



May 24, 2024

Amanda Sullivan
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Arlington, VA 22204
Sent Via Email Only to Amanda.d.sullivan7.ctr@army.mil

Subject: Applicable or Relevant and Appropriate Requirements Determination
West Bend Army National Guard Site, #02-67-587928
125 Chopper Drive, West Bend, WI

Dear Ms. Sullivan:

The purpose of this letter is to provide you with an identification of applicable or relevant and appropriate requirements (ARARs) for the proposed remedial investigation (RI) and potential remedial actions at the West Bend Army National Guard site (Site) in West Bend, Wisconsin. The Army National Guard (ARNG) requested a list of all ARARs in a letter dated March 14, 2024.

The ARNG is the “responsible party,” as defined in Wis. Admin. Code § NR 700.03(51), for the Site. The ARNG must follow all applicable law to address the discharge of the hazardous substance or other environmental pollution to the environment, including Wis. Stat. ch. 292, Wis. Admin. Code chs. NR 700-799, and other statutes and rules referenced in this letter. It is anticipated that upon completion of the RI, future work may include time critical or non-time critical removal actions. Removal actions are considered remedial actions under Wis. Admin. Code § NR 700.03(48).

The Site has soil and groundwater impacted with Per- and Polyfluoroalkyl Substances (PFAS) from historical use of aqueous film-forming foam (AFFF). Based on the information provided, we have identified the following Wisconsin Department of Natural Resources (WDNR) ARARs and To Be Considereds (TBCs). Any federal, other state agency, or local ARARs that may be applicable are not included in this letter. The WDNR Administrative Codes are available at: <http://docs.legis.wisconsin.gov/code/toc/nr>. If there are activities that are not covered in the ARAR request letter and other Site documents reviewed to prepare this letter, additional ARARs may apply. The WDNR reserves the right to amend this list as additional information becomes available and other ARARs or TBCs are identified.

A. Wastewater Standards

You may be generating wastewater from decontamination and waste treatment activities. If such wastewater is generated, and you plan to discharge it to surface water or groundwater, the requirements of our Industrial Wastewater Program would apply. You would have to identify the point of discharge and the contaminants present and request effluent discharge limits. These requirements would apply to a discharge to any existing wastewater or sanitary system at the site.

If you plan to discharge wastewater to a sewage treatment facility, then you would have to meet any applicable pretreatment ordinances and requirements in Wis. Admin. Code ch. NR 211. You would also need permission from the sewage treatment facility owners.

If wastewater is to be hauled from the site to a sewage treatment facility or any other type of management facility, and that wastewater is a characteristic hazardous waste, then the hazardous waste generator requirements outlined

below would apply. If the wastewater is not characteristic hazardous waste, then the transporter requirements contained in Wis. Admin. Code § NR 502.06 would apply.

B. Hazardous Waste Management Standards

Solid wastes identified as hazardous waste under Wis. Admin. Code § NR 661.0003 must be managed as hazardous waste. The document entitled, “Guidance for Hazardous Waste Remediation,” available at <https://widnr.widen.net/s/jwzt8pjp2/rr705>, contains specific information on the options available for managing hazardous waste.

C. Non-Hazardous Waste Disposal and Recycling

Solid wastes defined under Wis. Admin. Code § NR 661.0002 are non-hazardous. Under Wis. Admin. Code § NR 718.05(1), sites where less than 2,500 cubic yards of excavated contaminated soil are stored by a responsible party for no more than 6 months are exempt from solid waste program requirements under Wis. Stat. ch. 289 and Wis. Admin. Code chs. NR 500-538, provided the responsible party meets all requirements set forth in Wis. Admin. Code § NR 718.05. If the volume of non-hazardous contaminated soil to be stored exceeds 2,500 cubic yards, the soil will be stored for more than 6 months, or the facility is already licensed for solid waste storage, the exemption in Wis. Admin. Code § NR 718.05(1) does not apply and solid waste program requirements, including requirements under Wis. Admin. Code § NR 502.05, apply.

Under Wis. Admin. Code § NR 718.07, a solid waste collection and transportation service operating license is required under Wis. Admin. Code § NR 502.06 when excavated contaminated soils are transported; however, a responsible party may transport excavated contaminated soil in vehicles the responsible party owns without a solid waste collection and transportation service operating license, if the excavated contaminated soil is hauled to a site or facility in compliance with the requirements of Wis. Admin. Code ch. NR 718 or to a licensed solid waste storage, treatment or disposal facility. A responsible party must cover contaminated soil, as necessary, to prevent the loss of any material during transport.

Disposal of non-hazardous contaminated soils and solid waste is regulated under the solid waste rules set forth in Wis. Admin. Code chs. NR 500-538. Any contaminated soils disposed as solid waste must be sent to a landfill that is certified to accept those wastes under the landfill’s plan of operation, as required in Wis. Admin. Code § NR 506.105. The landfill operator must agree to accept the soils, and all requirements for waste characterization must be met.

