

US EPA ARCHIVE DOCUMENT

# **Outer Continental Shelf Air Permit Approval: Cape Wind Energy Project**

## **Horseshoe Shoal Nantucket Sound**

### **Offshore Renewable Wind Energy Project**

#### **Response to Comments**

##### **Introduction**

On June 11, 2010, EPA New England published notices in the *Cape Cod Times* and *The Boston Globe* for public review and comment of a proposed Outer Continental Shelf (OCS) Air Permit for the Cape Wind Energy Project (Cape Wind) on Nantucket Sound off the coast of Massachusetts. The comment period ran through July 16, 2010. In addition, EPA New England held three public hearings on the following dates:

Tuesday, July 13, 2010  
Nantucket High School  
Nantucket, Massachusetts

Wednesday, July 14, 2010  
Martha's Vineyard Regional High School  
Oak Bluffs, Massachusetts

Thursday, July 15, 2010  
Mattacheese Middle School  
West Yarmouth, Massachusetts

As required by 40 CFR 124 "Procedures for Decisionmaking," EPA has prepared this document known as the "response to comments" (RTC) that describes and addresses the significant issues raised during the comment period and describes the provisions of the draft permit that have been changed and the reasons for the changes.

Since the Fact Sheet is a final document, no changes were made to it. Instead, comments on the Fact Sheet were noted, and responses to them are included in this document.

Extensive comments were submitted by various parties during the public comment period. In some cases, a single person commented multiple times, e.g. filed multiple sets of written comments, or submitted written comments and also spoke at one or more public hearings. A cross reference for each party's specific comment and location is provided at the end of this introduction.

After a review of the comments received, EPA has made a final decision to issue this air permit. The final air permit regulates the air pollutants emitted from vessels engaged in Outer Continental Shelf preconstruction, construction and operation activities of the proposed wind energy facility. It does not regulate operation of the eventual wind turbines themselves, or any other aspect of the Cape Wind project besides vessel air emissions. Cape Wind must also comply with any other authorizations issued by other federal agencies, such as the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE).<sup>1</sup>

The Final Permit is substantially identical to the Draft Permit that was available for public comment. Although EPA's decision-making process has benefitted from the various comments and additional information submitted, the information and arguments presented did not raise any substantial new questions concerning the permit. EPA did, however, improve certain analyses and make certain clarifications in response to comments. These improvements and changes are detailed in this document and reflected in the Final Permit. A summary of the changes made in the Final Permit are listed below. The analyses underlying these changes are explained in the responses to individual comments that follow.

The Final Permit and RTC are available on EPA's web site at <http://epa.gov/ne/communities/nsemissions.html>. EPA is mailing the RTC and the Final Permit to everyone who commented on the draft permit (including at any public hearing) or who requested a copy. Copies of the Final Permit also may be obtained by writing or calling EPA between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays:

Brendan McCahill  
Office of Ecosystem Protection  
U.S. Environmental Protection Agency – Region 1  
5 Post Office Square, Suite 100 (OEP05-02)  
Boston MA 02109-3912  
Telephone: (617) 918-1652  
Mccahill.brendan@epa.gov

In this response to comments document, EPA has organized the responses topically, since many commenters raised the same or similar points. EPA digested the significant comments received from commenters, and in some cases grouped together related comments concerning each set of issues where EPA received comments raising multiple perspectives. (There are a few topics where comments raised only one perspective.) In some cases, EPA has provided a synthesized "general comment" that distills the essence of many individual comments, and then provided a general response to that general

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<sup>1</sup> BOEMRE was formerly known as the Minerals Management Service (MMS). The Department of Interior has since reorganized, and the current name of the relevant agency is BOEMRE. This RTC uses both abbreviations, generally using MMS to refer to the agency before the reorganization and BOEMRE afterwards, but no significance should be attached to the RTC's use of one or the other name.

comment. In such cases, the commenters raising that point have been identified within the comment. Comments submitted on behalf of Indian tribes, companies, and organizations have been identified with the name of the organization, not the individual, and abbreviated as follows:

