



STATE OF DELAWARE  
**DEPARTMENT OF NATURAL RESOURCES AND  
ENVIRONMENTAL CONTROL**

DIVISION OF WATER  
RICHARDSON & ROBBINS BUILDING  
89 KINGS HIGHWAY  
DOVER, DELAWARE 19901

**WETLANDS &  
WATERWAYS SECTION**

PHONE  
(302) 739-9943

October 4, 2024

US Wind, Inc.  
c/o: Laurie Jodziewicz  
401 E. Pratt St. Suite 1810  
Baltimore, MD 21202

**RE: Water Quality Certification (WQ-043/24)-US Wind, Inc.**

Dear Ms. Jodziewicz,

The Wetlands and Waterways Section of the Delaware Department of Natural Resources and Environment Control (DNREC) has completed its review of the above referenced project. This letter is in response to the request for a Water Quality Certification submitted by Laurie Jodziewicz, US Wind, Inc on April 15, 2024.

**PROPOSED ACTION**

The US Wind, Inc. is proposing to utilize an U.S. Army Corps of Engineers' Individual Permit to install up to four (4) transmission cables utilizing various methods of installation which include jet plowing and hydraulically dredging up to 74,000 cubic yards of material from the Indian River Bay and Indian River. The dredged material is proposed to be transported via hydraulic pipeline and contained within geo bags on an upland site (TP # 233-2.00-2.01) adjacent to the Indian River Power Plant in Sussex County, Delaware. The proposed discharge activity requires an individual Water Quality Certification in accordance with the U.S. Army Corps of Engineers' Individual Permit.

**WATER QUALITY CERTIFICATION UNDER THE CLEAN WATER ACT**

Pursuant to 40 CFR Part 121, a Section 401 Water Quality Certification is required for any federal license or permit that authorizes an activity that may result in a discharge. According to 40 CFR

§121.1, the term “discharge” refers to a discharge from a point source into a water of the United States. The construction activities referenced above are considered a discharge.

## **PUBLIC PARTICIPATION**

DNREC informed the public about a Public Information Session to provide details on the proposed project ahead of the Public Hearing. This session took place on June 5, 2024, at Beacon Middle School in Lewes, Sussex County, Delaware.

Additionally, in accordance with 7 Del. Admin. Code 7201, the public was invited to participate in the review of the US Wind, Inc. Water Quality Certification Request. Notice of the Joint Virtual Public Hearing, which was held on Tuesday July 9, 2024, on the above referenced matter was published in the Delaware State News, The News Journal, DNREC Public Notices website and the State Public Meeting Calendar on April 28, 2024. The public was given until September 9, 2024, which equates to 134 days, to provide comment.

During the Public Hearing, 34 members provided comments and an additional 412 comments were received during the public comment period (4/28/2024-9/9/2024).

## **WATER QUALITY ANALYSIS**

The DNREC, Wetlands and Waterways Section reviewed the project in accordance with 7 Del. Admin. Code 7401 Surface Water Quality Standards, 7 Del. Admin. Code 7201 Regulations Governing the Control of Water Pollution, and §§ 301, 302, 303, 306, and 307 of the federal Clean Water Act. In addition, section staff coordinated with the following agencies as part of the review:

- DNREC, Division of Fish and Wildlife
- DNREC, Division of Watershed Stewardship, Watershed Assessment and Management Section
- DNREC, Division of Climate, Coastal and Energy, Delaware Coastal Management Program
- United States Army Corps of Engineers
- United States Environmental Protection Agency

The proposed discharge of dredged material is defined as a pollutant and the project site has been identified as being located in Delaware Exceptional Recreational or Ecological Significance Waters (ERES). (7 Del. Admin. Code § 7401 – 3.0). Designated ERES waters must be accorded a level of protection and monitored in excess of that provided in most other waters of the State (7 Del. Admin. Code § 7401 – 5.6.1.1). A project monitoring plan titled “Indian River Bay Turbidity Minimization and Monitoring Plan” dated September 2024 was developed to describe US Wind’s proposed concept plan to minimize turbidity in the Indian River Bay and Indian River through best

management practices and engineering controls to prevent exceedance of Delaware's Surface Water Quality Standards (7 Del. Admin. Code § 7401 – 5.6.1.2 and 5.6.3.4.1). The plan also describes general monitoring activities that US proposes to employ in order to comply with expected permit conditions.

