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June 29, 2023

FID #: 804 00914 0
Bayfield County
HW/LIC

The Chemours Company FC, LLC
Bradley Nave
500 West Jefferson Street, Suite 1600
Louisville, KY 40202

Subject: Hazardous waste remediation variance approval for the former DuPont Barksdale Works
Project BRRTS No: 02-04-000156; EPA ID No: WIR000133447

Dear Bradley Nave:

The department has completed its review of The Chemours Company FC, LLC (Chemours) April 28, 2023, request for a hazardous waste remediation variance[1] at the former DuPont Barksdale Works located at 72315 State Highway 13, Barksdale, WI 54891. The request was for on-site and ex-situ storage and treatment of "soils that contain a hazardous waste" under EPA's "contained-in" policy and for "hazardous waste debris." These soils and debris will be referred to collectively as "materials" throughout this letter.

Chemours has stated that the types of materials that have been encountered on-site contain nitroaromatic and nitramine organic constituents (NNOCs) or other hazardous waste constituents that exhibit a reactivity characteristic and/or exceed the toxicity characteristic regulatory limits established in subchapter (subch.) C of chapter (ch.) NR 661, Wis. Adm. Code. Proposed activities associated with this hazardous waste remediation variance include the ex-situ and on-site storage and treatment of these materials.

The purpose for issuing a hazardous waste remediation variance is to facilitate the remediation process of the former DuPont Barksdale Works project while being protecting of human health and the environment. In accordance with s. NR 670.079, Wis. Adm. Code, and s. 291.31 Wis. Stats., the department has determined that **Chemours' request for a 3rd hazardous waste remediation variance for the on-site and ex-situ storage and treatment of materials that will be encountered during the former DuPont Barksdale Works project is approved, subject to compliance with chapters NR 660-679, Wis. Adm. Code, and the conditions of this approval.** This approval does not relieve Chemours of obligations to meet all other applicable federal, state, and local permits, as well as zoning and regulatory requirements.

BACKGROUND INFORMATION

The following background information originated from a November 10, 2016, report titled "*Superfund Site Reassessment Dupont Barksdale Explosives Plant Town of Barksdale, Bayfield County US EPA ID: WIN000508267*"

[1] Wisconsin's hazardous waste remediation variance are called Remedial Action Plans (RAPS) at the federal level.

The E.I. du Pont de Nemours & Company (DuPont) operated the former DuPont Barksdale Explosives Plant from 1905 until 1971. The plant property originally encompassed approximately 1,800 acres with about 1,000 acres were used for explosives production. The types of explosives manufactured included: trinitrotoluene (TNT), nitroglycerin (NG), along with lesser amounts of compounds such as trinitroxylene (TNX), dinitroxylene (DNX), soda amatol, nitramex, and other compounds including sulfuric and nitric acids which were produced for use on site in the manufacturing processes. These explosives were manufactured for the mining industry, as well as the United States military during both World War I and World War II.

During World War I, as many as 6,000 people were employed at the facility, and an estimated 900 buildings were constructed over the operating life of the facility. All except four of these buildings were demolished prior to the sale of the property leaving only the concrete footers/foundations in place where present. In addition, several miles of roads and narrow-gauge rail were constructed to connect the different portions of the facility. The rail system has since been removed, and some of the roads have become overgrown with vegetation. During World War I, a security fence was erected around the perimeter of the facility. This fence remains intact.

The site is surrounded by forested, residential and agricultural properties. The site is bounded to the east by State Highway 13, to the north by Nolander Road, to the west by Ondossagon Road, and to the south by forest and agricultural land. There are 15 homes immediately north of the site along Nolander Road, and another 17 residences along the east side of State Highway 13. Several additional residences are located northeast, west, and south of the site perimeter.

DuPont manufactured NG and dynamite at the facility from 1905 until 1961 and TNT from 1912 until the facility's closing in 1971. From 1913 to 1918, the facility was the world's largest producer of TNT, manufacturing over 130 million pounds of the explosive. Following the end of World War I, production at the facility dropped dramatically. However, with the start of World War II, DuPont increased production to meet the country's war needs. DuPont produced over 226 million pounds of TNT during World War II.

The sulfuric and nitric acids used in the manufacturing processes at the former DuPont Barksdale Explosives Plant were produced on-site. On the northwestern portion of the property. Concentrated sulfuric acid, also known as oil of vitriol or OV, was originally produced through roasting iron pyrite; the iron residue was used as fill for both road and rail beds. Elemental sulfur later replaced iron pyrite as the source of sulfur at the acid plant. Concentrated nitric acid was produced in the southern portion of the acid area, using caliche containing sodium nitrate, and later anhydrous ammonia, as the initial feed stock. Concentrated sulfuric acid was used to concentrate the nitric acid.

Nitroglycerin was produced by mixing acid, glycerin, and glycol in a nitrator building. Following a neutralizing step, the NG was separated from a mixture of NG and water. The resultant wastewater was discharged to a ditch that ran to Boyd Creek. Waste solids from this process were sent to the "burning ground" for on-site disposal. The ingredients used in TNT production included concentrated sulfuric and nitric acids, and toluene. The toluene was nitrated in three successive steps, with the flow of acid opposite the flow of product in the process. After the third nitration step, molten TNT was gravity fed to a wash house. The molten TNT was then washed with a sodium sulfate ("sellite") solution, and the resultant wastewater, also known as red water, was discharged to catch boxes. The catch boxes in turn discharged to ditches that drained either to Boyd Creek or to the intermittent streams on the property. Solids from the catch boxes were periodically collected and transported to the burning ground for destruction.

OVERVIEW OF THE REMEDIATION WORK

The following information originated from an April 28, 2023, report titled "*DRAFT Interim Remedial Action Plan*" and an April 28, 2023, report titled "*Remediation Variance Application*"

Excavation and Characterization

Subsurface investigation work is focused on former production buildings, process drains, and ditches; however, other discontinuous areas may be investigated based on field observations. Non-production buildings (e.g., change houses, office buildings), water supply lines, storm water ditches not connected to process lines, and other nonproduction related site features have been determined through historical sampling to be generally unaffected from past manufacturing activities and are therefore excluded from the investigative work.

Because entrained TNT (i.e., residual solid product (RSP)) is in soil at the site, shielded excavation equipment is typically used for the excavations. This excavation work is advanced at intervals of approximately 6-inches or less to allow for early identification of RSP and other affected soil and debris. As the excavation is advanced, excavated soil and debris is visually inspected and screened using a FIDO® meter (handheld explosives trace detector) combined with colorimetric identification spray (Expray®) to identify the presence of NNOCs. The soil and debris encountered are segregated based on field screening results and consolidated into staging piles located within the area of contamination (AOC) depicted in Figure 2 of the April 28, 2023, Chemours report titled "Remediation Variance Application."

