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April 21, 2025

Charles A. Uhlarik
Chief, Environmental Analysis Section
US Army Corps of Engineers, Detroit District
477 Michigan Avenue
Detroit MI 48226-2550

Subject: Menominee Navigation Study; Water Quality Certification preview

Dear Mr. Uhlarik:

As requested by the United States Army Corps of Engineers (USACE) on February 24, 2025, this letter outlines the Wisconsin Department of Natural Resources (Department) evaluation and authority for the determination of suitability for open water placement of dredge material generated from the proposed Menominee River deepening project. The Department is requiring upland disposal of an estimated 30,000 cubic yards (cu yds) of dredge material from the project. This material is less than 10% of the approximately 400,000 cu yds of material targeted for dredging and open-water disposal. Following is the rationale and referenced regulatory authority supporting this decision. Adhering to the disposal requirements described below as project design continues will support the Department's issuance of a Clean Water Act (CWA) Section 401 water quality certification as well as Wisconsin Department of Administration Coastal Management Program's (DOA CMP) determination of coastal consistency.

Please note that the volume presented above and within this letter are estimates. Volume estimates will be refined during design.

DMU 6 (~10,000 cu yds)

The Department is authorized to require an assessment for the potential risk of PFOA and PFOS discharged to surface waters using standard analytical methods (Wis. Admin. Code NR 219). In the Department's letter provided to USACE on June 30, 2023 stating requirements for PFOS and PFOA testing of the Menominee River sediment, the Department indicated that the elutriate concentrations would be used to determine risk of these compounds to surface waters. Based on the report, Dredge Management Unit six (DMU 6) contains material that exceeds Wisconsin's PFOA surface water criteria of 20 nanograms per liter (ng/L) (Wis. Admin. Code NR 102.04 (8) (d)) for drinking water sources (Lake Michigan is a designated drinking water source). The elutriate sample for the "A-layer" material in this unit was 44 ng/L of PFOA. Because there are exceedances of State surface water PFOA criteria in the elutriate, this material must be managed separately and does not qualify for open water disposal. Likewise, the Department has determined the material comprising and surrounding sample locations 30 and 31 to a depth of 25' (referenced to Lake Michigan Low-Water Datum) is a potential risk to surface waters of Green Bay for PFOA and therefore must be disposed in a licensed landfill. Any discharge

during dewatering of this material must be properly managed to meet State surface water quality standards as outlined in Wisconsin Administrative Code Chapter NR 106.98 (4). Furthermore, any discharge resulting from dewatering the dredged material to waters of the state requires a wastewater discharge (WPDES) permit, in accordance with s. 283.31, Wis. Stats. That permit will have pollutant limitations assigned based on the elutriate results and may require some type of treatment to meet those limitations. Dewatering and treatment methods to meet assigned pollutant limitations shall be specified in a discharge management plan that is required to be submitted with an application for WPDES permit coverage.

- Samples for elutriate testing were composited laterally across the entirety of each of the 10 individual DMUs, such that a composite of material from six or seven individual sample locations represents approximately 45,000 cu yds of dredge material. The PFOA elutriate results for DMU 6 are being governed by sample locations 30 and 31:
    - The existence and concentration of PFOA within the A-layer of sediment sample core 31 is responsible for the criteria exceedance for the entire DMU 6 A-layer and would likely also trigger an exceedance if the elutriate from the individual A-layer of core 31 were tested.
    - While there is no A-layer material at core 30 sample location, PFOA registers across the upper four feet of the sample profile and includes the maximum concentration (570 ng/kg) found throughout the entire project area. As with sample location 31, it is likely that an elutriate test of the sample 30 B-layer material would exceed the 20 ng/L criteria.

- As previously stated, the Department required elutriate testing to help determine the potential risk of PFOS/PFOA contamination to surface waters. USACE requested that the state consider further dilution of the elutriate samples using their STFATE model. The Department will not be utilizing this model for an assessment of risk of PFOA to surface waters for the reasons outlined below:
    - Under Wisconsin's water quality certification, the Department is required to ensure activities have a reasonable assurance that water quality will not be impacted (Wis. Admin. Code NR 299.01 (2)). The position of the Department is that the exceedance of the State's water quality standard in the elutriate samples is sufficient evidence that discharging the material from DMU 6 identified to have elevated levels of PFOA poses a reasonable risk to water quality.
    - In order for the Department to accept modeled dilution as a line of evidence for reduced risk, the dilution would have to account for both solids and overlaying water, as both would be part of the discharge. The elutriate sample test does not account for this mixture. Wisconsin's surface water criteria for PFOA are applicable to the total fraction in surface waters (Wis. Admin. Code NR 102.04 (8) (d)).
    - The STFATE model is not consistent with our procedures for calculating water- quality based effluent limitation for point source discharges to surface waters (Wis. Admin. Code NR 106). The purpose of an elutriate test is to characterize the wastewater that is generated from the dewatering process so that the Department can assign pollutant limitations that are as representative as possible of the discharge during the project. Unless part of the discharge management plan as required by the WPDES permit includes procedures to dilute the dewatering wastewater prior to discharge, the results from a dilution model are not

applicable. Those procedures would need to be specified in the discharge management plan, which would need to be approved, prior to accepting the results of the dilution model.

DMU 3 (~ 20,000 cu yds)

In DMU-3, woody debris is present throughout the sediment samples to a degree such that the material composition is significantly different from the sediment bed at the three open water disposal locations. In addition, this woody material appears to be correlated to sediment samples with elevated concentrations of PFAS "precursors"; compounds known to break down into PFOS. Most woody debris in the Lower Menominee River originated from historic lumber mill practices, and this material has commonly been found to be associated with high levels of arsenic due to area-wide contamination caused by industrial release of an arsenical herbicide. Because this organic debris would have been removed by the laboratory during sample preparation, there is no data to confirm that arsenic is not an issue with the woody material in this DMU. Unless evaluated under an approved plan, the material should be disposed as a solid waste. Details would be required in the discharge management plan as part of the WPDES permit to describe how the woody debris would be separated from and removed from the dewatering discharge to meet permit requirements. Additionally, this woody debris would not be allowed for open water disposal consideration under the following State narrative water quality codes:

- NR 102.04(1)(b) Floating or submerged debris, oil, scum or other material shall not be present in such amounts as to interfere with public rights in waters of the state.
- NR 102.04(1)(d) Substances in concentrations or combinations which are toxic or harmful to humans shall not be present in amounts found to be of public health significance, nor shall substances be present in amounts which are acutely harmful to animal, plant or aquatic life.

Thank you for inviting the opportunity to present these determinations as a preface to the upcoming State of Wisconsin S.401 Certification decision. If you have any questions, please don't hesitate to contact us.

Sincerely,

Kay Lutze

Waterways NER Field Supervisor

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