UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
5 POST OFFICE SQUARE SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

FEB 0 1 2019

Commissioner Martin Suuberg
Department of Environmental Protection
One Winter Street
Boston, Massachusetts 02108

Dear Commissioner Suuberg:

Thank you for your letter dated December 18, 2018 requesting that the Commonwealth of Massachusetts be designated the corresponding onshore area (COA) for the Deepwater Wind New England, LLC meteorological buoy project for purposes of outer continental shelf air permitting.

We have reviewed your request and demonstration and find that you have fully addressed the requirements of 40 CFR § 55.5(b) in requesting COA designation. Based on our review of your request, we have made a preliminary determination to designate Massachusetts as the COA for the project, subject to the administrative procedures and public participation requirements of 40 CFR § 55.5(f). We will be accepting public comments on our preliminary determination through March 8, 2019. Once we have considered all public comments, we will issue a final COA designation. Enclosed is the Technical Support Document detailing our analysis and preliminary determination in greater detail.

If you have any questions regarding this matter, please do not hesitate to contact me or Patrick Bird of my staff at bird.patrick@epa.gov or 617-918-1287.

Sincerely,

Deborah A. Szaro

Deborah A. Szaro
Acting Regional Administrator

Enclosure

cc: Glenn Keith, Massachusetts Department of Environmental Protection
Marc Wolman, Massachusetts Department of Environmental Protection
Janet Coit, Rhode Island Department of Environmental Management
Laurie Grandchamp, Rhode Island Department of Environmental Management
Stephanie Wilson, Deepwater Wind New England, LLC

Technical Support Document

Preliminary Determination to Designate the Commonwealth of Massachusetts as the Corresponding Onshore Area for the Deepwater Wind, LLC Meteorological Buoy Project

I. Introduction

The purpose of this Technical Support Document is to provide a detailed rationale of the Environmental Protection Agency's (EPA) preliminary determination to designate the Commonwealth of Massachusetts as the corresponding onshore area (COA) for the Deepwater Wind New England, LLC (Deepwater) meteorological buoy (met buoy) project pursuant to the outer continental shelf (OCS) air regulations found at 40 CFR part 55. This document includes a brief description of the Deepwater met buoy project, an overview of relevant provisions applicable to EPA in designating a COA, an overview of the COA request and demonstration provided by the Massachusetts Department of Environment Protection (MassDEP), EPA's analysis of the MassDEP request and demonstration, EPA's preliminary determination to designate the Commonwealth of Massachusetts as the COA, and a description of how EPA will meet the required administrative procedures and public participation for this action.

II. Background

a. Deepwater Met Buoy Project

The Deepwater met buoy project meets the definition of an OCS source as found at §328(a)(4)(c) of the Clean Air Act and at 40 CFR § 55.2, and as such, Deepwater submitted to EPA a notice of intent (NOI) to submit an OCS air permit application for its met buoy project on February 16, 2018. The February 2018 NOI provided information necessary to meet the requirements of a NOI at 40 CFR § 55.4(b). The NOI categorized the met buoy as an "exploratory source" as defined at 40 CFR § 55.2 and stated that Massachusetts was the nearest onshore area (NOA) to the met buoy project location. On July 12, 2018 Deepwater submitted its OCS air permit application to EPA for the met buoy project.

According to the February 2018 NOI and the July 2018 air permit application, the met buoy project consists of the deployment, operation, and decommissioning of a Floating Light Detection and Ranging 6M buoy for the purpose of gathering meteorological data to support development of offshore wind projects in Renewable Energy Lease Number OCS-A 0486. The met buoy will be deployed for approximately six years and satisfies its energy demands through rechargeable batteries powered by an onboard wind turbine, solar panels, and an onboard 6-kilowatt ultra-low sulfur diesel-fired back-up generator. Vessel emissions associated with deployment, operation and maintenance, and decommissioning of the met buoy are also regulated as OCS sources when those vessels meet the definition of an OCS source as found at §328(a)(4)(c) of the Clean Air Act and at 40 CFR § 55.2.