Staging Piles for Investigation Materials Sorting

Excavated material is initially segregated and consolidated into staging piles that are adjacent to the open excavations. Field screening and/or laboratory analysis are used to segregate the staging piles into the following 2 categories:

- Unaffected materials are materials that contains concentrations of constituents of concern (COCs) below the Site-Specific Residual Contaminant Levels (SSRCLs), Land Disposal Restrictions (LDRs) treatment standards, and applicable toxicity characteristic criteria of subchapter C of chapter NR 662, Wis. Adm. Code.
- Affected materials are materials that may contain concentrations above SSRCLs, LDRs, and/or toxicity characteristic criteria. Reactive material will not be managed in a staging pile. Easily segregable residual material that may exhibit a characteristic of reactivity will be containerized for subsequent storage, processing, and off-site disposal or placement in a heated treatment cell. Materials that cannot be easily segregated and exhibit the reactivity characteristic, if any, will be wetted to remove the reactivity characteristic prior to being staged for subsequent treatment. Soil reactivity is defined as a concentration of greater than 12% of TNT in soil. If field screening indicates the potential presence of TNT at a concentration of greater than 12% in soil, the material will be considered reactive and wetted to 30% by weight with water.

Unaffected materials are assigned for reuse within the AOC. Affected material that cannot be treated on-site is shipped off-site to a licensed treatment, storage, and disposal (TSD) facility. Affected material that can be treated on-site are moved to a clay-lined cell (heated and unheated) for treatment. The affected material that are treated are then moved into staging piles in the unheated clay-lined treatment cells (i.e., CAMUs as discussed later) until a sufficient volume of affected material is accumulated to warrant initiation of treatment either in the unheated treatment cell or within heated treatment cell.

Unheated Treatment Cells

Each unheated treatment cell consists of two portions: the main area, which is used to store and treat the affected material and a surface water/sediment containment basin, which is used to reduce the potential for water and sediment from migrating outside of the cell. The cell construction process includes the removal of topsoil and underlying subsoil and placement of a one-foot-thick layer of clay along the bottom and sidewalls of the cell and surface water/sediment trap. The clay used to construct the cell is from on-site clay borrow source that was unaffected by historical site operations. Berms are constructed to eliminate stormwater flow into the cells and retain the affected material placed within the cell. The specific dimensions of the cell will vary depending on site conditions; however, the maximum cell width between the top of the berms is expected to be under 50 feet to allow for an excavator mixing of the cell contents with hydrated lime and/or other amendments.

The specific location of the cells is dependent on a variety of factors including proximity to ongoing site investigation work, available space, topography, future stability, etc. Generally, cells are constructed within the vicinity of site investigation work areas to limit the distance that material would need to be moved. The cell may contain material from one or more use areas.

Heated Treatment Cell

When the TNT particles are larger than sand grain-sized, are heavily weathered, or vitrified (i.e., glasslike), the ability of the TNT particles to dissolve into the aqueous phase, where alkaline hydrolysis (AH) occurs, is limited. To reduce the size of the TNT particles a low temperature thermal treatment process is used that involves heating the soil to a temperature above the melting temperature of TNT (176 degrees F) while safely remaining below the TNT self-detonation temperature (approximately 450 degrees F). This thermal process is highly effective at melting larger pieces of TNT and increasing surface area so the material can be more readily solubilized in water and treated via AH. Soils that complete this thermal process (estimated to be 5% of the total volume of treated) also results in a reduction of the COC to below the direct contact SSRCLs.

Currently there is a single heated treatment cell (C40) that was constructed in 2021. No additional heating cells are planned at this time; however, additional heating cells and associated retention basins may be constructed, if needed. It is expected that new heating cells would be of generally similar design to cell C40 with the scale of the cell increased to expand treatment capacity.

Construction of Cell C40 is with reinforced concrete. To limit the potential of cell contents leaking during treatment, a water stop is installed between the walls and floor and a waterproofing concrete mixture was used to lower the permeability of the concrete, and the joints at wall/floor interface were covered with a high temperature sealant. The concrete floor is underlain with an approximately 3-foot-thick layer of foamed glass aggregate, which was placed over layers of woven geotextile and a 45-millimeter-thick ethylene propylene diene monomer (EPDM) liner. The EPDM liner is installed to contain potential leaks from the cell, if any. The water level within the foamed glass aggregate layer is routinely measured when the cell is in operation to monitor for leaks from the cell.

To manage the soil and water associated with cell C40 required the construction of 3 retention basins that are located near cell C40. The construction of 3 retention basin is like that of an unheated cell. The 3 retention basins are used to:

- Temporarily store soil that is either being prepared for treatment in cell C40 or has already undergone treatment in cell C40. The basin is split into 2 halves to keep the treated and untreated soil separated.
- Temporarily store water that was previously heated for future re-use in the heating cell.

- Retain excess water from the soil retention basin.

Treatment Process

The remediation process for the COC (e.g., NNOCs, other organics, and inorganics) consists of AH treatment (unheated and/or heated) augmented by concurrent and ongoing natural biological remediation using microbial remediation and phytoremediation. The initiation of AH treatment process occurs when a sufficient volume of material has been accumulated for treatment or at the end of a field season, whichever comes first.

The AH treatment process requires the mixing of high calcium hydrated lime (lime) with the soil placed in the cells. The amount of lime added to each cell is approximately 4% lime by weight of the soil. The lime is mixed into the soil using an excavator bucket and/or a rotating mix-head installed on the excavator. Periodic pH sampling is performed to maintain a target soil pH of >10.5. If the pH is below 10.5 and the COC concentrations are above target numerical values, then additional lime is added to the cell. To activate the AH process water is required. This water may be obtained from a variety of sources, including, precipitation, recirculation from the surface water/sediment trap, pumping ponded stormwater from nearby excavations into the cell, water from decontamination activities, and water from other cells or sources.

Alkaline hydrolysis is a chemical reaction that occurs in the soil's pore space. Once the hydrated lime has dissolved into the soil's pore space the degradation of targeted COC is nearly instantaneous and results in a reduction of the COC to below the direct contact SSRCLs. It should be noted that while AH is nearly instantaneous when COC are in aqueous solution, dissolution cannot occur when water in the treatment cells is frozen. This will be the case for approximately 6 to 7 months each year. In addition to temperature, a number of variables will also dictate the rate(s) of dissolution, including but not limited to contaminant concentrations, soil conditions, soil moisture content, etc. As such, more than 2 years of active treatment may be required to remediate the material to levels below the SSRCLs.

