

Wes Moore  
Governor

Serena McIlwain  
Secretary

*State of**Maryland***DEPARTMENT OF THE ENVIRONMENT**

Air and Radiation Administration  
1800 Washington Boulevard, Suite 720  
Baltimore, MD 21230

☒ PSD Approval☐ Operating PermitPERMIT NO. PSD-2024-01DATE ISSUED June 6, 2025PERMIT FEE \$57,000.00 (Paid)EXPIRATION DATE In accordance with  
COMAR 26.11.02.04B**LEGAL OWNER & ADDRESS**

US Wind, Inc.  
401 East Pratt Street  
Baltimore, MD 21201  
Attn: Mr. Jeffrey Grybowski, CEO  
US Wind, Inc.

**SITE**

Maryland Wind Energy Area (WEA)  
Atlantic Ocean  
Offshore, Ocean City, Maryland  
Lat 38.352747° N; Long 74.753546° W  
Premises # 047-0248  
AI # 153737

**SOURCE DESCRIPTION**

Installation of a wind energy project (Maryland Offshore Wind Project), in a lease area approximately 18.5 km (11.5 miles, 10.0 nautical miles [NM]) off the coast of Maryland on the outer continental shelf (OCS) consisting of up to 121 wind turbine generators (WTG), up to four (4) offshore substations (OSS), and one (1) meteorological tower (Met Tower).

This source is subject to the conditions described on the attached pages.

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\_\_\_\_\_  
Program Manager  
\_\_\_\_\_  
Director, Air and Radiation Administration

**US WIND, INC.**  
**PREVENTION OF SIGNIFICANT DETERIORATION APPROVAL CONDITIONS**  
**APPROVAL PSD-2024-01**

Part A	General Provisions
Part B	Applicable Regulations
Part C	Best Available Control Technology (BACT)
Part D	Emissions Restrictions
Part E	Operating and Monitoring Requirements
Part F	Compliance Demonstration
Part G	Reporting and Recordkeeping Requirements

This Prevention of Significant Deterioration (PSD) Approval covers the following equipment for US Wind, Inc.'s Maryland Offshore Wind Project:

**Table 1A – Types of marine vessels, and associated main and auxiliary marine engines, to be used during Construction and Commissioning (C&C)**

<b>Vessel Types to be used for Scour Protection Installation</b>	<b>Number of Vessels of this Type</b>	<b>Marine Engines (per each vessel): Type (Main or Auxiliary), Number &amp; Maximum Engine Power (kilowatts (kW)/engine)</b>
Fallpipe Vessel (HC)	1	Main engines (3): 4,500 Auxiliary engines (1): 492 Auxiliary engines (1): 1,200
<b>Vessel Types to be used for Foundation Installation</b>	<b>Number of Vessels of this Type</b>	<b>Marine Engines (per each vessel): Type (Main or Auxiliary), Number &amp; Maximum Engine Power (kW/engine)</b>
Heavy Lift Vessel (HC)	1	Main engines (5): 4,500 Auxiliary engine (1): 4,500
Foundation Installation Tugs (HC)	4	Main engines (2): 2,540 Auxiliary engine (1): 199
Crew Transfer Vessel (HC)	1	Main engines (2): 749 Auxiliary engine (2): 20
Noise Mitigation Offshore Service Vessel (HC)	1	Main engines (2): 3,310 Auxiliary engines (3): 499
Acoustic Monitoring Offshore Service Vessel (HC)	1	Main engines (2): 2,540 Auxiliary engine (1): 199
Environmental Crew Transfer Vessel (HC)	2	Main engines (2): 749 Auxiliary engine (2): 20
<b>Vessel Types to be used for WTG Installation</b>	<b>Number of Vessels of this Type</b>	<b>Marine Engines (per each vessel): Type (Main or Auxiliary), Number &amp; Maximum Engine Power (kW/engine)</b>
Jack-up Vessel (HC) <b>[OCS Source]</b>	1	Main engines (3): 3,800 Auxiliary engines (1): 2,880
Tugs (HC)	3	Main engines (2): 2,540 Auxiliary engines (1): 199

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**Table 1A – Types of marine vessels, and associated main and auxiliary marine engines, to be used during C&C (continued)**