On October 22, 2018, Deepwater submitted to EPA an amended NOI to correct certain elements of the February 2018 NOI. According to Deepwater, the October 2018 NOI reclassified the met buoy as a non-exploratory source, as the length of time the project extended beyond what is

considered "temporary" with respect to Clean Air Act permitting. The October 2018 NOI also acknowledged that Rhode Island is the NOA because Rhode Island's onshore area is geographically closest to the met buoy project location.[1] Despite this, Deepwater expressed interest in having EPA designate Massachusetts as the COA and provided a brief justification to support its position.

b. Regulations Applicable to Designating a COA

In accordance with 40 CFR § 55.3(b), OCS sources located within 25 miles of states' seaward boundaries shall be subject to all the federal, state, and local requirements of the COA. Therefore, when EPA is the OCS air permitting authority, the Agency shall apply all federal, state, and local regulations and requirements of the COA as applicable to the OCS source(s) in the EPA-issued OCS air permit.

The NOA is designated the COA without further action by EPA if no requests for designation are received within 60 days of receipt of an applicant's NOI. Such requests must be made by the chief executive officer of the air pollution control agency of an area that believes it has more stringent air pollution control requirements than the NOA for a proposed OCS source. The request must be accompanied by a demonstration within 90 days of the NOI showing that:

- The area has more stringent requirements with respect to the control and abatement of air pollution than the NOA;

- The emissions from the source are or would be transported to the requesting area; and

- The transported emissions would affect the requesting area's efforts to attain or maintain a Federal or State ambient air quality standard or to comply with the requirements of part C of title I of the Clean Air Act, taking into account the effect of air pollution control requirements that would be imposed if the NOA were designated as the COA.

If no demonstrations are received by EPA within 90 days of the receipt of the NOI, the NOA shall become the designated COA without further action. If one or more demonstrations are received, EPA will issue a preliminary designation of the COA within 150 days of the receipt of the NOI, which shall include a 30-day public comment period, in accordance with 40 CFR § 55.5(f). EPA will designate the COA for a specific source within 240 days of the receipt of the NOI, and EPA shall designate the COA for each source only once in the source's lifetime.

III. The Commonwealth of Massachusetts's Request and Demonstration for COA Designation

On December 18, 2018, EPA received a request and demonstration seeking COA designation for the Deepwater met buoy project from Commissioner Martin Suuberg of MassDEP. The request and demonstration states that air pollutant emissions from the project, including nitrogen oxides and volatile organic compounds, would occur during use of ocean vessels used to install, service, and decommission the met buoy, and from the operation of the back-up diesel generator. The

[1] The October 2018 NOI indicates that the project location is 17 miles away from Block Island, Rhode Island and 23 miles away from Nomans Land Island, Massachusetts.

MassDEP request provided a technical justification to satisfy the criteria of 40 CFR 55.5(b)(2)(i)-(iii), which a state must demonstrate before EPA can designate it as the COA. Specifically, MassDEP stated:

- "While RI DEM [Rhode Island Department of Environmental Management] and MassDEP have stringent air pollution regulations, MassDEP has more stringent requirements with respect to opacity [compare 310 CMR 7.06(1)(b) to 250-RICR-120-05-1 1.6]."

- "Emissions from the met buoy would be transported predominantly to Massachusetts. An analysis of wind speed and direction data from weather stations at Martha's Vineyard Airport in Massachusetts and at Block Island State Airport in Rhode Island show that prevailing winds in the Rhode Island/southeastern Massachusetts area predominantly blow from the west and the southwest. Land areas downwind from the met buoy are predominantly in Massachusetts."

- "The transported emissions associated with the met buoy would affect Massachusetts' efforts to attain and maintain the 2015 Ozone National Ambient Air Quality Standards (NAAQS) of 70 parts per billion (ppb). During the 2018 ozone season, southeastern Massachusetts ozone monitors recorded numerous days in excess of 70 ppb. Nitrogen oxides (NOx), a precursor to ozone, are the highest emitted criteria pollutant from the installation, operation, and decommissioning of the met buoy. Given that emissions associated with the met buoy project primarily will be transported to Massachusetts, these emissions will affect Massachusetts' efforts to attain or maintain the 2015 Ozone NAAQS."