To promote the natural biological remediation of the COCs the soils are aerated (via direct soil tilling or plant rooting) and have sufficient moisture. Previous testing has shown that elevated concentrations of TNT inhibit biodegradation processes to the point that no or very slow biodegradation occurs. The AH treatment process is used, as necessary, to reduce TNT concentrations in soil to a point that would be conducive to biodegradation. This natural biological remediation serves as an ongoing mechanism for sustained constituent reduction in the final placement areas.

To demonstrate compliance with meeting the direct contact SSRCLs, the alternative LDR treatment standards for soils, and to determine if a material contains a characteristic hazardous waste sampling and analysis is performed in every treatment cell several times during the AH treatment process. Meeting the direct contact SSRCLs will result in meeting the alternative LDR treatment standard for soils. Materials that continue to contain a characteristic hazardous waste, or do not meet the SSRCLs, or do not meet the alternative LDR treatment standards are either returned to the cell for additional treatment or containerized and shipped to an off-site licensed TSD facility. The analytical results that demonstrate that the alternative LDR treatment standard for soil in each cell is met is based on discrete grab samples. For the hazardous waste determination under s. NR 662.011 Wis. Adm Code, incremental sampling methodology (ISM) is used for the collection of a representative sample of the materials from the staging piles or treatment cells. ISM sampling methodology is also used for determining compliance with SSRCLs proposed for the site.

Completion of the Treatment Process

Final placement of treated soil will occur within the clay-lined treatment cells where soil was initially treated or within a separate, consolidated clay-lined cell. These areas will be a final repository for treated soil and be used for ongoing natural attenuation. Natural biological degradation and phytoremediation will serve as an ongoing mechanism for sustained constituent reduction in the final placement areas to meet Wisconsin performance standards, if necessary.

Following completion of work, excavation areas will be graded to blend with surrounding grade to the extent practical. Efforts will be made to grade soil in a manner that will allow for surface drainage, where practical. Water retention basins may be purposely constructed as part of restoration that enhance recreational opportunities at the site and benefit wildlife. All areas of disturbed soil will be seeded and mulched when work in the area is complete. The seeded area will be inspected at least once per week, when the ground is not frozen or snow covered, until a perennial vegetation cover with a density of at least 70% is achieved.

OVERVIEW OF THE REGULATORY ISSUES RELATED TO THIS HAZARDOUS WASTE REMEDIATION VARIANCE

The following information provides pertinent definitions, regulatory authorities, and specifics relating to Chemours units.

Hazardous waste remediation variances

In the May 23, 2001, federal resister (66 FR 28397-99) EPA stated the department can use its hazardous waste variance authority when it is used in a manner that is consistent with section 7003 regarding imminent and substantial endangerment to health or the environment under the Resource Conservation and Recovery Act (RCRA) or section 121(e) of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) regarding that permits are not required for remediations conducted pursuant to CERCLA with respect to on-site response actions. The department believes this hazardous waste remediation variance approval is being issued in the manner consistent with section 7003 of RCRA and section 121(e) of CERCLA.

Because of the need to reduce the risk these waste poses to public health and the environment, it is often impractical to undergo the multi-year process of obtaining a hazardous waste license while carrying out remediation activities. A hazardous waste remediation variance operates in lieu of a hazardous waste license and allows for expedited management of hazardous waste in situations where hazardous waste is generated from the remediation of environmental media.

While the issuing of a hazardous waste remediation variance relieves Chemours from the requirement from obtaining a hazardous waste license under s. 291.25, Wis. Stats., it does not relieve Chemours from being subject to the substantive, unit-specific requirements for hazardous waste management units in ch. NR 664 Wis. Adm. Code. In the November 30, 1998, federal register (63 FR 65894) EPA states the following regarding RAPs (i.e., hazardous waste remediation variance) "*The most critical parts of the Director's determination is whether or not operation according to the RAP will ensure compliance with applicable Part 264, 266, and 268 requirements*"

Subchapter S of ch. NR 664, Wis. Adm. Code contains the unit-specific requirements for conducting remedial investigations, evaluating potential remedies, and selecting and implementing remedies at facilities having a RCRA license or facilities only undergoing remediation. These unit-specific requirements include temporary units, staging piles, and corrective action management units (CAMUs), which may only be used for the management materials generated from the remediation of environmental media. Since placement of materials

is occurring when treatment is initiated in a treatment cell, Chemours is not able to use the AOC policy to manage the materials and therefore must use another regulatory mechanism (i.e., CAMUs) to manage the materials.

Placement under the AOC policy

Certain remediation actions can trigger the hazardous waste requirements when managing environmental media (e.g., soil and groundwater) that contains hazardous waste. If management of the environmental media that contains hazardous waste can be performed without triggering placement, then EPA's AOC policy[2] applies and the hazardous waste requirements do not apply. If management of the environmental media that contains hazardous waste results in placement, then the hazardous waste requirements apply, and the AOC policy will not apply - even if the management activity is performed within the AOC. Understanding the concept of placement is important because placement of hazardous waste into a landfill or other land-based unit is considered land disposal, which triggers the land disposal restrictions requirements under ch. NR 668, Wis. Adm. Code and may trigger other hazardous waste requirements including licensing, closure, and post closure (March 8, 1990, Federal Register (55 FR 8759)). Examples are provided below.

Placement **does occur** when hazardous wastes are:

1. Consolidated from different AOCs into a single AOC;
2. Moved outside of an AOC (e.g., treatment or storage) and then returned to the same or a different AOC; or
3. Excavated from an AOC, placed in a separate unit (e.g., incinerator, tank, container storage area) that is within the AOC, and redeposited into the same AOC.

Placement **does not occur** when hazardous wastes are:

1. Treated in-situ (i.e., in its original place);
2. Capped or left in place;
3. Consolidated within the AOC; or
4. Excavated from the AOC into a remediation pile (e.g., soil pile, waste pile) within the AOC to improve its structural stability (e.g., for capping or to support heavy machinery) or as part of a pretreatment process to facilitate and ensure proper operation of the final treatment technology needed to meet the LDR treatment standards. An example of this is the staging piles that are utilized by Chemours during the active investigation of a former manufacturing area. Placement has not occurred when materials are staged in the active work area or within a clay-lined treatment cell for characterization, preconditioning for treatment, and/or segregation in preparation for either subsequent treatment or reuse (e.g., backfill).