<b>Vessel Types to be used for WTG Commissioning</b>	<b>Number of Vessels of this Type</b>	<b>Marine Engines (per each vessel): Type (Main or Auxiliary), Number &amp; Maximum Engine Power (kW/engine)</b>
Commissioning Crew Transfer Vessels (HC)	3	Main engines (2): 749 Main engines (2): 20
<b>Vessel Types to be used for OSS Installation</b>	<b>Number of Vessels of this Type</b>	<b>Marine Engines (per each vessel): Type (Main or Auxiliary), Number &amp; Maximum Engine Power (kW/engine)</b>
Heavy Lift Vessel (HC)	1	Main engines (5): 4,500 Auxiliary engines (1): 4,500
Tug (HC)	2	Main engines (2): 2,540 Auxiliary engines (1): 199
Noise Mitigation Offshore Service Vessel (HC)	1	Main engines (2): 3,310 Auxiliary engines (3): 499
Acoustic Monitoring Offshore Service Vessel (HC)	1	Main engines (1): 2,500 Auxiliary engines (1): 199
Topside Tug (HC)	1	Main engines (2): 2,540 Auxiliary marine engines (1): 199
Refueling Offshore Service Vessel (HC)	1	Main engines (2): 749 Auxiliary engine (2): 20
Hotel Jack-up Vessel (HC) [OCS Source]	1	Main engines (2): 2,350 Auxiliary engine (2): 1,000
<b>Vessel Types to be used for Array Cable Installation</b>	<b>Number of Vessels of this Type</b>	<b>Marine Engines (per each vessel): Type (Main or Auxiliary), Number &amp; Maximum Engine Power (kW/engine)</b>
Cable Lay Vessel (HC)	1	Main engines (3): 1,750 Auxiliary engine (1): 1,750
Offshore Support Vessel (HC)	1	Main engines (1): 1,611 Auxiliary engine (2): 123
Crew Transfer Vessel (HC)	2	Main engines (2): 749 Auxiliary engine (2): 20
Trenching Vessel (HC)	1	Main engines (5): 3,000 Auxiliary engine (1): 3,000
Guard Crew Transfer Vessel (HC)	1	Main engines (2): 749 Auxiliary engine (2): 20

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**Table 1A – Types of marine vessels, and associated main and auxiliary marine engines, to be used during C&C (continued)**

<b>Vessel Types to be used for Export Cable Installation</b>	<b>Number of Vessels of this Type</b>	<b>Marine Engines (per each vessel): Type (Main or Auxiliary), Number &amp; Maximum Engine Power (kW/engine)</b>
Cable Lay Vessel (HC)	1	Main engines (3): 1,750 Auxiliary engine (1): 1,750
Multipurpose Offshore Support Vessel (HC)	1	Main engines (1): 1,611 Auxiliary engine (2): 123
Trenching Vessel (HC)	1	Main engines (5): 3,000 Auxiliary engine (1): 3,000
Horizontal Directional Drilling Lift Vessel (HC)	1	Main engines (2): 2,350 Auxiliary engine (2): 1,000
Horizontal Directional Drilling Pull-In Vessel (HC)	1	Main engines (1): 1,611 Auxiliary engine (2): 123
Pull-In Support Vessel (HC)	1	Main engines (2): 392 Auxiliary engine (2): 135
<b>Vessel Types to be used for Met Tower Installation</b>	<b>Number of Vessels of this Type</b>	<b>Marine Engines: Type (Main or Auxiliary), Number &amp; Maximum Engine Power (kW/engine)</b>
Heavy Lift Vessel (HC)	1	Main engines (5): 4,500 Auxiliary engine (1): 4,500
Tugs (HC)	3	Main engines (2): 2,540 Auxiliary engines (1): 199
Noise Mitigation Offshore Service Vessel (HC)	1	Main engines (2): 3,310 Auxiliary engines (3): 499
Acoustic Monitoring Offshore Service Vessel (HC)	1	Main engines (2): 2,540 Auxiliary engines (1): 199
Refueling Offshore Service Vessel (HC)	1	Main engines (2): 749 Auxiliary engine (2): 20
Hotel Jack-up Vessel (HC) <b>[OCS Source]</b>	1	Main engines (2): 2,350 Auxiliary engine (2): 1,000