**MWT:** Mashpee Wampanoag Tribe (submitted by Chuckie Green, Natural Resources Assistant Director and Tribal Historic Preservation Officer)  
**WTGH:** Wampanoag Tribe of Gay Head (Aquinnah) (submitted by Bettina Washington, Tribal Historic Preservation Officer)  
**APNS:** Alliance to Protect Nantucket Sound (submitted by Audra Parker, President and CEO)  
**Cape Wind:** Cape Wind Associates (submitted by Michael Feinblatt, ESS Group)  
**ConocoPhillips:** ConocoPhillips Alaska (submitted by Brad Thomas)

In some cases, EPA has included original comments nearly verbatim for the reader's convenience. In others, EPA included a brief digest of each comment to remind the reader of the topics being discussed. The particular language used in the summary of each issue presented below may derive primarily from one set of comments, but this does not mean that EPA has not read each of the comments noted under that issue. Many of the details presented in the original comments were not repeated in the digested comments. EPA did not limit its analysis of the comments submitted to the digest presented below, and EPA has reviewed each comment in its entirety. This outline and its digest of the comments are simply designed to structure EPA's responses and make them more accessible to the interested public. No significance should be attached to the form in which EPA cited or summarized the original comment in this response document. The complete text of each comment as submitted, and a complete copy of the transcripts from the three public hearings, is in the administrative record and available by request.

### Changes to Permit

The following is the list of revisions that EPA made from the Draft Permit to the Final Permit based on comments received during the comment period. The list includes a brief description of the revision, and the location in the RTC document where EPA provides a more detailed description of the revision.

**Revision 1:** EPA approved the request from Cape Wind to extend the Phase 1 time period from 24 to 36 months. See Response A1.

**Revision 2:** EPA approved the request from Cape Wind to remove the provision in Section III.A of the Draft Permit to limit the maximum displacement of any cylinder of any engine operating on the OCS source (including any vessel propulsion engine) to less than 10 liters. See Response A2.

**Revision 3:** EPA added new definitions in Section II of the Final Permit to clarify the requirements of the permit with respect to OCS stationary engines (which conduct

stationary source activities), non-stationary engines (which are on a vessel that is physically attached to an OCS source but are not conducting stationary source activities), and vessel engines (which are engines on a vessel that is not, and is not attached to, an OCS source). EPA also added a new definition of “transit” to explicitly include emissions from vessels that are idling within the project area. Finally, EPA revised Sections II, III, IV, V, VIII, and IX to use the new terminology. See Responses A2, A8.

**Revision 4:** EPA approved the request from Cape Wind to remove the requirements from Sections III.B & C that vessel propulsion engines be certified by the manufacturer(s) to meet or surpass the emission standards required for 40 C.F.R. Part 89, Tier 2 or Tier 3 engines. EPA approval was based on Cape Wind’s confirmation that the vessel propulsion engines will not be in operation at any time during any OCS activity. Finally, to protect the assumption underlying this change, EPA added a provision prohibiting vessel propulsion engines from operating on an OCS Source. See Response A3.

**Revision 5:** EPA approved the request from Cape Wind to revise the permit’s emissions calculation methodology for vessel emissions in Section VIII.B to reflect the most up to date emissions calculations methodology found in the guidance entitled, “Current Methodologies in Preparing Mobile Source Port-Related Emissions Inventories – Final Report,” dated April 2009. EPA also included a term in the calculation methodology to include emissions from non-stationary engines. EPA also revised the permit’s monitoring requirements to track the hours of operation of each OCS stationary engine, each vessel in transit within the project area, and each non-stationary engine. See Response A4.