If placement is not occurring, then under the AOC policy the hazardous waste can remain in the AOC without triggering the hazardous waste requirements. The AOC policy not only applies to environmental media that contains a hazardous waste but also to materials buried in the environmental media and are themselves a hazardous waste (e.g., debris, foundry sand, mercury-containing equipment, batteries, 55-gallon drum of solvent waste). Note that if ex-situ storage and treatment of the environmental media that contains hazardous waste is conducted in containers or tanks- even if the ex-situ storage and treatment is performed outside the AOC, then the storage and treatment is exempt from the hazardous waste licensing requirements when the requirements in s. NR 670.001(3)(b)11., Wis. Adm. Code are met.

Chemours action of excavating materials and placing those materials onto a clay-lined cell results in placement of a hazardous waste because the clay-lined cell is a separate unit and therefore the AOC policy can no longer be

[2] https://www.epa.gov/hw/resource-conservation-and-recovery-act-rcra-area-contamination-policy

used to manage the materials. Furthermore, this placement is generally prohibited under ch. NR 668 Wis. Adm. Code because this placement activity constitutes land disposal.

Land disposal
Land disposal means the placement in or on the land (except in a staging pile or CAMU) and includes, but is not limited to, placement in a landfill, surface impoundment, waste piles, injection well, salt dome formation, salt bed formation, underground mine or cave, or placement in a concrete vault, or bunker intended for disposal purposes. Even the temporary placement of materials onto the land that do not meet the LDR treatment standard is prohibited.

Temporary units
The temporary unit regulations of s. NR 664.0553 Wis. Adm. Code outline provisions for storage and/or treatment. However, the storage and treatment must occur in containers or tanks. Since storage and treatment will be occurring on clay lined cells, the temporary unit provisions of s. NR 664.0553 Wis. Adm. Code cannot be used.

Staging piles
The staging pile[3] regulation of s. NR 664.0554 Wis. Adm. Code outline provisions for storage and/or treatment. However, s. NR 664.0554.1 Wis. Adm. Code limits treatment to mixing, sizing, blending, or other similar physical operations as long as they are intended to prepare the wastes for subsequent management or treatment. Even though natural biological remediation will serve as an ongoing mechanism for sustained reduction of the COCs, the AH process is the primary treatment method used to achieve the direct contact SSRCLs, the LDRs, and the removal of the hazardous waste characteristics from the material. Therefore, Chemours cannot use the staging piles provisions of s. NR 664.0554 Wis. Adm. Code for the AH treatment process.
Chemours may use the staging piles provisions to aggregate, segregate, and characterize materials at the point of excavation or within the clay-lined cells before AH treatment process that occurs in CAMUs. The staging pile provisions only allow for the temporarily placement of materials onto the land that do not meet the LDR treatment standard, which is no more than 30 months.

Corrective Action Management Units
The CAMU[4] regulations of s. NR 664.0552 Wis. Adm. Code also outline provisions for the storage and/or treatment. While there is no limit to the type of legitimate treatment that can be used in a CAMU, the issuance of a hazardous waste remediation variance for a CAMU cannot include combustion per s. 40 CFR 270.85(b). Even though Chemours is using heat to treat the COC for some of the material, the heat is not high enough to cause combustion. Additionally, the CAMU provisions allow for the permanent placement (i.e., disposal) on materials onto the land that do not meet the LDR treatment standard and/or are a hazardous waste. Under s. NR 664.0552(7) Wis. Adm. Code, CAMUs in which materials are placed where all materials have constituent levels at or below remedial levels or goals applicable to the site (i.e., no longer contains a characteristic hazardous waste and the SSRCLs and LDR treatment standards are meet) do not have to comply with the CAMU requirements for:

- Liners at s. NR 664.0552(5)(c)1. Wis. Adm. Code;
- Caps at s. NR 664.0552(5)(f)4. Wis. Adm. Code; and
- The groundwater monitoring requirements at s. NR 664.0552(5)(e) Wis. Adm. Code.

[3] A staging pile means an accumulation of solid, non−flowing remediation waste that is not a containment building and is used only during remedial operations for temporary storage at a facility.
[4] A CAMU means an area within a facility that is used only for managing remediation wastes for implementing corrective action or cleanup at the facility.

In the November 30, 1998, federal register (63 FR 65880) EPA revises the definition of the CAMU to make it clear that CAMUs are also available under RAPs and are not subject to the permitting requirements of 40 CFR 264.101 or RCRA section 3008(h).

Units to be used by Chemours

Of the 3 units (temporary units, staging piles, and CAMUs) discussed above, the appliable units used by Chemours are staging piles and CAMUs. Chemours uses staging piles at the point of excavation to evaluate the excavated material for the appropriate material management options. Chemours uses CAMUs to treat the materials to remove the hazardous waste characteristics, to meet the direct contact SSRCLs, and to meet the alternative LDR soil treatment standards. When these treatment standards are meet Chemours may then use the CAMUs for the permanent disposal of the materials.

CLOSING

Therefore, the department grants a hazardous waste remediation variance which allows for the following:

1. On-site staging of materials into staging piles for up to 30 months.
2. On-site and ex-situ storage and treatment of materials in CAMUs for up to 5 years that are a hazardous waste, contain a hazardous waste, or do not meet the alternative LDR soil treatment standard.
3. On-site disposal of the materials listed in item 2 provided that these materials meet the minimum treatment requirements of s. NR 664.552(5)(d) Wis. Adm. Code. The liner, capping, and groundwater monitoring requirements are not applicable since the materials disposed in the CAMU no longer contain a hazardous waste and the alternative LDR soil treatment standard is meet.

Note that materials covered by this hazardous waste remediation variance approval may be managed under a hazardous waste remediation variance approval for no more than 7.5 years (up to 2.5 years (30 months) in a staging pile and up to 5 years (60 months) in a CAMU).

In addition to the condition of this hazardous waste remediation variance approval, Chemours is still subject to the applicable staging pile and CAMU requirements of subchapter S of chapter NR 664, Wis Adm. Code.

If you have any questions regarding this hazardous waste remediation variance approval, please contact Mike Ellenbecker at 262-752-7622 or by email at michael.ellenbecker@wisconsin.gov.