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**Table 1B. Types of marine vessels, and associated main and auxiliary marine engines, to be used during Operations and Maintenance (O&M)**

<b>Vessel Types to be used for Offshore Marine Operations</b>	<b>Number of Vessels of this Type</b>	<b>Marine Vessel Engines (per each vessel): Type (Main or Auxiliary), Number &amp; Maximum Engine Power (kW/engine)</b>
Fallpipe Vessel (Scour Protection Repairs) (HC)	1	Main engines (3): 4,500 Auxiliary engines (1): 492 Auxiliary engines (1): 1,200
Crew Transfer Vessel (OSS O&M Refueling Operations) (HC)	1	Main engines (2): 749 Auxiliary engines (2): 20
Jack-Up Vessel (WTG Inspection/Maintenance/Repairs Main Repair Vessel) (HC) [OCS Source]	1	Main engines (2): 2,350 Auxiliary engines (2): 1,000
Survey Vessel (WTG Inspection/Maintenance/Repairs Multi-role Survey Vessel) (HC)	1	Main engines (2): 392 Auxiliary engines (2): 135
<b>Vessel Types to be used for Offshore Maintenance</b>	<b>Number of Vessels of this Type</b>	<b>Marine Vessel Engines (per each vessel): Type (Main or Auxiliary), Number &amp; Maximum Engine Power (kW/engine)</b>
Survey Vessel (Cable Inspection/Repairs Multi-role Survey Vessel) (HC)	1	Main engines (2): 392 Auxiliary engines (2): 135
Crew Transfer Vessel (Daily O&M and Miscellaneous) (HC)	4	Main engines (2): 749 Auxiliary engines (2): 20
Sportfisher (Daily O&M and Miscellaneous) (HC)	1	Main engines (2): 749 Auxiliary engines (2): 20

**Table 2A – Non-Marine Engines – Portable Diesel Generator Engines used during C&C**

<b>Activity</b>	<b>Engine Description</b>	<b>Number of Engines</b>	<b>Maximum Engine Power (kW)</b>
OSS Installation	OSS Installation Generator Engine [OCS Source]	4	150

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**Table 2B - Non-Marine Engines – Portable Diesel Generator Engines used during O&M**

<b>Activity</b>	<b>Engine Description</b>	<b>Number of Engines</b>	<b>Maximum Engine Power (kW)</b>
Daily O&M and Miscellaneous (Electrical Service)	Generator Engine [OCS Source]	4	150

**Table 2C. Non-Marine Engines – Permanent Diesel Generator Engines used during O&M**

<b>Activity</b>	<b>Engine Description</b>	<b>Number of Engines</b>	<b>Maximum Engine Power (kW)</b>
OSS	OSS Generator Engine [OCS Source]	4	150

**PART A – GENERAL PROVISIONS**

- (1) The following Air and Radiation Administration (ARA) applications and supplemental information are incorporated into this permit by reference:
- (a) Application for Prevention of Significant Deterioration (PSD) Approval received on August 17, 2023 (hardcopies received on September 3, 2023), with revised application received November 30, 2023 (hardcopies received on December 7, 2023) for the construction of the Maryland Offshore Wind Project.
  - (b) Application for Non-Attainment New Source Review (NA-NSR) Approval received on August 17, 2023 (hardcopies received on September 3, 2023), with revised application received November 30, 2023 (hardcopies received on December 7, 2023) for the construction of the Maryland Offshore Wind Project.
  - (c) Application for Fuel Burning Equipment (Form 11) for the following vessels supporting the construction and/or operation of the Maryland Offshore Wind Project: Foundation Installation Fallpipe Vessel; Foundation Installation Heavy Lift Vessel; Foundation Installation Tugs; Foundation Installation Crew Transfer Vessel;