**Other revisions:** EPA made several other changes to the final permit based on its own final review. These include:

- Removed the unused term “Support Vessel” from Section II.
- Fixed erroneous cross-reference in Section VIII.B.
- Added requirement to record hours of operation of each engine in Section VIII.A.
- Added records retention requirement in Section VIII.D,
- Added requirement that offsets comply with the requirements of 310 CMR 7.00 Appendices A and B, in Section VII.
- Added factor to convert emissions from grams to tons in Section VIII B.
- Added protocol for determining emission rates for any engines not specified in September 23, 2009 or June 4, 2010 letters, and recordkeeping requirement for such engines, in Sections VIII.A and B.
- Added deadline for change of control/ownership notification in Section XIII.

### List of Commenters

As a convenience to commenters, the following is a list of names of people who submitted written and oral comments during the Cape Wind permit comment period and the location in the RTC document where EPA addresses the comments.

**Commenters who submitted written comments**

<b>Commenter</b>	<b>Response Location</b>
Richard Mahoney	C7, C10, C11, C15, C17, C18, E1
Melissa Renn	C9, C16, C18
Mary Reardon	C9, C19
Joanne P. Q. El-Fayoumy	C7
Don Schaefer	C12, C13, C15, C17, C22
Francine Kariadakis Nisbet	C7, C19
David W. Geyer	C21
Barbara Wilson	C9, C16, C19
Joe McGinity	C6, C9, C11, C17
Nolaa Cloutier	C6, C11, C16, C18, C20
James H. Bodurtha	C8, C11, C15, C17
Diana Morse	C9, C15, C16, C18, C21, C22
Charles Curran	C6, C10, C11, 14, C18, C19, C21, E1
Jay Stevens	C9, C15, C16
Barbara Durkin	C6, C7, C10, C11, C15, C18, E1, C6
Deke Ulian	C6, C8, C9, C11, C15, C17 C18
Joan Hill	C1, C7, C16
Ted Giletti	C9, C16
Cape Wind (submitted by ESS)	A1, A2, A3, A4, A5
ConocoPhillips Alaska	A6, A7, A8
Alliance to Protect Nantucket Sound	B1, B2, C1, C2, C3, C4, C6, C10, D1, D2, E1, E2, E3, E4
James Liedell	C23

**Commenters who made oral comments during the public hearings****Nantucket High School Auditorium**

<b>Commenter</b>	<b>Response Location</b>
Audra Parker, President/CEO, Alliance to Protect Nantucket Sound	B1, B2, C1, C2, C3, C4, C6, C10, D1, D2, E1, E2, E3, E4
Caroline Marshall	C23
Mark Rodgers, Communication Director, Cape Wind	C23
Victoria Merson Pickwick	C8, C9
Whiting Willauer	C8, C9
Cynthia Gaynor	A9, B2, C7, C8, C22, C27
Ara Charder	C27

**Martha's Vineyard Regional High School Auditorium**

<b>Commenter</b>	<b>Response Location</b>
Chris Fried	C23
Caroline Marshall	C23
Audra Parker, President/CEO, Alliance to Protect Nantucket Sound	B1, B2, C1, C2, C3, C4, C6, C10, D1, D2, E1, E2, E3, E4
Megan Ottens-Sargent	C1, C10, C18, E1, G1
Bettina Washington, Tribal Historic Preservation Officer, Wampanoag Tribe of Gay Head (Aquinnah)	C12, C24, F1, F2, H1
Olga Church	G1
Suzanna Nickerson	C7, C11, C18, C19, C20, C25
Charles Carlson	C20, C26, G1
Richard Toole	C23

**Mattacheese Middle School Auditorium**

<b>Commenter</b>	<b>Response Location</b>
Chuckie Green, Natural Resources Assistant Director/Tribal Historic Preservation Office, Mashpee Wampanoag Tribe	C12, C18, G2, H2
Peter Kenney	A10, B2, C5, C9, C11, C15, H3
Caroline Marshall	C23
James Liedell	C23
Audra Parker, President/CEO, Alliance to Protect Nantucket Sound	B1, B2, C1, C2, C3, C4, C6, C10, D1, D2, E1, E2, E3, E4
Cliff Carroll	B2, B3, B4, C7, C15, H2, H4
Ariel Walcutt	C23
Mark Rodgers, Communication Director, Cape Wind	C23
Cynthia Cole	C9, C14, C16, C17
Lincoln Baxter	C6, C11, C16
David Moriarty	C27

