this page)

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Wetland Delineation Map

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Soil Survey Map

File Attachment

Wisconsin Wetland Inventory Map

File Attachment

Topographical Map

File Attachment

Other Site Maps

Select Map Type: ...Select Map Type

File Attachment

Other Attachments

File Attachment

(Click insert to add additional Other Items or Site Photos. Use your cursor to hover over the file name field. When the drop down arrow appears, select insert or remove item)

Complete Payment

Your Invoice Number: WP-00022463

Amount Due: $1,500

STEP 1:

Payment is Complete

Confirmation Number: WS2WT3004476700

Upon completing payment in STEP 1, you will receive an email confirmation from DNRFINANCEEPYMNT with a DNR-Water Div. Volume Permits subject line. Enter 15 digit transaction number into the box above.

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Terms and Conditions

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Authorized Signature.

☑ I accept the above terms and conditions.

Signed by : i:0#.f|wamsmembership|ericcschmidt on 2020-03-17T16:21:34

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Municipality:	○ City ◉ Township ○ Village of BARKSDALE;T
Quarter-Quarter:	NW
Quarter:	NE
Section:	23
Township:	48 **N**
Range:	05 ○ **East** ◉ **West**
Latitude:	46.629068183
Longitude:	-90.953702210

(PLSS information filled in by the site map created on this page)

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Seasonally Flooded Basins	

Wetland Identification Requests

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Project Information

Wetland ID Activity:	Wetland Identification Request
Project Name:	Former Barksdale Works - PAF

Project Description and Site Narrative

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Potential Environmental Remediation

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Organization:	AECOM
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State:	WI
Zip Code:	54481
Email:	ericcschmidt@aecom.com
Phone Number:	920-621-3878 **xxx-xxx-xxxx**

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First Name:	Paul
Title:	
Organization:	Bretting Development Corporation
Address:	3401 Lake Park Road
City:	Ashland
State:	WI
Zip Code:	54806
Email:	paulbretting@bretting.com
Phone Number:	715-682-5231 **xxx-xxx-xxxx**

Site Information - Complete

Address:	72315 Highway 13
City:	Ashland
State:	WI
Zip Code:	54806
Acreage:	4.771
Government Lot #:	

Site Map ID1144-Former-Barksdale-Works--PAF

March 16, 2020

1:1,980

0 0.01 0.03 0.06 mi

0 0.03 0.05 0.1 km

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Range:	05 ○ **East** ○ **West**

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Delineation Data Forms

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Narrative

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Wetland Delineation Map

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Soil Survey Map

File Attachment

Wisconsin Wetland Inventory Map

File Attachment

Topographical Map

File Attachment

Other Site Maps

Select Map Type: ...Select Map Type

File Attachment

Other Attachments

File Attachment

(Click insert to add additional Other Items or Site Photos. Use your cursor to hover over the file name field. When the drop down arrow appears, select insert or remove item)

Complete Payment

Your Invoice Number: WP-00022464

Amount Due: $1,500

STEP 1:

Payment is Complete

Confirmation Number: WS2WT3004476735

Upon completing payment in STEP 1, you will receive an email confirmation from DNRFINANCEEPYMNT with a DNR-Water Div. Volume Permits subject line. Enter 15 digit transaction number into the box above.

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Authorized Signature.

☑ I accept the above terms and conditions.

Signed by : i:0#.f|wamsmembership|ericcschmidt on 2020-03-17T16:26:23

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PROJECT INFORMATION - Former Barksdale Works - PAF

Project Description:

Geographical Management Unit:	https://permits.dnr.wi.gov/water/Lists/Public%20Issues/Attachments/1694/GMU%20Map.pdf
Wetland Bank Service Area:	
County:	Bayfield
Municipality:	○ City ◉ Township ○ Village of BARKSDALE;T
Quarter-Quarter:	NW
Quarter:	NE
Section:	23
Township:	48 **N**
Range:	05 ○ **East** ◉ **West**
Latitude:	46.627653950
Longitude:	-90.953435277

(PLSS information filled in by the site map created on this page)

PROPOSED UNAVOIDABLE WETLAND IMPACTS BY COVER TYPE AND DELINEATED ACREAGE

Wetland Cover Type	*Acreage (to nearest 0.01)*
Shallow, Open Water:	
Deep and Shallow Marshes:	
Sedge Meadows:	
Fresh (Wet) Meadow:	
Wet to Wet - Mesic Prairie:	
Calcareous Fens:	
Bogs (Open or Coniferous):	
Shrub - Carr or Alder Thicket:	
Hardwood or Coniferous Swamps:	
Floodplain Forests:	
Seasonally Flooded Basins	