IV. EPA's Analysis and Preliminary Determination

a. Applicability

Deepwater's October 2018 NOI characterized the met buoy as a non-exploratory source because the met buoy would be deployed for up to six years. Deepwater cites its Bureau of Ocean and Energy Management (BOEM)-approved Site Assessment Plan, which corroborates information provided in its February 2018 NOI and July 2018 air permit application which both state that the met buoy would be deployed for a period up to six years.

EPA agrees that the met buoy does not meet the definition of an *exploratory source or exploratory OCS source*, as defined at 40 CFR § 55.2. As such, the COA designation process for proposed exploratory sources, as found at 40 CFR § 55.5(a), does not apply. The COA designation process for the met buoy project shall follow the procedures as found in 40 CFR § 55.5(b)-(f), as applicable.

b. Timeliness

As discussed above, Deepwater submitted an NOI to EPA on February 16, 2018 and an amended NOI on October 22, 2018. The amended NOI contained material corrections relevant to designating a COA. For example, Deepwater identified Rhode Island as the NOA and amended the classification of the source to a non-exploratory source. EPA considers the amended NOI as a

new NOI for the project, and all timelines and deadlines related to the receipt of an NOI as found in 40 CFR § 55.5 should be calculated from Deepwater's October 22, 2018 NOI submittal.

EPA preliminarily determines the Commonwealth's December 18, 2018 submittal to be timely.

c. MassDEP's Demonstration

A state's demonstration for a COA designation must meet the requirements of 40 CFR § 55.5(b)(2), as described in section II.b above. MassDEP's COA demonstration contains information as to how the Commonwealth meets each of these criteria. Below EPA analyzes each of MassDEP's claims with respect to the criteria as found at 40 CFR § 55.5(b)(2)(i)-(iii).

40 CFR § 55.5(b)(2)(i): MassDEP submitted citations for opacity requirements in the Commonwealth of Massachusetts and the State of Rhode Island in support of its claim of more stringent requirements. EPA has reviewed the citations provided by MassDEP for opacity requirements in both Massachusetts regulations and Rhode Island regulations.

Massachusetts 310 CMR 7.06(1)(b) requires that:

> No person shall cause, suffer, allow or permit the operation of a facility so as to emit contaminant(s), exclusive of uncombined water or smoke subject to 310 CMR 7.06(1)(a) of such opacity which, in the opinion of the Department, could be reasonably controlled through the application of modern technology of control and a good Standard Operating Procedure, and in no case, shall exceed 20% opacity for a period or aggregate period of time in excess of two minutes during any one hour provided that, at no time during the said two minutes shall the opacity exceed 40%.

Rhode Island's 250-RICR-120-05-1 1.6 requires that:

> No person shall emit into the atmosphere from any source any air contaminant for a period or periods aggregating more than three minutes in any one hour which is greater than or equal to 20 percent opacity.

EPA acknowledges that both Massachusetts and Rhode Island have stringent air quality regulations that adequately control emissions of sources, small and large. With respect to opacity, both regulations contain a 20% limit. However, the Massachusetts regulation contains a shorter observation period (two minutes versus three minutes). The Massachusetts regulation also includes an opacity ceiling of 40%, which the Rhode Island regulation does not include.

The permitting action for the met buoy project will follow a minor New Source Review permitting pathway as opposed to any general permitting or permit-by-rule pathway because of the complexity of the OCS permit, especially when considering vessel operations. Each state's minor New Source Review program requires a best achievable control technology (BACT) analysis, and this BACT analysis may yield a lower opacity emission limit than is found in either regulation. However, given the opacity limits found in each state's regulations, EPA preliminary determines the Massachusetts's regulation is more stringent and therefore MassDEP has met the criterion of 40 CFR § 55.5(b)(2)(i).