## **A. PERMIT TERMS AND CONDITIONS**

### **Comment A1**

Cape Wind asks for an extension for phase 1 of the project from 24 months to 36 months. Cape Wind requests the extension to accommodate additional monitoring and surveying requirements mandated by the MMS. These additional preconstruction requirements are documented in the MMS's final Record of Decision (ROD) for the Project released on April 28, 2010. Cape Wind claims the additional preconstruction survey requirements may result in unanticipated seasonal delays in the preconstruction and construction activities and believes the extension will provide the necessary flexibility to manage these delays. Cape Wind notes the extension will not change the estimates for equipment usage and emissions during Phase 1 above the levels that were included in the draft permit's fact sheet based on a June 4, 2010 letter from the ESS Group. (Cape Wind)

### **Response A1**

EPA accepts the request and has revised the definition of "Phase 1 End Date" in Section II of the Final Permit accordingly. As noted in the Fact Sheet, Cape Wind requested this change before issuance of the Draft Permit, and EPA specifically solicited comment on whether to extend this period from 24 months to 36 months. See Fact Sheet at 18, 24 n.10. No other party commented on this issue. Furthermore, this change will have no impact on total air emissions; indeed, spreading the same air emissions over a longer period of time may even be beneficial to air quality because it results in a lower impact in any one year.

Cape Wind did not request any changes in Section XI.A, and therefore EPA has made no changes to Section XI.A.

### **Comment A2**

Cape Wind requests that EPA remove the provisions under Section III.A of the Draft Permit that limits the maximum displacement of any cylinder of any engine operating on the OCS source (including any vessel propulsion engine) to less than 10 liters. Cape Wind believes the limitation has no regulatory basis and its removal from the OCS Permit will not affect Cape Wind's compliance with all applicable requirements or be less protective of the environment. The emission standards contained in 40 CFR 60, Subpart IIII, Tables 1 and 2, apply to stationary compression ignition internal combustion engines with a displacement less than 10 liters per cylinder. However, the permit requires that the engines used by Cape Wind comply with the stricter EPA emission standards for new and in-use nonroad compression-ignition engines from 40 CFR 89.112. These emission standards are not limited to engines with a displacement less than 10 liters per cylinder. Furthermore, neither the Subpart IIII nor the 40 CFR 89 emission standards would apply to the vessel propulsion engines used by Cape Wind, as the vessel propulsion engines are not subject to either regulation. This provision puts an unnecessary limitation on the engines and vessels available for use on the project. Cape Wind will use engines (excluding vessel propulsion engines) which meet the emission standards in the permit, regardless of their displacement. (Cape Wind)

## Response A2

The comment raises two points: (1) the appropriateness of the cylinder displacement limit for engines operating as part of an OCS Source, and (2) the appropriateness of that limit for vessel propulsion engines.

As the comment suggests, the cylinder displacement limit is not intended to control air emissions. Rather, this limit was designed to protect the assumptions upon which EPA relied in deriving the emissions limits. Upon further review, EPA has determined that the emissions limits can stand on their own without the cylinder displacement limit.

1. *Engines operating as part of a stationary source*: As discussed in the Fact Sheet, EPA has determined that, while engaged in OCS stationary source activities, Cape Wind's construction engines are subject to 40 C.F.R. part 60 subpart III, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. *See* Fact Sheet at 27. These standards also informed EPA's LAER analysis. *See id.* at 34-37. As noted in the Fact Sheet, Cape Wind had informed EPA that all engines would have a displacement of less than 10 liters per cylinder. *See id.* at 18. Under subpart III, such engines would be subject to the emissions limitations found in 40 C.F.R. §§ 89.112, whereas engines with larger displacements would be subject to alternative emissions limits. *See generally* 71 Fed. Reg. 39,154, 39,156-57 (tables 1-3). Based on Cape Wind's statement regarding engine displacement, EPA derived the emission limits in permit Sections III.B and III.C from 40 C.F.R. § 89.112(a). *See id.* at 36.