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Andrea Keller, Chief
Hazardous Waste Prevention & Management Section
Bureau of Waste and Materials Management

CC: Mike Ellenbecker, WDNR – Waste and Material Program

BEFORE THE STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

HAZARDOUS WASTE REMEDIATION VARIANCE
FINAL DETERMINATION

CHEMOURS COMPANY FC, LLC FOR THE
FORMER DUPONT BARKSDALE WORKS
72315 STATE HIGHWAY 13
BARKSDALE, WI 54891
EPA ID#: WIR000133447
FID#: 804009140
BRRTS #: 02-04-000156

FINDING OF FACTS

1. Bretting Development Corporation (BDC) owns the property located at 72315 State Highway 13, Barksdale, Bayfield County, Wisconsin (the DuPont Property).

2. Bradley Nave of The Chemours Company FC LLC (Chemours), 500 West Jefferson Street, Suite 1600, Louisville, Kentucky, 40202, is the contact for remedial activities at the DuPont Property. As a result of a corporate reorganization, Chemours assumed remediation operations at the DuPont Property on February 1, 2015. Chemours was separated from the DuPont as a stand-alone, publicly traded company on or about July 1, 2015.

3. DuPont operated the former Barksdale Explosives Plant at the DuPont Property from 1904 to 1971. Non-explosives manufacturing work in support of detonation cladding performed elsewhere occurred as late as 1974. During the facility's operational life, primary products produced were dynamite, nitroglycerin, and trinitrotoluene (TNT) for the U.S. armed forces and the mining industry in the Lake Superior region. BDC purchased the DuPont Property in June 1986.

4. In June 1997, department water supply specialists sampled 3 private wells adjacent to the former DuPont Barksdale Explosives Plant. Explosives-related contaminants were detected in one of the wells. DuPont Corporate Remediation Group (CRG) then initiated private well monitoring and site investigation activities in September 1997.

5. On June 5, 2007, DuPont CRG submitted a document titled "*2007 DNT Biopilot Field Study Design and Work Plan*". This document described a proposed field pilot study for an in-situ biodegradation approach to remediate dinitrotoluene (DNT) isomers in surficial soil (biopilot cells).

6. On April 28, 2011, URS Corporation (URS) submitted a document to the department titled "*Remediation Variance Request for Removal of Residual Product and Debris.*" The variance request sought to facilitate research and development activities on degradation of DNT and TNT in soil. The presence of residual product and debris inhibited the ability of URS to optimize and expedite the soil remediation testing. URS proposed physical separation of residuals and debris from biologically treatable contaminated soil.

7. On December 20, 2011, URS submitted a document to the department titled "*Revised Remediation Variance Request for Removal of Residual Product and Debris*."

8. On February 17, 2012, URS submitted (final) a document to the department titled "*Revised Remediation Variance Request for Removal of Residual Product and Debris*."

9. On May 22, 2012, the department conditionally approved the document titled "*Revised Remediation Variance Request for Removal of Residual Product and Debris*". The conditional approval was granted for a term of five years with an expiration date of May 22, 2017.

10. May 18, 2017, the department conditionally approved the document titled "*Revised Remediation Variance Request for Removal of Residual Product and Debris*". The conditional approval was granted for a term of 5 years with an expiration date of May 18, 2022.

11. In a letter dated July 20, 2020, Chemours requested the department's approval to modify the hazardous waste remediation variance to allow for the use of low temperature thermally-assisted particle size reduction and to provide for a one-year extension to the hazardous waste remediation variance. This request included and referred to previous requests dated February 6, 2020, and April 23, 2020.

12. On December 3, 2020, the department conditionally approved Chemours' July 20, 2020, letter requesting to use low temperature thermally assisted particle size reduction and to provide for a one-year extension to the hazardous waste remediation variance. The conditional approval was granted for a one-year term with an expiration date of May 18, 2023.

13. On April 28, 2023, the department received from a report from Bradley Nave of AECOM titled "*Remediation Variance Application*."

14. On April 28, 2023, a public notice for the remediation variance was published in the Ashland Daily Press newspaper by Chemours. The public notice included a 30-day comment period. The department received no comments to the public notice or a request for an information hearing.

15. Additional information used by the department in connection with this remediation variance approval includes:
    a. EPA's March 13, 1996, guidance document titled "*Use of the Area of Contamination (AOC) Concept During RCRA Cleanups*" (RO 11954)
    b. EPA's guidance document titled "*Corrective Action Management Units (CAMUs) and Corrective Action Temporary Units (Tus)*"
    c. A November 10, 2016, department document titled "*Superfund Site Reassessment Dupont Barksdale Explosives Plant Town of Barksdale, Bayfield County US EPA Id: WIN000508267*"
    d. An April 28, 2023, AECOM document titled "DRAFT Interim Remedial Action Plan"
    e. A June 26, 2023, AECOM document titled "Remediation Variance Application Addendum"

16. On May 9, 2023, the department received the affidavit of the public notice from Eric Schmidt of AECOM.

17. On June 8, 2023, the department emailed a draft of this hazardous waste remediation variance approval to Eric Schmidt and Cary Pooler of AECOM.

18. The department received comments back on the draft hazardous waste remediation variance approval on June 26, 2023. The department included these edits in preparing this hazardous waste remediation variance.

CONCLUSIONS OF LAW

The department has authority under s. NR 670.079, Wis. Adm. Code, to issue a hazardous waste remediation variance for the ex-situ on-site storage and treatment of hazardous waste.

1. The department promulgated chs. NR 660 through 679, Wis. Adm. Code, establishing minimum requirements for hazardous waste management under the authority of chs. 289 and 291, Wis. Stats.

2. The department has the authority under s. NR 670.079(2)(d), Wis. Adm. Code, to revoke the hazardous waste remediation variance at any time if it is determined that revocation is appropriate to protect human health or the environment.

3. The department has the authority under s. NR 670.079(2)(e), Wis. Adm. Code, to require compliance with the appropriate requirements of chs. NR 660 to 670 and chs. NR 700 to 750, Wis. Adm. Code, as a condition of the hazardous remediation variance issuance, in order to protect human health or the environment.

4. The department has the authority under s. 291.31, Wis. Stats. and NR 670.079(4), Wis. Adm. Code, to issue the following conditional hazardous waste remediation variance when the department determines the application for a license would cause undue or unreasonable hardship to any person and the remediation variance would not result in undue harm to human health or the environment. For purposes of hazardous waste remediation, issuance of a treatment or storage license under ch. NR 670 Wis. Adm. Code would constitute an undue or unreasonable hardship.

5. Section 291.37 Wis, Stats and NR 664, Subch. F, Wis. Adm. Code authorizes the department to require corrective action when a release has occurred from a solid waste management unit at a facility.