Attachment 5

Request for WDNR Concurrence of Conceptual Soil Management Plan dated April 26, 2019

The Chemours Company
500 West Jefferson Street
Suite 1600
Louisville, KY 40202

502-569-2301 t
chemours.com

April 26, 2019

Mr. Chris Saari
Wisconsin Department of Natural Resources
2501 Golf Course Road
Ashland, WI 54806-3505
Via e-mail: christopher.saari@wisconsin.gov

RE: Request for Wisconsin Department of Natural Resources Concurrence of Conceptual Soil Management Plan
State Highway 13 Bridge Over Boyd Creek Bridge Replacement Project
Former Barksdale Works
Town of Barksdale, Bayfield County, Wisconsin
WDNR BRRTS Numbers 02-04-000156 and 02-04-550402

Dear Mr. Saari,

The Chemours Company, FC, LLC (Chemours) has prepared this letter to request concurrence from the Wisconsin Department of Natural Resources (WDNR) regarding the management of soil associated with the planned replacement of the State Trunk Highway (STH) 13 Bridge over Boyd Creek adjacent to the Former Barksdale Works site. Project background information and contingent plans for soil management are provided in the following paragraphs.

Background

The Wisconsin Department of Transportation (WisDOT) plans to replace the STH 13 Bridge over Boyd Creek. In support of that project, WisDOT retained staff from the AECOM Stevens Point, Wisconsin office to perform a Phase 1 Hazardous Materials Assessment (Phase 1 HMA) for the area of the STH 13 Bridge over Boyd Creek. A WisDOT Phase 1 HMA is similar to, but not equivalent to an ASTM Phase I Environmental Site Assessment. Because of the open Environmental Repair Program (ERP) cases adjacent and upgradient of the WisDOT construction area on the Former Barksdale Works site, WisDOT contracted AECOM to perform a subsequent Phase 2.5 Environmental Sampling Investigation (Phase 2.5) in the planned construction limits. A WisDOT Phase 2.5 is generally equivalent to a traditional Phase II Environmental Site Assessment. The investigation consisted of soil, sediment, and groundwater sampling in the proposed construction area and was conducted in 2017-2018. Collected media were quantified by analytical laboratories for nitroaromatic and nitroamine organic compounds (NNOCs), which are the primary constituents associated with the historical manufacturing on the Barksdale Works site.

Detailed results of the investigation were documented in the AECOM Phase 2.5 report dated November 2018. The laboratory results indicated no NNOCs were present above the detection limits in the sediment samples; however, low concentrations of NNOCs were detected in the soil and groundwater samples. The low level concentrations are generally consistent with concentrations historically detected by Chemours in the Boyd Creek area.

The NNOC concentrations detected during the Phase 2.5 were compared to screening criteria as detailed below:

- Soil analytical results were compared to default Wisconsin Administrative Code, Chapter NR 720 (NR 720) non-industrial residual contaminant levels (RCLs) protective of the direct contact pathway.
    - NNOC concentrations detected in soil were below default NR 720 non-industrial RCLs for direct contact.
- Soil analytical results were also compared to default NR 720 RCLs protective of the soil to groundwater pathway. This pathway is incomplete at the Former Barksdale Works site because NNOCs have not been detected in groundwater in the southern portion of the site and a municipal water supply was provided to residences downgradient of the northern portion of the site. Default NR 720 soil to groundwater RCLs have not been established for the NNOCs detected in soil samples, with the exception of 2,4-Dinitrotoluene (2,4-DNT).
    - 2,4-DNT was detected in two soil samples collected from within wetlands north of Boyd Creek. 2,4-DNT was detected at concentrations of 36 µg/kg and 55 µg/kg, which were above the laboratory method detection limit, but below reporting limit. The 2,4-DNT detections exceeded the default NR 720 groundwater pathway RCL of 0.1 µg/kg. The soil concentrations are consistent with the concentrations of detected NNOCs in the northern portion of the Southern Area of the Former Barksdale Works site and several orders of magnitude below the site specific RCLs.
- Groundwater analytical results were compared to the United States Environmental Protection Agency Regional Screening Levels (RSLs) as NR 140 Enforcement Standards and Preventive Action Limits have not been established for the NNOCs detected in groundwater.
    - Detected concentrations of NNOCs were below RSLs, with the exception of 2,4,6-trinitrotoluene (TNT) at one location. TNT was detected at 27 micrograms per liter (µg/L), which exceeded the RSL of 2.2 µg/L, from a boring located within the STH 13 right of way north of Boyd Creek.