EPA agrees, however, that, it is not necessary to actually restrict the engine displacement, since the emissions standards in the permit reflect the most stringent emissions standard available for engines of any cylinder volume. In other words, eliminating the displacement limit will not affect the permit's emissions limits. Therefore, the displacement limit has been removed. The emissions limits in the permit will apply regardless of actual engine displacement.<sup>2</sup>

2. *Non-stationary source engines*: Non-stationary source engines are those which do not operate on stationary sources and are not subject to stationary source requirements. *See* also Response A8. For vessel propulsion engines or other non-stationary source engines, the purpose of the cylinder displacement limit in the draft permit was to protect the assumptions underlying the calculation of total emissions, both for purposes of determining OCS Vessel Emissions under Section VIII.B and to support the air quality modeling. However, the provisions of Section VIII.B, as revised, provide this calculation without requiring a limitation on engine displacement. The final permit requires Cape Wind to calculate OCS Vessel Emissions according to each engine's actual profile, rather than under an assumption that no engine will exceed 10 liters per cylinder displacement. *See* Response A4. In other words, if Cape Wind chooses to use vessels with propulsion engines displacing a volume greater than 10 liters per cylinder, and these engines in fact

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<sup>2</sup> Any New Source Performance Standards that may be applicable to the stationary source engines will apply based on the engines' actual displacement, model year, and other characteristics. Such NSPS standards are not, however, requirements of the permit. *Cf.* Fact Sheet at 36 n.20.

have higher NO<sub>x</sub> emissions than would an engine with a smaller displacement, Cape Wind must calculate OCS Vessel Emissions using these higher NO<sub>x</sub> emissions. Since the Total OCS Emissions are subject to a fixed cap in Section IV of the permit, use of higher-emitting vessel propulsion engines simply means Cape Wind will need to reduce emissions elsewhere in the project.

### **Comment A3**

Cape Wind requests that EPA remove the requirements from Sections III.B & C that vessel propulsion engines must be certified by the manufacturer(s) to meet or surpass the emission standards required for 40 C.F.R. Part 89, Tier 2 or Tier 3 engines. Cape Wind confirms that the vessel propulsion engines will not be in operation at any time during an OCS activity, and argues that the propulsion engines are not OCS sources and are not subject to any OCS or stationary source emission standards. (Cape Wind)

### **Response A3**

EPA agrees that if the vessel propulsion engines will not be in operation at any time during an OCS activity, then they are not subject to stationary source requirements. Consequently, EPA has made several changes in response to the comment.

First, pursuant to Cape Wind's confirmation that the vessel propulsion engines will not be in operation at any time during any OCS activity, EPA has removed vessel propulsion engines from the emissions limits in Sections III.B & C. See Response A2.

Second, to protect the assumption underlying this change, EPA has added a provision prohibiting the vessel propulsion engines from operating on an OCS Source.

To facilitate these changes, EPA has added several new definitions in Section II of the Final Permit. *Non-stationary Engine* includes engines that may operate on support vessels that attach to an OCS Source, but do not conduct OCS Activities. *OCS Stationary Engine* means any engine on an OCS Source that operates during an OCS Source Period. *Vessel Engine* means any other engine, e.g., vessel propulsion engines while vessels are in transit. *Non-stationary Engine Emissions* are simply the total of the emissions from Non-stationary Engines.

EPA replaced the term "OCS Source" with the new definition "OCS Stationary Engine" where appropriate throughout the permit.