40 CFR § 55.5(b)(2)(ii): MassDEP submitted an analysis of wind speed and direction associated with data from weather stations in both Massachusetts and Rhode Island using EPA's AirNow-Tech tool (https://www.airnowtech.org/). EPA has evaluated this information. Figure 1 depicts the wind rose analysis submitted by MassDEP compiling data from January 1, 2013 to December 31, 2017 at Martha's Vineyard Airport and Block Island State Airport. As stated in MassDEP's demonstration, the prevailing winds in the Rhode Island/southeastern Massachusetts area predominantly blow from the west and the southwest.

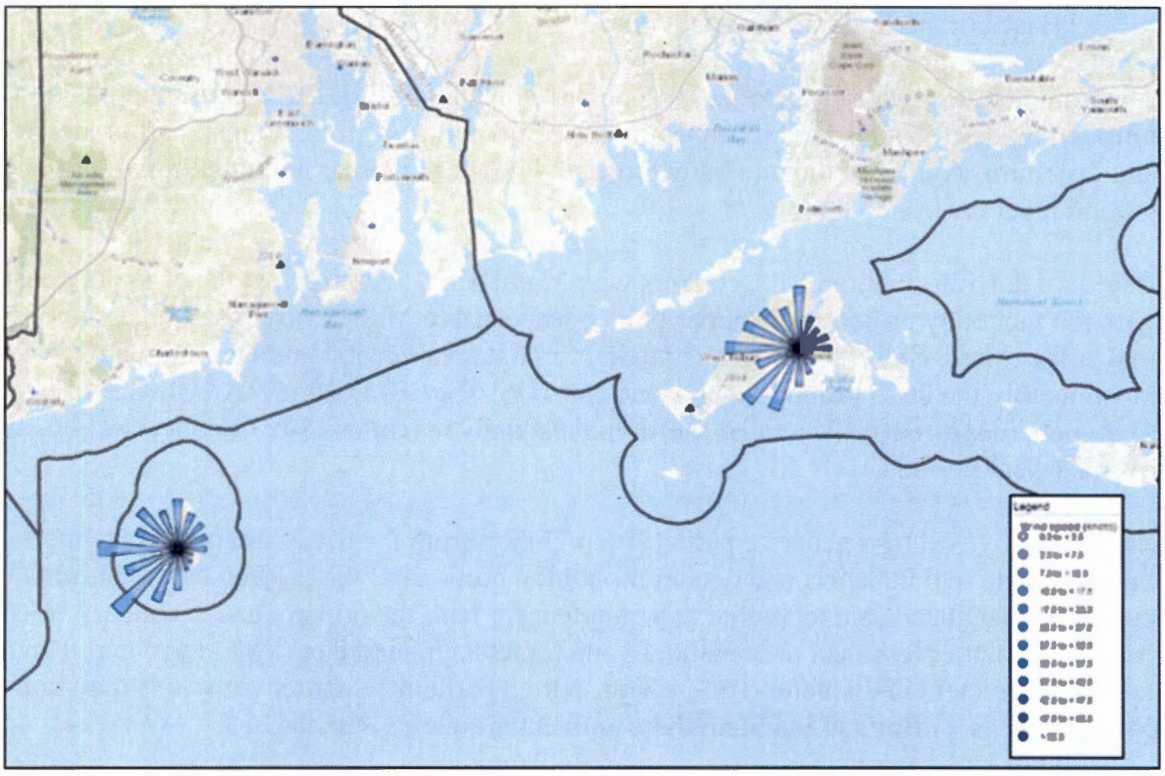

Figure 1: Wind Rose Analysis Compiling Wind Speed and Direction Data for Martha's Vineyard Airport and Block Island State Airport from January 1, 2013 to December 31, 2017

Based on this information, EPA concurs with MassDEP's assertion that emissions from the met buoy project would be transported predominantly to Massachusetts, and thus EPA preliminarily determines that MassDEP has met the criterion of 40 CFR § 55.5(b)(2)(ii).

40 CFR § 55.5(b)(2)(iii): EPA has reviewed MassDEP's claim that during the 2018 ozone season, ozone monitors in southeastern Massachusetts recorded numerous days in excess of 70 parts per billion (ppb). Table 1 compiles data from EPA's Air Data website (https://www.epa.gov/outdoor-air-quality-data), tabulating the number of days measured in excess of 70 ppb at ozone monitors in southeastern Massachusetts between 2016 and 2018. Over the past three years, numerous days measuring above 70 ppb ozone were recorded in southeastern Massachusetts, consistent with MassDEP's claim.