DETERMINATION

In accordance with s. 289.28(3), Wis. Stats., the department has determined that there is a need for Chemours to store and treat hazardous waste in order to remediate the environment. The department has further determined that there is no need for an environmental impact report or environmental impact statement for this facility at this time, pursuant to s. 1.11, Wis. Stats., and ch. NR 150, Wis. Adm. Code and that the existing facility conforms to wetlands water quality standards pursuant to ch. NR 103, Wis. Adm. Code.

Based on the Findings of Fact and Conclusions of Law, the department hereby approves the hazardous waste remediation variance for Chemours submitted on April 28, 2023, subject to compliance with ch. 291, Stats., chs. NR 660 through NR 670, Wis. Adm. Code, and the following conditions.

CONDITIONS OF APPROVAL

Chemours is subject to the following conditions:

General Conditions

1. The department may require the submittal of additional information or to modify this approval at any time if, in the department's opinion, conditions warrant further modifications. Nothing in this conditional approval shall relieve Chemours of the legal obligation to comply with applicable federal, state, and local approvals.

2. Chemours shall comply with all the following:
    a. The conditions of this hazardous waste remediation variance approval.
    b. Chemours' April 28, 2023, report titled "Remediation Variance Application."
    c. Chemours' April 28, 2023, report titled "DRAFT Interim Remedial Action Plan," including the final version and/or amendments to the IRAP that are approved by department at a date following issuance of this variance document.
    d. Chemours' June 26, 2023, Remediation Variance Application Addendum.

    The approval conditions contained within this hazardous waste remediation variance approval, Wisconsin Statutes, or the Wisconsin Administrative Code shall take precedence over any discrepancies with Chemours' documents.

3. This hazardous waste remediation variance approval is only for the on-site and ex-situ storage and treatment of "soils that contain a hazardous waste" under EPA's contained in policy and for "hazardous waste debris, which collectively (i.e., the soil and debris) will be referred to as "materials."

4. This hazardous waste remediation variance approval shall expire 5 years from the date of this approval (June 29, 2028) or when Chemours completes the remediation, whichever occurs sooner. The hazardous waste remediation variance may be renewed or extended only after opportunity for a public hearing on each remediation variance renewal.

5. If a corrective action management unit (CAMU) or staging pile will be operating after the expiration of this hazardous waste remediation variance approval, then Chemours shall either obtain another hazardous waste remediation variance approval from the department or discontinue operation of the CAMU or staging pile prior to the expiration of this hazardous waste remediation variance. In obtaining another hazardous waste remediation variance approval Chemours shall submit the information required under s. NR 670.079 Wis Adm. Code (including the proof of public notice) at least 90 days (no later than March 31, 2028) prior the expiration of this hazardous waste remediation variance approval.

6. Any request to change this hazardous waste remediation variance approval or the April 28, 2023, report titled "Remediation Variance Application" or the June 26, 2023 "Remediation Variance Application Addendum" will constitute a remediation variance modification. The department will use subch. D of ch. NR 670 Wis. Adm. Code to determine the class category of the remediation variance modification. Chemours shall include the appropriate fee stated in ch. NR 670, Wis. Adm. Code, Appendix II.

7. If at any time Chemours becomes aware that there was a failure to disclose relevant facts in any reports, plans, or other documents submitted, or that incorrect information was submitted, Chemours shall promptly submit such facts or correct information to the department.

8. Chemours shall always maintain in good working order and operate efficiently all facilities and systems of treatment or control and related appurtenances which are installed or used to achieve compliance with the terms and conditions of this hazardous waste remediation variance approval. Proper operation and maintenance and effective performance of the facility includes, but is not limited to, maintaining preventive maintenance, adequate funding, effective management, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures.

9. Chemours shall operate the facility in a manner that prevents discharges from the facility from impacting the facility and the environment.

10. Chemours shall document complaints received and the actions taken (if any) to resolve those complaints regarding the implementation of this remediation variance approval.

11. Chemours shall notify the department and EPA pf the appropriate generator status using EPA form 8700-12.

12. Chemours shall submit a hazardous waste remediation variance review fee of $1,600 to the department within 30 days of the date of receiving an invoice from the department.

CAMU Construction

13. Chemours shall design, construct, and install each CAMU to prevent any migration of wastes, water, or leachate out of the CAMU and into the soil or surface water at any time during the active life of the CAMU. The active life of the CAMU begins on the date of when materials are added to the CAMU and ends when the materials are no longer a characteristic hazardous waste and meet the alternative land disposal restriction (LDR) soil treatment standards for contaminated soil under s. NR 668.49 Wis. Adm. Code.

14. During construction of the CAMU, Chemours shall inspect the CAMU for uniformity, damage, and imperfections (e.g., holes, cracks, thin spots, or foreign materials). Damage and imperfections shall be corrected and documented.

15. Chemours shall design, construct, and maintain a run−on control system that prevents the overland flow of water onto the clay-lined cell during peak discharge from at least a 24−hour, 25−year storm. Note that condition 16 allows for precipitation for falling onto the clay-lined cell.

16. Chemours shall design, construct, and maintain a run-off control system that prevents the flow of water out of the clay-lined cell during peak discharge from at least a 24−hour, 25−year storm.

17. Prior to placing materials onto the CAMU, Chemours shall retain a written assessment that certifies that conditions associated with CAMU's construction are met. The written assessment shall be reviewed and certified by a qualified professional engineer that attests to the CAMU's integrity

CAMU Construction for Unheated Cells

18. Construct with at least one-foot-thick layer of suitable and properly compacted clay to contain the material before, during, and after treatment. This minimum thickness shall not be reduced by addition of removal of stored and/or treated material.

19. Place upon a base capable of providing support to the clay liner and resistance to pressure gradients above and below the clay liner to prevent failure of the clay liner due to settlement, compression, or uplift.

20. Maintain CAMU to eliminate or minimize desiccation, cracking, erosion, leaking, or other damage.

21. Construct CAMU with two areas:
    a. The main area used to store and treat the materials.
    b. The surface water/sediment containment basin used to prevent water and sediment from migrating outside of the clay-lined cell.

CAMU Construction for Heated cells

22. Construct with reinforced concrete using either a waterproof concrete mixture so that the concrete is impermeable or coat the concrete with an impermeable coating.

23. Construct with impermeable water stops at all concrete joints.

24. Placed upon a base capable of providing support to the concrete cell and resistance to pressure gradients above and below the concrete cell to prevent failure of the concrete cell due to settlement, compression, or uplift.