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Foundation Installation Offshore Support Vessel Noise Vessels; Foundation Installation Environmental Crew Transfer Vessels; Wind Turbine Generator Installation Jack-up vessel; Wind Turbine Generator Installation Tugs; Wind Turbine Generator Commissioning Crew Transfer Vessels; Offshore Substation Installation Heavy Lift vessel; Offshore Substation Installation Tug; Offshore Substation Installation Offshore Support Vessel; Offshore Substation Installation Topside Tug; Offshore Substation Installation Refueling Offshore Support Vessel; Offshore Substation Installation Hotel Jack-up vessel; Array Cable Lay vessel; Array offshore support vessel; Array Crew Transfer Vessel; Array trenching vessel; Array guard vessel; Export Cable lay vessel; Export Cable Multipurpose Offshore Support Vessel; Export Cable Trenching Vessel; Export Cable Horizontal Directional Drilling Lift Vessel; Export Cable Horizontal Directional Drilling pull in Vessel; Export Cable pull in support vessel; Operation Scour Protection Repair Vessel; Operation Refueling Vessel; Operation Main Repair Vessel; Operation survey vessel; Operation Crew Transfer Vessel; and the Operation Environmental Monitoring Vessel, received on August 17, 2023 with revised forms received November 30, 2023.

- (d) Application for Internal Combustion Engines (Form 44) received on August 17, 2023 (hardcopies received on September 3, 2023) with revised form received November 30, 2023 (hardcopies received on December 7, 2023) for the construction/installation of four (4) 150 kW electric generators, each to be located on the four (4) Offshore Substations.
- (e) Supplemental Information:
  - (i) Air Quality Impact Analysis for 24-hour PM-10, annual PM-2.5, 1-hour and annual NO<sub>2</sub> Impacts received on August 17, 2023, and revised copies on November 30, 2023;
  - (ii) Response to the Department's Supplemental Request for Additional Information for OCS Air Permit (i.e., revised Section 5, and revised Appendix A) received January 5, 2024;
  - (iii) Class I AQRV Assessment Modeling Protocol, received on May 23, 2024;
  - (iv) Class I AQRV Assessment Modeling Report, received on July 31, 2024;

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- (v) Revised potential to emit emission calculations, received September 20, 2024, for air pollutants originating from various marine vessels, each powered by their own diesel engine and other construction equipment all servicing the construction and operation of the Maryland Offshore Wind Project using the EPA's "Ports Emissions Inventory Guidance: Methodologies for Estimating Port-Related and Goods Movement Mobile Source Emissions", EPA-420-B-22-011, April 2022; and
- (vi) Narrative on vessel selection criteria and information on the assumptions taken to support the facility wide potential to emit, received November 6, 2024.

If there are any conflicts between representations in this Approval and representations in the applications, the representations in this Approval shall govern. Estimates of dimensions, volumes, emissions rates, operating rates, feed rates and hours of operation included in the applications do not constitute enforceable numeric limits beyond the extent necessary for compliance with applicable requirements.

- (2) Upon presentation of credentials, representatives of the Maryland Department of the Environment ("MDE" or the "Department"), the EPA, and the Worcester County Health Department shall at any reasonable time be granted, without delay and without prior notification, access to the Permittee's property and permitted to:
  - (a) inspect any construction authorized by this Approval;
  - (b) sample, as necessary to determine compliance with requirements of this Approval, any materials stored or processed on-site, any waste materials, and any discharge into the environment;
  - (c) inspect any monitoring equipment required by this Approval;
  - (d) review and copy any records, including all documents required to be maintained by this Approval, relevant to a determination of compliance with requirements of this Approval;
  - (e) obtain any photographic documentation or evidence necessary to determine compliance with the requirements of this Approval; and
  - (f) the Department may exercise its right of entry through use of an unmanned aircraft system to conduct inspections, collect samples, or make visual observations through photographic or video



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recordings.

- (3) Nothing in this Approval authorizes the violation of any rule or regulation or the creation of a nuisance or air pollution.
- (4) If any provision of this Approval is declared by proper authority to be invalid, the remaining provisions of the Approval shall remain in effect.
- (5) All terms defined in the Permit-to-Construct for the Maryland Offshore Wind Project (ARA Registration No. 047-0248) apply to this PSD Approval.
- (6) Any notifications, records, reports, plans, and documents referenced in this Approval shall be made available to the EPA as specified in this Approval or upon request by the EPA.