Based on the results of the Phase 2.5, the management of low-level NNOC contaminated soil and possibly groundwater was determined to be warranted by WisDOT and WDNR during construction.

Chemours, WisDOT, WDNR, and AECOM have participated in several group discussions in 2018 and 2019 regarding the results of the WisDOT Phase 2.5 and associated options for management of soil generated by WisDOT during construction that has low-level concentrations of NNOCs. It is our understanding that the WDNR will not allow WisDOT to place soil with NNOC detections back within the areas from which it was excavated based on location standards included in NR 718.12. Most of the WisDOT project area is located within 100 feet of wetlands and/or within 300 feet of Boyd Creek. Therefore, WisDOT plans to transport soil with detected NNOCs off-site for disposal. In lieu of transport of the material to a landfill, you had initially indicated that management of the soil at the adjacent Former Barksdale Works site may be a possibility. In an email dated February 5, 2019, you

indicated that the WDNR would be amenable to the management of excavated soil (from the WisDOT project) on the southern area of the Former Barksdale Works site.

Soil Management & Schedule

As detailed in the group discussions, WisDOT has estimated that approximately 1,100 cubic yards of soil with detected NNOCs will be excavated during construction of the new bridge. The conceptual WisDOT soil management plan is to take the soil to the Southern Area of the Former Barksdale Works site at which point Chemours would take responsibility for the soil.

Chemours' conceptual plan to manage the soil is to place the soil as cover, as needed, in the northern half of the Southern Area or within the former manufacturing areas at the Former Barksdale Works site to limit direct contact with existing soils in areas where appropriate. The soil may need to be temporarily stockpiled at the Former Barksdale Works site for an indeterminate time, prior to being spread out as cover. Prior to placement of WisDOT soils at the Former Barksdale Works site, Chemours will submit a plan to the WDNR indicating specific soil placement locations and methods in order to track the soil use.

Reuse of the soil as cover at the Former Barksdale Works site is appropriate because the NNOC concentrations in the WisDOT soil are:

- Less than the default NR 720 non-industrial (i.e., residential) direct contact RCLs, meaning the soil is suitable for use in residential areas. This comparison is considered to be over-protective because there are contractual agreements between Chemours and Bretting Development Corporation (property owner) that limit use of the Former Barksdale Works site to recreational purposes.
- Less than or generally consistent with existing NNOC concentrations in the northern half of the Southern Area of the Former Barksdale Works site where groundwater data have already been collected and demonstrate that the soil-to-groundwater migration pathway is incomplete. As such, if the soil were to be placed as cover in that area of the site, groundwater is not expected to be adversely affected because the concentrations are much less than anticipated recreational use screening criteria that will be used for closure and because there is no use of groundwater downgradient of these areas (i.e., municipal supply and contractual restrictions).

We understand that WisDOT's internal timing requirements dictate that a Draft Soil Management Plan is required by May 1, 2019, and must be finalized by August 1, 2019 in order to support the construction work, which is scheduled to begin in Spring 2020. Transport of WisDOT soil by WisDOT to the Chemours site is estimated to begin in June or July 2020.

Chemours' schedule for use of the soil will be based on a number of factors, including the timing of program needs, type of material actually provided (soil properties, amenability to compaction, etc.), and analytical results of material provided. As such, a specific plan cannot be prepared by Chemours on the same schedule as WisDOT.

Chemours assumes that the conditions of the soil that will be transported to the Former Barksdale Works site will be consistent with the analytical results of the WisDOT Phase 2.5. Those results were obtained from 36 soil/sediment analytical samples collected from 27 locations within the WisDOT project area. Chemours also assumes that the volume of soil that will be transported to the Barksdale Works site will be generally consistent with the WisDOT estimate of 1,100 cubic yards.

Request for WDNR Concurrence

Chemours is willing to accept soil from the WisDOT Boyd Creek Bridge replacement project and manage it on-site as part of the ongoing site remediation work, provided:

- WDNR is in agreement with the WisDOT soil management plan, and
- WDNR provides acceptance of Chemours' conceptual plan presented herein to manage the soil after it has been placed on the Former Barksdale Works site.

If the conceptual approach for soil management included in this letter is acceptable to the WDNR, please provide a written response indicating as such prior to May 1, 2019. We understand that WDNR concurrence may be contingent upon review of the Draft WisDOT Soil Management Plan and an associated Soil Management Plan from Chemours.

Please contact me if you have any questions with respect to this letter.

Sincerely,

Bradley S. Nave
Chemours Corporate Remediation Group

Cc: Cary Pooler, AECOM
Eric Schmidt, AECOM
Kyle Wagoner, AECOM