25. Provide a secondary containment system consisting of an approximately 3-foot-thick layer of foamed glass aggregate placed over layers of woven geotextile and a 45-millimeter-thick ethylene propylene diene monomer (EPDM).

26. Maintained to eliminate or minimize cracking, erosion, leaking, or other damage.

27. Any clay lined retention basin used for managing materials associated with the operation of the heated cell shall meet the minimum design criteria of the unheated clay lined cells

CAMU and Staging Pile Operations

28. If a CAMU or staging pile contains particulate matter which may be subject to wind dispersal, then Chemours shall cover or otherwise manage the CAMU (e.g., moisture addition) to prevent the wind dispersal of hazardous waste or hazardous waste constituents.

29. Chemours shall Inspect each CAMU that is treating material or each staging pile from June to October at least monthly.

30. Chemours shall Inspect each CAMU that is treating material or each staging pile within 24 hours after each rainfall event that is at least ½ inch.

31. Each inspection of the CAMU or staging pile shall look for evidence of any of the following:
    a. Deterioration, malfunctions, or improper operation of run−on and run−off control systems.
    b. Proper functioning of wind dispersal control systems, where present.
    c. The presence of leachate in and proper functioning of leachate collection and removal systems, where present.

    Chemours shall record these inspections into a logbook and document in the logbook any corrective action taken.

32. Chemours shall maintain a logbook showing the date and estimated volume of materials placed into the CAMU or staging pile, the date and estimated volume of any materials removed from the CAMU or staging pile, and the date of when a staging pile became a CAMU.

33. Chemours shall comply with the following facility standards of ch. NR 664, Wis. Adm. Code during the active life of the CAMU or staging pile:
    a. The security requirements of s. NR 664.0014, Wis. Adm. Code.
    b. The general inspection requirements of s. NR 664.0015, Wis. Adm. Code.
    c. The personnel training requirements of s. NR 664.0016, Wis. Adm. Code.

d. The general requirements for ignitable, reactive or incompatible waste of s. NR 664.0017, Wis. Adm. Code.
e. The design and operation of facility requirements of s. NR 664.0031, Wis. Adm. Code.
f. The required equipment requirements of s. NR 664.0032, Wis. Adm. Code.
g. The testing and maintenance of equipment requirements of s. NR 664.0033, Wis. Adm. Code.
h. The access to communications or alarm system requirements of s. NR 664.0034, Wis. Adm. Code.
i. The arrangements with local authorities, requirements of s. NR 664.0037, Wis. Adm. Code.
j. The contingency plan and emergency procedures requirements of subch. D of ch. NR 664.0035, Wis. Adm. Code.

Land Disposal Restrictions

34. If the alternative LDR soil treatment standards for constituents present in treated materials (see Tables 1 and 2 in the April 28, 2023, Remediation Variance Application) are not met within 5 years after the date of when the treatment is initiated in any of the CAMUs, then Chemours shall either:
    a. Remove the materials from the CAMU(s) and ship these materials to an approved site for treatment; or
    b. Remove the materials from the CAMU(s) and place the materials into a container for continued treatment.

    The 5-year period begins at initiation of treatment. Materials will be allowed to be placed in the CAMUs up until the expiration date of this HWRV.

35. To show that the alternative LDR soil treatment standards are met and that the materials do not contain a hazardous waste, Chemours shall do all the following for each CAMU:
    a. Collect one grab sample for every 200 yards of material.
    b. The grab sample shall not be composited after collection nor when analyzed.
    c. Have 2 consecutive sampling events that demonstrate that all grab samples meet the alternative LDR soil treatment standards and are above the toxicity characteristic values for the analytes listed in s. NR 661.0024 Wis. Adm. Code.

    When all grab samples collected from the last two consecutive sampling events demonstrate that the material in the CAMU does not contain a hazardous waste and the material meets the alternative soil LDR treatment standards, then the hazardous waste regulations shall no longer apply to the materials within the CAMU.

36. The alternative LDR soil treatment standards under s. NR 668.49, Wis. Adm. Code only applies to the soils themselves. Non-soils (e.g., hazardous waste debris) mixed in with the soils are not eligible alternative LDR soil treatment standards under s. NR 668.49, Wis. Adm. Code.

37. Impermissible dilution of the material during treatment is prohibited. The mixing (i.e., aggregation) of hazardous wastes for treatment on an economic scale shall only occur when the waste-constituents are legitimately amenable to the same type of treatment. For example, when hazardous wastes are mixed during stabilization and it results in the characteristic hazardous waste code and/or the underlying hazardous constituents (UHCs) being removed due to dilution as a result of that mixing, then the mixing is not considered to be impermissibly diluted under LDR requirements of s. NR 668.03 Wis. Adm. Code. However, mixing organic waste with inorganic waste is considered impermissible dilution because the treatment type required for organic waste is different than the treatment type required for inorganic waste. An example of permissible mixing during the treatment process would be the combination/aggregation of

materials from multiple treatment cells (i.e., individual CAMUs) into one, larger cell at any time during the process, as needed by Chemours.

38. Chemours shall follow the LDR notification and certification requirements of ch. NR 668.07(1), Wis. Adm. Code for the on-site storage, treating, or disposal of materials treated in the CAMU.

39. Prior to land disposing a material at the facility that was determined to be a hazardous waste or contained a hazardous waste, Chemours shall submit to the department documentation showing that Chemours has met the alternative LDR soil treatment requirements in ch. NR 668, Wis. Adm. Code. This documentation when included annual progress reports (see condition 40) does not require a separate submittal to the department. The definition of 'facility' in these conditions has the same meaning as identified in s. NR 660.10(43), Wis. Adm. Code.

Reports

40. Annual progress reports covering the previous calendar year's activities shall be submitted to the department in accordance with s. NR 724.13(3), Wis. Adm. Code. The reports can be combined with the annual progress reports that will be submitted as part of the IRAP as long as they are submitted within 15 days of the anniversary date of this approval and shall include all the following:
    a. A summary of any unexpected material (e.g., foundry sand, mercury-containing equipment, batteries, 55-gallon drum of solvent waste) encountered that may be a hazardous waste and how these materials were managed.
    b. Problems encountered in the operation or maintenance of the CAMU.
    c. Complaints received and the actions taken (if any) to resolve those complaints regarding the implementation of this remediation variance approval.
    d. The type and amount of product residuals and debris removed from the CAMU.
    e. Discussion of any characterization and container storage of product residuals and debris removed from the CAMU. Documentation of disposal of any product residuals and debris removed from the CAMU including manifest copies.
    f. Discussion of all soil as part of the IRAP work including source, volume, etc. For example, documentation would be provided that would summarize the quantity of excavated soil from various site sources (e.g., buildings) if it was combined into a single cell.
    g. Discussion of any alternative treatment for hazardous waste debris treated on-site.
    h. Documentation of management of all impacted waste streams generated by these activities, including amounts and volumes of waste treated and generated.