**PART B – APPLICABLE REGULATIONS**

- (1) The Permittee may not construct or operate a PSD source, as defined in COMAR 26.11.01.01B(37), which will result in violation of 40 CFR §52.21, as amended.
- (2) COMAR 26.11.06.14, which states that the Permittee shall not construct, modify, or operate a PSD source as defined in COMAR 26.11.01.01B(37) without first obtaining a PSD Approval in accordance with the provisions of 40 CFR §52.21.

**PART C – BEST AVAILABLE CONTROL TECHNOLOGY**  
**(BACT)**

- (1) To meet Best Available Control Technology (BACT) requirements, emissions of nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), and particulate matter (PM-10 and PM-2.5) from each OCS source shall be limited to the following:
  - (a) All vessels contracted by the Permittee shall be equipped with marine engines (main and auxiliary) that meet the most stringent, applicable EPA Tier or MARPOL Annex VI emissions standard available at the time the marine vessel is hired for the specific work required in the timeframe required. Marine vessels with the next highest-tier engines may be hired and deployed, if the Permittee documents the basis for its conclusion that the highest-tier vessel, and any other higher-tiered vessels, are not available. The engines may also meet the next most stringent emission standards if the total emissions associated with the use of a vessel with an engine(s) that meet the most stringent emission standards would be greater than the total emissions associated with the use of the vessel with an engine(s) that meet the next most stringent emission standards.

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For purposes of this subparagraph, when determining the total emissions associated with the use of a vessel with a particular engine, the Permittee shall include the emissions of the vessel that would occur when the vessel would be in transit to the OCS source from the vessel's starting location.

- (b) Each Category 1 main and auxiliary marine engine of a vessel shall be certified to the applicable engine EPA Tier emission standard specified in 40 CFR §1042.101, meeting Tier 2 requirements at the minimum.
  - (c) Each Category 2 main and auxiliary marine engine shall be certified to the applicable engine EPA Tier emission standard specified in 40 CFR §1042.101, meeting Tier 2 requirements at the minimum.
  - (d) Each Category 3 main and auxiliary marine engine shall be certified to the applicable engine EPA Tier emission standard specified in 40 CFR §1042.104, meeting Tier 2 requirements at the minimum.
  - (e) For marine engines (main and auxiliary) onboard foreign-flagged marine vessels, each engine shall be certified to the applicable engine emission standard specified in 40 CFR §1043, meeting MARPOL Annex VI requirements at the minimum.
  - (f) For Non-Marine Engines, Portable Diesel Generator Engines used during C&C and O&M, the Permittee shall ensure that each of the portable diesel generator engines is certified to meet the EPA Tier 4 emission standard from 40 CFR §1039, that applies to each engine.
  - (g) For Permanent Diesel Generator Engines on OSS during O&M, the Permittee shall ensure that each of the portable diesel generator engines is certified to meet the EPA Tier 4 emission standard from 40 CFR §1039, that applies to each engine.
  - (h) The Permittee shall use good combustion practices based on the manufacturer's specifications for all marine and non-marine engines associated with the Maryland Offshore Wind Project.
- (2) The Permittee shall comply with the following additional BACT fuel requirements for PM-10 and PM-2.5 from the Maryland Offshore Wind Project, while the vessel is an OCS source:
- (a) The Permittee shall use ultra-low-sulfur diesel (ULSD) fuel in all Category 1 and 2 engines, Non-Marine Engines, Portable Diesel Generator Engines used during C&C and O&M, and Permanent Diesel

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Generator Engines on OSS during O&M that meets the per-gallon standards below.