DNREC Representatives reviewed a technical report titled “Indian River and Indian River Bay Surface Water and Sediment Assessment” dated September 13, 2024, to ensure that the proposed discharge meets Delaware Surface Water Quality Standards. The DNREC, Division of Watershed Stewardship, Watershed Assessment and Management Section reviewed the submitted analysis of chemical constituents in the sediments and found that the final documentation provided in the application adequately characterized the potential water quality concerns that might result from the proposed activities.

Furthermore, the report presented an evaluation of surface water and sediment samples collected from the Indian River and Indian River Bay. The evaluation was conducted to characterize current constituent levels in the surface water and sediments from areas proposed for potential dredging/plowing, and to evaluate increased potential for impact on ecological and/or human health as a result of the proposed activities. Analytical surface water data were compared to DNREC Water Quality Standards and Hazardous Substance Cleanup Act (HSCA) Screening Levels for Marine Surface Water. Analytical sediment data from three composite samples were compared to appropriate human health and ecological screening levels and were used to calculate porewater concentrations for comparison to applicable water quality standards. All of the calculations and comparisons were done to evaluate water quality impacts as a result of dredging/plowing for transmission cable placement and from dredge material dewatering and upland disposal activities.

Mercury was the only compound detected in surface water to exceed DNREC screening levels for human health, at all three sampling locations. Although both the HSCA screening level and the DNREC (2020) calculated human health screening value were exceeded, the concentrations in all three surface water samples were below the Delaware chronic and acute Water Quality Criteria for the Protection of Aquatic Life.

No semi-volatile compounds exceeded Water Quality Standards nor HSCA Screening values applicable to human health or aquatic life. No dioxins, furans, polychlorinated biphenyl (PCBs), per-and polyfluoroalkyl substances (PFAS) nor organochloride pesticides exceeded the chronic nor acute Water Quality Standards for Protection of Aquatic Life, nor HSCA Screening Levels. Aldrin exceeded the human health Water Quality Criterion in the SW COMP 1 sample. Total PCBs exceeded the human health Water Quality Criterion in each of the three surface water samples. The only dioxin detected was Octachlorodibenzodioxin (OCDD) in the SW COMP 1 sample. The

2,3,7,8-TCDD TEQ (based on the single detect of OCDD) exceeded the human health Water Quality Criterion.

The human health sediment evaluation compared detected concentrations of inorganics, semi-volatile organic compounds (SVOCs), dioxins and furans, PCBs, and PFAS to the HSCA soil screening values. No pesticides were detected in the sediment samples; therefore, no further evaluation was warranted. In the absence of human health screening values for sediment, the soil screening levels are considered to be appropriate for evaluating potential human exposure whether the material remains as sediment or is deposited on land as surface soil. The results of this comparison indicated that thallium was the only constituent detected at concentrations above its soil screening level. Thallium was further evaluated using the RAIS risk calculator for selected receptor scenarios (residential, occupational and recreational). The quantitative risk evaluation for thallium indicated that even using the most conservative, default exposure assumptions, the potential for adverse effects is below the acceptable threshold established by both DNREC and USEPA. The results of the human health evaluation for direct contact with sediments indicate that constituent levels within the proposed dredging area would not be associated with unacceptable risk to human health.

To address the potential for human health risk via consumption of organisms, equilibrium partitioning calculations were used to estimate pore water concentrations from the sediment data. The pore water concentrations were then compared to human health Water Quality Criteria. The results of this conservative evaluation indicated that thallium and total 2,3,7,8-TCDD Equivalents (Eq.) concentrations exceeded the human health Water Quality Criteria protective of fish consumption. However, it is noted that the baseline measured surface water concentrations of mercury, dioxins, total PCBs and aldrin exceed the human health Water Quality Criteria. Therefore, the Project is not expected to affect water quality beyond its current conditions.

For the ecological evaluation of sediment samples, effects on both aquatic and terrestrial receptors were considered. For aquatic receptors, this was accomplished through a preliminary comparison of data to HSCA marine sediment screening levels. Similar to the approach for human health, equilibrium partitioning equations were also used to estimate pore water concentrations from the sediment data. The resulting predicted pore water concentrations are compared to Water Quality Criteria and marine surface water quality standards. The results of the ecological evaluation for the individual constituent groups are summarized below.