41. A complete report in accordance with ss. NR 724.15 and 716.15, Wis. Adm. Code, documenting the remedial action (excavation, soil, air and groundwater confirmation samples, storage and treatment of hazardous waste, proper disposal of excavated soils, photos, groundwater investigation results, etc.) shall be submitted to the department at the conclusion of the overall treatment activities.

Closure of the Heated Cell

42. When disposing of the heated cell, Chemours shall remove, treat, or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils and structures and equipment contaminated with waste and leachate and manage them as hazardous waste unless s. NR 661.0003(4), Wis. Adm. Code applies.

43. If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in condition 39, and Chemours finds that not all subsoils contaminated by the heated cell can be removed or properly decontaminated or treated, Chemours shall close the facility and perform long−term care in accordance with the closure and long−term care requirements that apply to landfills (s. NR 664.0310, Wis. Adm. Code).

44. Within 90 calendar days after this hazardous waste remediation variance approval expires or the heated cell ceases operation (whichever is later), Chemours shall close the heated cell and submit a closure report to the department that contains all the following information and records. The requirement for closure does not apply at the time of hazardous waste remediation variance expiration if the variance in the process of renewal or if a separate variance application is in process with the department. If an individual heated cell ceases operation prior to the closure of all heated cells constructed and operated under this variance approval, then the closure confirmation sampling for that heated cell may be performed in accordance with a. to e. below, with the results subsequently submitted as part of the closure report prepared for final closure of all heated cells.
    a. Closure confirmation samples shall be grab samples. Closure confirmation sampling must show that all areas of a heated cell have been successfully cleaned and that no contamination is above the wastewater standards identified in table 1 of s. NR 668.40, Wis. Adm. Code.

    b. Sampling methods and equipment, as well as laboratory analytical methods, shall follow the guidance in U.S. EPA's SW-846, "*Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Third Edition*" and updates (see 40 CFR 260.11).

    c. Chemours shall use the lowest possible analytical Method Detection Limit (MDL) for the underling hazardous waste constituents (UHCs) associated with the hazardous wastes, if any, and consistent with the method approved in the IRAP. Currently the reporting limit for the method used to quantify nitroaromatics and nitramine organic constituents in soil at the site is 200 µg/Kg.

    d. Chemours shall report all concentration data, even if it is estimated, for compounds or elements that have been positively identified in the sample. Some target analytes are present at concentrations which are above the level that can be reliably detected but below the level that they can be reliably quantified. These data are referred to as “qualified” and will be reported as a number which has been “flagged” by the laboratory. Although less reliable than data which are reported above the Estimated Quantitation Limit (EQL), these qualified data must nevertheless be evaluated carefully by the department.

    e. The closure report shall include a discussion/evaluation of the deconstruction of the heated cell, including observations of any defects (e.g., cuts, tears, eroded areas) in the liner. Sampling of the underlying material will be required if defects to the liner are discovered, and these results must be included in the closure report.

    f. The closure report shall include a discussion/evaluation of how the cleaning methods and the surfactants chosen, if any, are suitable for the contaminants. If detergent washing and water rinsing are selected, the closure report should show that the detergent solution will remove the contaminants of concern. This may be demonstrated with solubility data from product specification sheets or standard chemical tables. The length of time solution is in contact with the surface, and whether or not scrubbing or other physical efforts are used will affect the accuracy of the decontamination demonstration. Other useful considerations might include the temperature of the wash water and the pressure/nozzle that

would be used to apply it to clean the surface. The effectiveness of chemical and physical decontamination will also depend on the unit's design, the cleaning solutions, and the constituents to be removed.

g. The closure report shall include a discussion/evaluation on the equipment used to clean the heated cell, how this equipment was decontaminated and how the residues from the decontamination were handled.

h. The closure report shall include a discussion/evaluation of how waste materials (i.e., rinsate, debris, disposable equipment, etc.) from decontamination were managed and the volumes / quantity of waste materials that were generated by the decontamination efforts.

i. The closure report shall include a drawing of the heated cell that is being closed. The drawing should show, at a minimum, dimensions and other construction details, appurtenant structures and relationship to other significant points or structures on the facility property. All drawings shall provide a specified scale, legend, and north arrows.

j. The closure report shall include a discussion on the types and quantities of hazardous wastes and materials that were stored and treated in the heated cell.

k. The closure report shall include a photo log documenting the decontamination of the heated cell and photos showing that the heated cell has been removed from the area. Each photo should be numbered, dated, and include a description of what was photographed.

l. The closure report shall include a discussion/evaluation of the sampling strategy (i.e., sample collection, sample locations, number of samples collected, how the sample was collected and analytical considerations).

m. The closure report shall include waste disposal documentation on the heated cell (e.g., bills of lading, uniform hazardous waste manifest, waste profile information).

n. The closure report shall include an Excel table summarizing the data reported by the lab. The Excel table needs to include concentration data, even if it is estimated, for compounds or elements that have been positively identified in the sample.

o. The closure report shall include a discussion/evaluation of any spills that have occurred in and around the heated cell.

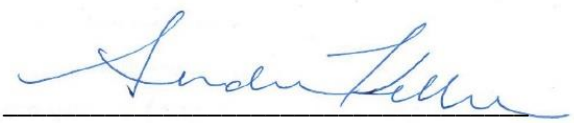
NOTICE OF APPEAL RIGHTS

If you believe you have a right to challenge this decision made by the department, you should know that Wisconsin statutes, administrative codes and case law establish time periods and requirements for reviewing department decisions.

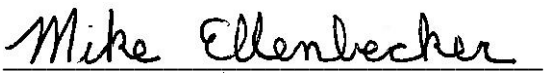
To seek judicial review of the department's decision, sections 227.52 and 227.53, Wis. Stats., establish criteria for filing a petition for judicial review. You have 30 days after the decision is mailed or otherwise served by the department to file your petition with the appropriate circuit court and serve the petition on the department. The petition shall name the Department of Natural Resources as the respondent.

Dated: June 29, 2023

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
For the Secretary



Andrea Keller, Chief
Hazardous Waste Prevention & Management Section
Waste and Materials Management Program



Michael J. Ellenbecker, Hazardous Waste Program Coordinator
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