- (i) a maximum sulfur content of 15 parts per million (ppm); and
  - (ii) a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.
- (b) The Permittee shall use fuel with a maximum sulfur content of 1000 ppm in all Category 3 engines.
- (3) Prior to the C&C Start Date, the Permittee shall provide the Department an initial report, for review and approval, that defines each vessel contracted, each anticipated representative vessel, and each marine and non-marine engine to be used during the initial C&C and O&M of the Maryland Offshore Wind Project. The report shall include, at a minimum, the following information:
  - (a) All the information required by Part G(1)(a), (b), (c), (d) of this Approval;
  - (b) The proposed BACT for each OCS source engine for NO<sub>2</sub>, CO, PM-10, PM-2.5 in units of grams per kilowatt-hour (g/kW-hr);
  - (c) The regulatory citation for each BACT proposal for NO<sub>2</sub>, CO, PM-10, PM-2.5;
  - (d) The proposed BACT compliance demonstration for NO<sub>2</sub>, CO, PM-10, PM-2.5; and
  - (e) Updated Potential to Emit estimates and calculations for NO<sub>2</sub>, CO, PM-10, PM-2.5 as per the emission estimation methods as required in Part F of this Approval.
- (4) C&C shall not commence until the Department has approved the proposed BACT for NO<sub>2</sub>, CO, PM-10, PM-2.5 and the proposed BACT compliance demonstrations for NO<sub>2</sub>, CO, PM-10, PM-2.5 in writing.
- (5) For any vessel or non-marine engine substitutions during the life of the Maryland Offshore Wind Project, the Permittee shall provide the information required by Part C(3) for review and approval, prior to use of that vessel or engine.

**PART D – EMISSIONS RESTRICTIONS**

- (1) Total emissions of NO<sub>2</sub>, CO, PM-10, and PM-2.5 from the Maryland Offshore Wind Project shall be less than the following limits including periods of startup, shutdown, and malfunction:

**Table 3 – Emissions Limits**

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<b>Pollutant</b>	<b>Maximum Annual C&amp;C and O&amp;M, Combined During C&amp;C (tons/12-months rolling)</b>	<b>Total for the Entire C&amp;C Phase, which includes both C&amp;C and O&amp;M Emissions (tons)</b>	<b>Maximum O&amp;M (tons/12-months rolling)</b>
NO <sub>2</sub>	616	1380	25
CO	149	344	24
PM-10	20	45	0.66
PM-2.5	19	44	0.65

- (2) Total daily emissions from the Maryland Offshore Wind Project shall be less than the following limits, expressed as tons per day (tpd). These limits are derived from the emissions modeled in the application and ensure compliance with the NAAQS and PSD increments.

**Table 4 – Daily Emissions Limits Pollutant Maximum C&C and O&M (tpd)**

<b>Pollutant</b>	<b>Maximum C&amp;C during OSS Installation Periods<sup>1</sup> combined with O&amp;M (tpd)</b>	<b>Maximum C&amp;C during OSS Commissioning Periods<sup>2</sup> combined with O&amp;M (tpd)</b>	<b>O&amp;M (tpd)</b>
NO <sub>2</sub>	30.06	29.54	4.52
CO	3.37	3.89	0.59
PM-10	0.32	0.28	0.06
PM-2.5	0.31	0.27	0.05

1. OSS Installation Period consists of the following: Scour protection installation, WTG Installation, WTG Commissioning, OSS Installation (the Vessels listed as OSS Installation Vessels in Table 1A, excluding the Refueling Offshore Service Vessel and Hotel Jack-up Vessel), Inter-Array Cable Installation, Offshore Export Cable Installation; and O&M activities.

2. OSS Commissioning Period consists of the following: Foundation Installation, Scour protection installation, WTG Installation, WTG Commissioning, OSS Commissioning (the Vessels listed as OSS Installation Vessels in Table 1A, excluding the Heavy Lift Vessel, Tug, Topside Tug, Noise Mitigation Offshore Service Vessel, and Acoustic Monitoring Offshore Service Vessel), Inter-Array Cable Installation, Offshore Export Cable Installation; and O&M activities."

## **PART E – OPERATING AND MONITORING REQUIREMENTS**

- (1) For the Maryland Offshore Wind Project, the Permittee shall develop and implement a plan that will ensure good combustion practices and combustion efficiency, per manufacturer recommendations. The Good Combustion Practices and Combustion Efficiency Plan shall include practices to minimize engine idling, a summary of the good combustion practices for each engine, a preventative maintenance schedule, and any additional information as deemed necessary by the Department.