Sediment data for metals and mercury showed no exceedances of the available HSCA marine sediment screening values. Potential toxicity to benthic aquatic organisms was also evaluated using equilibrium partitioning to predict pore water concentrations. The calculated pore water concentrations were below applicable surface water criteria for all inorganics except arsenic. Additional lines of evidence were presented which indicate that exposure to arsenic by aquatic

receptors is unlikely to result in adverse effects (e.g., the pore water concentrations are *conservative predictions*; measured surface water concentrations for arsenic are below the HSCA values; and all predicted arsenic pore water concentrations were below the Delaware WQC for both chronic and acute exposures). In addition, Interstitial Water Benchmark Unit (IWBU) values were calculated for each sample to evaluate potential cumulative toxicity associated with the divalent metals. Although the IWBUs slightly exceeded 1 when calculated using the HSCA screening levels, the results for all samples were below 1 when using the Delaware chronic and acute WQC.

Sediment data for SVOCs were first compared to HSCA screening levels for marine sediment. Concentrations of 2-methylnaphthalene and naphthalene in one sample exceeded the screening levels. Potential toxicity of SVOCs was evaluated further through a comparison of organic carbon-normalized concentrations to published narcosis-based Equilibrium Partitioning Sediment Benchmarks (ESBs). None of the sediment samples had concentrations of SVOCs exceeding the ESBs. Further, none of the summed toxic units for the samples exceeded 1. Therefore, potential toxicity to aquatic life from SVOCs in Indian River sediments is not expected.

Total 2,3,7,8-TCDD Eq. concentrations for each sample were calculated for aquatic receptor groups. Because DNREC does not provide marine screening levels for dioxins, the concentrations were compared to screening values presented by NOAA and from the primary literature. Based on these comparisons, there is negligible potential for adverse effects on aquatic ecological receptors due to exposure to dioxins in the sediment.

Total PCB concentrations did not exceed the HSCA marine sediment screening level. Additionally, predicted porewater concentrations were less than the aquatic life Water Quality Criteria and marine surface water screening value. Based on these comparisons, adverse effects on ecological receptors are not anticipated due to exposure to PCBs in sediments.

DNREC does not provide screening values for PFAS in marine sediment or surface water. However, due to the infrequency of detected substances and the “J” qualified (estimated) results, PFAS impacts are not considered to be significant in the Indian River sediments, and adverse effects are unlikely.

Evaluation of risks to terrestrial ecological receptors was completed through a comparison of sediment data to HSCA ecological surface soil screening levels and additional benchmarks specific to terrestrial receptor groups (plants, invertebrates, mammals and birds). The weight of evidence indicates that there is negligible potential for adverse effects on terrestrial ecological receptors due to exposure to constituents in dredged sediments that are placed on land.

In conclusion, the evaluations in this report were conducted to characterize potential water quality impacts from dredging/plowing and related activities. For the vast majority of constituents, no increased potential impact on human health or ecological receptors is anticipated. For a small number of constituents, potential impacts may be associated with current conditions (e.g., human health exposure to mercury, dioxins, PCBs, and aldrin in surface water). However, there is negligible increased potential for impact on ecological and/or human health as a result of the proposed activities. The use of engineering controls at strategic locations to address turbidity will further limit potential impacts from constituents present in the sediments.

## **DECISION**

Based on its review and pursuant to U.S. Environmental Protection Agency regulations (40 CFR Part 121), the DNREC Wetlands and Waterways Section conditionally certifies that proposed discharge into Waters of the United States will comply with Delaware Surface Water Quality Standards provided the scope of the project remains unchanged, and the materials are sourced from the specified locations and arranged in accordance with the enclosed “Indian River Bay Turbidity Minimization and Monitoring Plan” dated September 2024.

Pursuant to 7 Del. Admin. Code § 7401, where the quality of the waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected. In the case of ERES waters, existing quality shall be maintained or enhanced. Limited degradation may be allowed if the Department finds, after full satisfaction of public participation provisions of 7 Del. C. Sections 6004 and 6006 and the intergovernmental coordination provisions of the State's continuing planning process as required in 40 CFR Part 130, that allowing lower water quality is necessary to accommodate important social or economic development, or would result in a substantial net environmental or public health benefit, in the area in which the waters are located. In allowing such degradation or lower water quality, the Department shall assure maintenance of water quality adequate for full protection of existing uses. Further, the Department shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control. Impacts which are found by the Department to have impaired the value of State-regulated Wetlands and adjacent waters shall constitute reason for mitigation, compensation, and/or remediation as required to achieve a fully functional ecological system. (7 Del. Admin. Code § 7201 – 5.10.1.7.3.6)

The following conditions are necessary to ensure the discharges associated with the proposed project comply with water quality standards in the State of Delaware.