D. Air Management Standards

Wisconsin Admin. Code ch. NR 445 is applicable to any toxic substances discharged because of material disturbance or transportation. Additional applicable standards include: the primary and secondary ambient air quality standards in Wis. Admin. Code ch. NR 404, the fugitive dust requirements of Wis. Admin. Code ch. NR 415, the malodorous emissions abatement or control requirements of Wis. Admin. Code ch. NR 429, the visible emissions limitation standards of Wis. Admin. Code ch. NR 431, and the testing, inspection, and determination of compliance requirements of Wis. Admin. Code ch. NR 439.

E. Soil and Groundwater Quality Standards

WDNR has outlined a process for calculating soil cleanup standards in Wis. Admin. Code ch. NR 720. The procedures outlined in that chapter should be used to determine the residual contaminant levels and/or performance standards for each exposure or migration pathway of concern, and for each soil contaminant of concern at this Site.

Wisconsin Admin. Code §§ NR 720.10 and 720.12 identify the procedures for determining residual contaminant levels for organic or inorganic chemicals that are protective of human health from direct contact with contaminated soil and are protective of groundwater. Wisconsin Admin. Code § NR 720.12(1)(a) requires that residual contaminant levels for the protection of human health from direct contact with contaminated soil are

developed “[f]or individual compounds using an excess cancer risk of 1×10^{-6} and a hazard quotient for non-carcinogens of one.” Additionally, Wis. Admin. Code § NR 720.12(1)(b), provides that the cumulative cancer risk must not exceed 1×10^{-5} . The requirements in Wis. Admin. Code ch. NR 720 apply to all soils regardless of depth.

Any contaminated soils that are proposed to be managed on the Site must meet the requirements in Wis. Admin. Code ch. NR 718, including specific testing and location standards.

As described above in Section C, any contaminated soils that are proposed to be disposed of at a licensed landfill must meet the disposal facility requirements in Wis. Admin. Code chs. NR 500-538.

Any soil placed as backfill needs to be clean soil and free of debris; if it is not, then a Wis. Admin. Code NR 718 exemption is required. Material from an off-site source must be tested to confirm no contaminants are present and to ensure that the geotechnical properties of the soil are appropriate prior to placement at the Site.

Wisconsin Admin. Code ch. NR 140 contains the public health groundwater quality standards Preventive Action Levels (PALs) and Enforcement Standards (ESs). Groundwater quality standards are applicable to all groundwater, regardless of groundwater use. Generally, Wis. Admin. Code NR 140 PALs are the groundwater cleanup goal for all sites; however, Wis. Admin. Code ch. NR 140 ESs may be used as the groundwater cleanup standard, provided that an adequate source control action is conducted, groundwater monitoring shows a stable or receding plume, including source and non-aqueous phase liquid (NAPL) areas, and other applicable criteria are met, including applicable criteria specified in Wis. Admin. Code ch. NR 726.

The Wisconsin Department of Health Services (DHS) has established drinking water health advisories for 18 PFAS. Although these health advisory levels have not yet been promulgated in Wis. Admin. Code ch. NR 140 as enforcement standards, these values are considered TBCs for the purpose of determining groundwater cleanup levels, unless there is a more stringent federal standard in place, in which case the more stringent federal standard is an ARAR. The DHS health advisory levels for PFAS can be found here:

<https://www.dhs.wisconsin.gov/chemical/pfas.htm>.

F. Soil Borings, Monitoring Well Installation, Sampling and Reporting Results

New soil borings and monitoring wells must be installed in accordance with the standards in Wis. Admin. Code ch. NR 141. This chapter includes requirements for documenting boring and well construction on WDNR issued forms. Wisconsin Admin. Code § NR 141.17 also includes requirements for investigative waste management from the construction and development of the borings and wells. The solid and hazardous waste management requirements outlined above also apply. Purge water from sampling must also be managed in accordance with those requirements. Investigative wastes must be managed in accordance with Wis. Admin. Code ch. NR 718 and the guidance document “Guidance for the Management of Investigative Waste,” available at:

<https://widnr.widen.net/s/nxqelkrddr/rr556>. Finally, Wis. Admin. Code § NR 141.25 has requirements for boring and monitoring well abandonment and documentation of that abandonment.

Sampling and analysis of samples from borings must comply with Wis. Admin. Code § NR 716.13. Under Wis. Admin. Code § NR 716.13, samples must be collected and handled according to the procedures specified in Wis. Admin. Code § NR 140.16(1) and must be analyzed at a laboratory accredited under Wis. Admin. Code ch. NR 149. This rule also specifies method reporting limits.