EPA added a definition for *Non-stationary Engine Emissions* to ensure that the emissions from engines that do not operate as an OCS Source and are not subject to the Section III emission limits are included in the "Total OCS Emissions" calculations. EPA also included requirements that Cape Wind monitor the emissions from Non-stationary Engines in Section VIII.B of the permit. EPA also clarified that *OCS Vessel Transit Emissions* includes emissions from vessels idling within the project area. Finally, EPA included requirements that Cape Wind monitor the emissions from *OCS Vessel Transit Emissions* in Section VIII.B of the permit.

See also Responses A4 (calculation of OCS Vessel Emissions), A8.

**Comment A4**

Cape Wind requests that EPA revise the permit's emissions calculation methodology in Section VIII.B to reflect the most up to date EPA guidance for emissions calculations. At the direction of MMS and EPA, Cape Wind revised its vessel emissions estimates during both Phase 1 and Phase 2 in July of 2009 to reflect the most up to date EPA guidance for such estimations. In a letter dated September 23, 2009, the revised vessel emissions estimates and methodology used for the project were submitted to EPA. Specifically, the revised emissions estimates were made in accordance with the EPA's "Current Methodologies in Preparing Mobile Source Port-Related Emissions Inventories – Final Report," dated April 2009. At the direction of EPA, the revised emissions estimates for the project were not made on the assumption that the vessel propulsion engines were operating at maximum power, rather they were made using load factors from the EPA Port Study for different vessel categories and engine sizes. (Cape Wind)

**Response A4**

EPA agrees with the request. EPA has based the final permit's emissions calculation methodology for vessel emissions on the assumptions included in the April 2009 report on vessel emissions. This more accurately represents Cape Wind's vessel emissions.

The emission methodology also includes emissions from non-stationary engines. The final permit bases the emissions for non-stationary engines on the emission estimates provided in the June 4, 2010 letter from the ESS Group, Inc. to David Conroy entitled "Outer Continental Shelf Air Regulation Permit Application: Cape Wind Energy Project," Appendices, Tables entitled "Cape Wind Energy Project: Preconstruction Emissions Inside 25 miles.

**Comment A5**

Cape Wind requests that EPA remove the following provision from Section XI.C.3:

"If, pursuant to 310 C.M.R. 8.05, the Massachusetts Department of Environmental Protection declares an Air Pollution Episode Alert, Air Pollution Episode Warning, or Air Pollution Episode Emergency for particulate matter and/or sulfur dioxide, then the owner/operator shall stop all construction activities that generate air pollutants until the Department terminates the Alert, Warning, or Emergency."

Cape Wind believes that the project's small modeled impact far out in the ocean does not warrant a stop work order in the event of an emergency. Furthermore, 310 CMR 8.05 does not require stationary source activities to be shut down during Air Pollution Episodes, only construction activities. The project's OCS emissions sources, through the OCS air regulations, are being regulated by the EPA as stationary sources. Cape Wind is implementing Best Available Control Technology (BACT) for its OCS sources, which

ensures that the particulate matter and sulfur dioxide emissions from the project are being controlled to the greatest extent practicable. Land based construction activities and their associated emission sources are not subject to the BACT requirement. Due to its location offshore, localized impacts, low particulate matter and sulfur dioxide emissions rates, and BACT implementation, the Cape Wind OCS source activities should not be regulated in the same manner as land based construction projects, and should therefore not be subject to the shutdown requirements of 310 CMR 8.05. (Cape Wind)

#### **Response A5**

It is not clear precisely how Cape Wind's construction air emissions would affect ambient air quality (whether onshore or offshore) during a given air pollution alert, warning, or emergency. By definition, these are rare events in which ambient air contaminant concentrations are reaching, or have reached, unusually high and potentially dangerous levels. See 310 CMR 8.03(1)(b)-(d). Air modeling estimates a source's impact under historical average conditions, which provides a reasonable prediction for most purposes, but does not provide a basis to determine in advance how a given facility or activity will affect ambient air under extreme conditions. Even if it is true that the project would make only a small contribution to any emergency, 310 CMR 8.05 does not make exceptions for, or authorize EPA to discretionarily waive application to, small-contribution sources. For example, construction of a single-family home would likely result in fewer air emissions than Cape Wind's construction air emissions, but EPA does not understand 310 CMR 8.05 as exempting such construction.