### Specific Conditions:

- 1) The Permittee shall prepare a detailed turbidity monitoring plan for approval by DNREC that specifies the concepts outlined in the attached DNREC-approved general monitoring plan titled “Indian River Bay Turbidity Minimization and Monitoring Plan” dated September 2024 (e.g. sample locations, sample schedule, sampling methods, plan view drawings depicting engineering controls, and SOPs, etc.). The detailed monitoring plan shall be submitted to, and approved by, DNREC prior to any authorized sediment disturbing activity.
- 2) The monitoring plan shall include details regarding the measurement of TSS/turbidity utilizing real time and laboratory techniques (ADCP, water quality sonde, and laboratory samples) during pre-installation trials and/or during cable installation in order to generate appropriate correlations for use during real-time daily monitoring. Results generated during Campaign 1 shall be used to inform monitoring requirements for Campaign 2.
- 3) During construction activities, the Permittee shall measure total suspended solids (TSS), turbidity, and general water quality parameters (temperature, salinity, DO, specific conductance, etc.) at pre-approved locations each day (during daylight hours only) at the following tidal stages: max flood, high slack, max ebb, and low slack during project activities. Any observed activities or measured water quality parameters that may cause, or have caused, exceedances of the applicable Surface Water Quality Standards (7 Del. Admin. Code § 7401) must cease immediately.
- 4) In order to establish ambient (background) turbidity/TSS during dredging and cable installation operations, ambient TSS shall be measured daily at established compliance monitoring stations up current and down current of the work area prior to the start of daily operations. The average of the daily up current and down current ambient turbidity/TSS levels would establish the baseline for compliance for operations each working day. Turbidity/TSS concentrations at a distance of 500 feet from project activities shall not exceed 200 mg/L (or 600 NTU) above the average ambient turbidity/TSS (7 Del. Admin. Code § 7401 – 6.4.1.3). If measurements exceed these thresholds, then work must stop immediately until turbidity diminishes enough to continue within permit limits. Additionally, the Permittee shall measure baseline turbidity at 3 locations along and up-river from the export cable route approximately over 7 days prior to construction activities commencing and 7 days after cable installation to confirm conditions are within 5 mg/L of background conditions, discounting any storm or unusual upset conditions.
- 5) The Permittee shall install turbidity curtains prior to commencing any jet plowing or dredging and shall be positioned around the discharge locations to protect key critical boundary features such as tidal creeks, channels, and shoreline areas to prevent the encroachment of sediment into natural drainage areas. (7 Del. Admin. Code § 7401 – 4.1.1.2)
- 6) Any current proposed or future activities and controls within the Indian River Bay must attain/maintain average levels for nitrogen, phosphorus and total suspended solids (TSS) during the SAV growth season (March 1 to October 31), per DNREC Regulations (7 Del. Admin. Code § 7401 – 4.5.8.4), as these criteria were developed in order to support the re-introduction of SAV in the area.

Please be advised that this conditioned Water Quality Certification certifies that the discharge of dredged or fill material into a Waters of the United States meets Delaware Surface Water Quality Standards as long as the conditions of this certification are fulfilled. This Water Quality Certification shall not be construed as authorizing construction activities. Please be advised that this pertains only to the authority of 7 DE Admin. Code 7201 and 7401 and does not extend to permitting requirements of other sections within DNREC. Additionally, this letter does not relieve US Wind, Inc. of the obligation to comply with other applicable agencies.

Thank you for the opportunity to review and respond to the US Wind, Inc. water quality certification request. If you have any questions, please contact me at (302) 739-9943.

Sincerely,

Matthew R. Jones, Section Manager  
Wetlands and Waterways Section

Enclosures:

- US Wind, Inc. Section 401 Water Quality Certification Request Letter
- Reasonable Period of Time Establishment Email for Application No. NAB-2020-60863-M34 (US Wind, Inc. -MD Offshore Wind Energy/FAST-41)
- “Indian River Bay Turbidity Minimization and Monitoring Plan” dated September 2024.
- “Indian River and Indian River Bay Surface Water and Sediment Assessment” dated September 13, 2024
- Regulations Governing the Control of Water Pollution (7 Del. Admin. Code § 7201)
- Surface Water Quality Standards (7 Del. Admin. Code § 7401)
- 40 CFR Part 121- Clean Water Act Section 401: State Certification of Activities Requiring a Federal License or Permit.

cc: Jeffrey Grybowski., US Wind, Inc  
Jennifer Holmes, DNREC DCMP  
John Cargill, DNREC DWS  
Steve Williams, DNREC DWS  
Jennifer Pongratz, DNREC DWS  
Steven Smailer, DNREC DOW  
Erica Schmidt, USACE-Baltimore District