G. Sediment Quality Standards

WDNR guidance document “Guidance on Addressing Contaminated Sediment Sites in Wisconsin,” available here: <https://widnr.widen.net/s/6rqjjsxbvv>, outlines the recommended steps to investigate and clean up contaminated sediment. Contaminated material located below the ordinary high water mark (i.e., sediment) will require remedial actions aligned with the WDNR’s “Consensus Based Sediment Quality Guidelines: Recommendations for Use and Application,” available at: <https://widnr.widen.net/s/fkwscvxq26/rr088>. The values

presented in the Consensus Based Sediment Quality Guidelines could be used as cleanup standards with DNR approval.

H. Surface Water Standards

Wisconsin Admin. Code § NR 102.04(8)(d)1. contains the PFOS and PFOA standards for protection of public health and recreational uses of surface waters. This rule contains the levels of public health significance for PFOS and PFOA based on preventing adverse effects from contact with or ingestion of surface waters of the state, or from ingestion of fish taken from waters of the state.

- For PFOS, the level of public health significance is 8 ng/L for all waters except those that cannot naturally support fish and do not have downstream waters that support fish.
- For PFOA, the levels of public health significance are 20 ng/L in waters classified as public water supplies under Wis. Admin. Code ch. NR 104, and 95 ng/L for other surface waters.

I. Stormwater Erosion Control Standards

Construction projects where one acre or more of land will be disturbed must comply with the erosion control plan requirements outlined in Wis. Admin. Code § NR 216.46, including the development and implementation of a site-specific erosion control plan that meets the performance standards in Wis. Admin. Code § NR 151.11 and includes the required information in Wis. Admin. Code § NR 216.46(4), the site map requirements in Wis. Admin. Code § NR 216.46(5), the best management practices in Wis. Admin. Code § NR 216.46(6), the material discharge requirements in Wis. Admin. Code § NR 216.46(7), the velocity control requirements in Wis. Admin. Code § NR 216.46(8) and the inspection requirements in Wis. Admin. Code § NR 216.46(9). The plan must also meet the specific requirements for storm water management plans in Wis. Admin. Code § NR 216.47, including best management practices under Wis. Admin. Code § NR 216.47(6). WDNR's Stormwater Program has technical standards and other reference documents that may be found at <https://dnr.wisconsin.gov/topic/Stormwater/standards>.

J. Laboratory Certification

Wisconsin Admin. Code § NR 716.13(2) specifies that all chemical and physical analyses for which accreditation is available under Wis. Admin. Code ch. NR 149 shall be conducted by a laboratory accredited under ch. NR 149. The WDNR Laboratory Accreditation Program provides a listing of accredited labs here: <https://dnr.wisconsin.gov/topic/labCert/certified-lab-lists>.

K. Continuing Obligations Requirements

The WDNR has authority under Wis. Stat. § 292.12(2), to impose restrictions known as Continuing Obligations (COs) on a property to ensure that conditions at the site remain protective of public health, safety and welfare, and the environment. COs are legal requirements to address potential exposure to remaining contamination. Specific COs and related requirements are described in Wis. Admin. Code chs. NR 725, 726, 727 and § NR 722.15(2)(e). WDNR may impose COs at the time an interim or remedial action plan is approved and at the time case closure is approved.

L. Public Information, Participation, and Notification Requirements

Wisconsin Admin. Code § NR 714.07 provides that responsible parties must conduct all necessary public participation and notification activities at a site and evaluate the need for and the level of public participation and notification using certain prescribed criteria. Wisconsin Admin. Code ch. NR 725 contains the notification requirements that must be met before a site may be closed under Wis. Admin. Code ch. NR 726.

M. Other Site Investigation and Remediation Requirements

A site investigation must be conducted in accordance with the requirements contained in Wis. Admin. Code ch. NR 716. Under Wis. Admin. Code § NR 716.11(3)(a), the site investigation must determine the nature, degree, and extent, both areal and vertical, of the hazardous substances or environmental pollution in all affected media, including on off-site affected properties. ARNG must comply with applicable requirements for selecting remedial

actions, as specified in Wis. Admin. Code ch. NR 722, and for conducting remedial actions, as specified in Admin. Code ch. NR 724. Wisconsin Admin. Code § NR 722.09(1) requires ARNG to select a remedial action or a combination of remedial actions that achieve restoration of the environment to the extent practicable, minimize the harmful effects from the contamination on the air, lands and waters of the state and comply with all applicable state and federal public health and environmental laws and standards. ARNG must comply with other applicable requirements in Wis. Admin. Code chs. NR 700-799, as determined by the WDNR.

Should you have any questions regarding this letter, please contact me at (414) 750-7030, or riley.neumann@wisconsin.gov.

Sincerely,



Riley D. Neumann
Project Manager / Hydrogeologist
Remediation & Redevelopment Program

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