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- (2) The Good Combustion Practices and Combustion Efficiency Plan shall be submitted to the Department for review and approval. C&C shall not commence until the Permittee receives approval of the Good Combustion Practices and Combustion Efficiency Plan from the Department in writing.
- (3) To ensure compliance with the NAAQS and PSD increments and total daily emissions limits in Part D(2), Table 4 (Maximum C&C during OSS Installation Periods combined with O&M) of this Approval, vessels associated with the following activities may be operated simultaneously when each of the individual activities are located greater than 1.25 NM away from each other: WTG Installation, Scour Protection Installation, WTG Commissioning, OSS Installation (the Vessels listed as OSS Installation Vessels in Table 1A, excluding the Refueling Offshore Service Vessel and Hotel Jack-up Vessel), Inter-array Cable Installation, Export Cable Installation, and O&M. The separation distance shall be calculated based on the GPS coordinates of the center point of each activity (e.g., the monopile foundation attached to OCS).
- (4) To ensure compliance with the NAAQS and PSD increments and total daily emissions limits in Part D(2), Table 4 (Maximum C&C during OSS Commissioning Periods combined with O&M) of this Approval, vessels from the following activities may be operated simultaneously when each of the individual activities are located greater than 1.25 NM away from each other: Foundation Installation, WTG Installation, Scour Protection Installation, WTG Commissioning, OSS Commissioning (the Vessels listed as OSS Installation Vessels in Table 1A, excluding the Heavy Lift Vessel, Tug, Topside Tug, Noise Mitigation Offshore Service Vessel, and Acoustic Monitoring Offshore Service Vessel), Inter-array Cable Installation, Export Cable Installation, and O&M. Vessels associated with OSS Commissioning specified above and Export Cable Installation or Inter-array Cable Installation may be operated simultaneously at distances less than 1.25 NM away from each other. The separation distance shall be calculated based on the GPS coordinates of the center point of each activity (e.g., the monopile foundation attached to OCS).
- (5) With submittal of the Report in condition C(3), which defines each vessel contracted, each anticipated representative vessel, and each marine and non-marine engine to be used during the initial C&C and O&M of the Maryland Offshore Wind Project, permittee may provide additional modeling for NAAQS and PSD increment compliance, upon approval from the Department, for simultaneous activities at distances less than 1.25 NM."

**PART F – COMPLIANCE DEMONSTRATION**

- (1) The Permittee shall calculate actual total NO<sub>2</sub>, CO, PM-10, and PM-2.5 emissions from the Maryland Offshore Wind Project for each calendar month and for each

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consecutive 12-month rolling period. For marine engines, the Permittee shall use the most recent version of the EPA Ports Emissions Inventory Guidance. For non-marine engines the Permittee shall use the most relevant data available, which may include actual test data, tier standards, EPA's annual engine certification data, and any emissions information obtained from equipment vendors. The Permittee must obtain approval from the Department to use an alternate emissions estimation method.

- (2) The Permittee shall use actual vessel and engine data to calculate emissions as required by Part F(1). The Permittee shall include all data to support the calculations.
- (3) The Permittee shall demonstrate compliance with applicable BACT emission limits (g/kW-hr) for each OCS source engine by ensuring that each engine has an EPA Certificate of Conformity to the applicable Tier emission standard, or a MARPOL Annex VI, IAPP Certificate for the vessel and an EIAPP certificate for the engine, as required in Part C(1).

**PART G – REPORTING AND RECORDKEEPING REQUIREMENTS**

- (1) The following records with supporting documentation shall be maintained on site for at least five (5) years and made available to the Department and EPA upon request:
  - (a) For each vessel associated with the Maryland Offshore Wind Project: the vessel's owner, vessel name, year that the vessel was built, nation of origin of the vessel, exact vessel function, whether the vessel is an OCS Source, and documentation specifically supporting whether (1) the vessel requires attachment to the seabed (either via anchors, spuds (type of jack-up vessel), or other type of attachment) during the C&C or O&M activities; (2) the vessel could be maintained in a fixed position using only the vessel engines and without any attachment to the seabed during the C&C and O&M activities; or (3) the vessel would require attachment to other vessels, while those other vessels are OCS sources, or to the WTGs or OSSs structures during the C&C or O&M activities;
  - (b) For each marine engine of each vessel associated with the Maryland Offshore Wind Project, regardless of whether the vessel is considered an OCS source or not: the engine's category (1 through 3), marine engine function (i.e., main (or propulsion) or auxiliary marine engine), engine type (e.g., slow-speed diesel, gas turbine...), rated engine size and total installed propulsion power (maximum continuous rated engine power in kW), vessel speed and maximum vessel speed,