Table 1: Number of Days with Ozone Measurements Above 70 ppb at Monitors in Southeastern Massachusetts

Air Quality System (AQS) Monitor Site Identification Number	Monitor Location	2016	2017	2018*
25-005-1004	Fall River	4	5	10
25-005-1006	Fairhaven	3	4	1
25-007-0001	Aquinnah	2	4	3
25-001-0002	Truro	1	5	4

* Based on preliminary air quality data

According to Deepwater's October 2018 amended NOI, and July 2018 permit application, nitrogen oxides (NO_x) is the highest emitted criteria pollutant from the installation, operation, and decommissioning of the met buoy project. NO_x is a precursor pollutant in the formation of ground level ozone.

Based on this information, EPA concurs with MassDEP's assertion that the emissions associated with the met buoy project will primarily be transported to Massachusetts, and these emissions may affect Massachusetts's efforts to attain or maintain a Federal ambient air quality standard, most notably the 2015 ground-level ozone NAAQS. The 2015 ozone NAAQS has a design value of 70 ppb, measured as the annual fourth-highest daily maximum 8-hour concentration, averaged over a 3-year period.

The met buoy will also generate particulate pollution from the use of engines in the installation, operation and maintenance, and decommissioning portions of the project. Massachusetts is currently designated as unclassifiable/attainment for both the primary and secondary NAAQS for particulate matter less than or equal to 2.5 micrometers in diameter ($PM_{2.5}$) and less than or equal to 10 micrometers in diameter (PM_{10}). Transported particulate matter emissions may impact Massachusetts's efforts to maintain these ambient air quality standards.

Opacity is a common surrogate for particulate matter emissions. Opacity, as well as direct particulate matter emission limits, will apply to the emission devices associated with this project. Massachusetts air pollution control requirements, specifically those addressing opacity, impose more stringent limitations than those of the NOA for the project, and therefore provide for additional protection of any $PM_{2.5}$ and PM_{10} NAAQS maintenance issues associated with the project.

d. Preliminary Determination

Based on the facts and findings described above, EPA is making a preliminary determination that Massachusetts has met the criteria to be designated the COA for the Deepwater met buoy project. In accordance with 40 CFR § Part 55.5(f), and outlined in section V of this TSD, EPA will follow the administrative procedures and public participation requirements associated with making a preliminary determination for COA designation prior to finalizing its COA designation.

V. Administrative Procedures and Public Participation Requirements

In accordance with the administrative procedures and public participation requirements of 40 CFR § 55.5(f), EPA will make this preliminary determination available to the public via the following websites:

- Clean Air Act Public Comment Opportunities in Region 1: https://www.epa.gov/caa-permitting/caa-public-comment-opportunities-region-1
- Actions Open for Public Comment at EPA New England – Clean Air Act Actions: https://www.epa.gov/publicnotices/actions-open-public-comment-epa-new-england#caa

EPA will notify the public through prominent advertisement on the websites identified above of a 30-day opportunity for written public comment on the available information and the preliminary determination to designate the Commonwealth of Massachusetts as the COA.

Copies of the preliminary determination to designate the COA and information regarding the opportunity for public comment shall be sent to the requester (MassDEP), the affected source (Deepwater), each person from whom a written request of such notice has been received, and the following officials and agencies having jurisdiction over the COA and NOA: State and local air pollution control agencies, the town administrators of municipalities on Block Island, Rhode Island and Martha's Vineyard, Massachusetts, the Federal Land Manager of potentially affected Class I areas, and any Indian governing body whose lands may be affected by emissions from the OCS source.

Public comments received in writing through March 8, 2019 will be considered by EPA in making the final decision on MassDEP's request. All comments will be made available for public inspection. EPA will make a final COA designation within 60 days after the close of the public comment period. The Regional Administrator will notify, in writing, the MassDEP and each person who has requested notice of the final action and will set forth the reasons for the determination. Such notification will be made available for public inspection on the websites identified above.