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maximum draft, make and model year or remanufacture year, keel-laid year, engine stroke type (e.g. 2- or 4-stroke), displacement in liters/cylinder, install date, maximum in-use engine speed in rotations per minute, type of fuel used (e.g. marine gas oil, marine diesel oil...), brake specific fuel consumption, average loads, and the EPA Certificate of Conformity to a Tier engine rating, or EIAPP certificate and IAPP certificate, as applicable;

- (c) For each vessel deployed during C&C and/or O&M, the Permittee shall maintain a record of the alternate vessels that, during the time of contract deployment, were available for hire for the required work needed at the time needed, as well as the Tier levels for each vessel's engines. The alternate vessels available for hire shall be listed in ranking order from the one with the highest-tiered engines to the one with the lowest tiered-engines. The record should indicate if the vessel with the highest tiered-engines from the list was the actual vessel hired and deployed. If the vessel with the highest tiered-engines from the list was not the actual vessel hired and deployed, the record should document the reason(s) for the Permittee selection of a vessel with lower-tiered engines;
- (d) For each non-marine engine of each vessel that will be associated with the Maryland Offshore Wind Project: maximum engine power (kW), model year, type of fuel used, and the EPA Certificate of Conformity to the Tier 4 emission standards in 40 CFR §1039.101(b);
- (e) The daily operating hours for each engine associated with the Maryland Offshore Wind Project. The hours of operation shall be recorded from a non-resettable hour meter or, if a non-resettable hour meter is not available, by monitoring and maintaining records of the actual daily operating hours;
- (f) The daily fuel use, in units of gallons per day, for each engine associated with the Maryland Offshore Wind Project and records of fuel supplier certifications for all fuelings to demonstrate compliance with all applicable fuel sulfur content limitations;
- (g) Daily records of marine engine load factors calculated per vessel associated with the Maryland Offshore Wind Project; load factor shall be calculated per the most recent version of the EPA Ports Emissions Inventory Guidance, unless the Permittee obtains approval from the Department to use an alternate emissions estimation method.
- (h) The daily, monthly, and consecutive 12-month rolling actual NO<sub>2</sub>, CO, PM-10, and PM-2.5 emissions with the Maryland Offshore Wind

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Project, including calculations and data to support the calculations;  
and

- (i) The Good Combustion Practices and Combustion Efficiency Plan that will ensure good combustion practices and combustion efficiency, per manufacturer recommendations and all associated records.
  - (j) For each vessel deployed during C&C and/or O&M, US Wind, Inc. shall record on a daily basis, the GPS coordinates of the center point of the operation (e.g., the monopile foundation attached to OCS) from the list of the following activities: Foundation Installation, Scour Protection Installation, WTG Installation, WTG Commissioning, OSS Installation, OSS Commissioning, Inter-array Cable Installation, Export Cable Installation, and O&M.”
- (2) The Permittee shall provide a copy of the Permittee’s request for establishment of temporary safety zones and the temporary final rule for the 500-meter temporary safety zones established by the U.S. Coast Guard. In the event the U.S. Coast Guard does not establish a 500-meter safety zone, the Permittee shall establish an enforceable 500-meter exclusion zone to prevent incursion by unauthorized entities. The Permittee and/or the U.S. Coast Guard will monitor temporary exclusion/safety zones to prevent incursion into the exclusion/safety zones by unauthorized entities and report any incursion to the Department that results in an emissions exceedance as specified in Part H(9) of the air quality permit to construct. [Reference: 40 C.F.R. § 55.8, 40 C.F.R. § 55.13, and 33 C.F.R. § 147].
- (3) All air quality notifications, records, reports, plans, and documents required by this Approval shall be submitted electronically to the Air Quality Compliance Program to:

[mdeair.othercompliance@maryland.gov](mailto:mdeair.othercompliance@maryland.gov)