EPA also disagrees with Cape Wind's interpretation that, because Cape Wind's regulated activity under this permit is a stationary source activity, it is therefore outside the definition of "construction" in 310 CMR 8.05. To be sure, onshore construction activities are generally not regulated as stationary sources, and in most cases an onshore activity may be either construction or a stationary source but usually not both. However, this duality does not exist for OCS sources, since Section 328 of the Clean Air Act expressly includes "construction" as part of an OCS source. Therefore, for an OCS source, EPA sees no contradiction in applying, to the same OCS activity, both stationary source requirements and a requirement to "[s]top construction activities that generate pollutants" during air pollution episodes or incidents. Moreover, while there is no precise onshore analogy to the activities regulated under this air permit, CAA § 328(a)(1)'s mandate that OCS requirements be "the same as would be applicable if the source were located in the corresponding onshore area" counsels against an interpretation under which onshore construction must cease, but offshore construction may continue. While it is likely true that most onshore construction sources do not employ BACT-level controls, some do (indeed, newer construction equipment may well contain the same Tier 2 or 3 engines that this air permit requires for Cape Wind) and 310 CMR 8.05 provides no exemption for them, nor, in fact, does it refer at all to BACT or other control levels as relevant in exempting particular sources or categories of sources. For these reasons, EPA has retained the provision in the final permit.

**Comment A6**

ConocoPhillips requests that EPA clarify the definition of “OCS source” used in the draft Cape Wind permit to provide more weight to the term “erected thereon” found in the definition of OCS source in 40 C.F.R. § 55.2. The draft permit stated that a jack-up unit is an OCS source once the three legs have attached to the seafloor. This differs from an approach taken by EPA Region 10 for the Shell Chukchi Sea OCS permit. Jack-up units may be attach to the seafloor without being used for the purpose of producing resources from the seafloor, e.g., when they are staged for deployment or temporarily moved for reasons that may be unforeseeable. Jacking down three legs may not complete the jacking up process.

EPA should consider adding other elements to the OCS definition, such as that it is completely “erected thereon” as determined by the vessel operator, or that all of its legs are attached to the seabed and the unit is fully erected and ready to commence construction. At a minimum, EPA should clarify that the definitions employed in the Cape Wind permit are specific to the Cape Wind project. (ConocoPhillips)

**Response A6**

EPA disagrees and has not changed the definition. In the draft permit, EPA proposed that a jack-up unit for this project would become an OCS source upon the attachment of three legs, because Cape Wind informed EPA that the jack-up units would be capable of OCS activity after three legs had attached. *See* Permit Application Revision dated April 23, 2010, at 5-6 (question and answer #11-12). As the Fact Sheet explained:

Once three of the legs have attached to the seafloor, the jack-up unit has become stationary and is no longer operating as a vessel or barge. From that point forward (which, for brevity, we refer to as the unit’s “attachment”), the unit’s operations and emissions involve OCS source activities, namely, jack-up system stabilization and subsequent construction. Therefore, EPA proposes (and solicits comment on alternatives to its proposal) that a jack-up unit (including the construction equipment on it) becomes an OCS source as soon as three legs have attached to the seafloor. Once three legs have attached to the seafloor, the jack-up unit is sufficiently attached (and erected) to constitute an OCS source, and is subject to the terms and conditions of this permit. At the conclusion of jack-up unit operations, the construction equipment ceases operating and the jack-up legs are raised from the seafloor. The jack-up unit and equipment thereon remain an OCS source, and subject to the term and conditions of the permit, until the point in time (which, for brevity, we refer to as the unit’s “detachment”) when enough jack-up legs have been removed from the seafloor that fewer than three jack-up legs are attached to the seafloor. After the jack-up unit detaches, it returns to “vessel” status.

Fact Sheet at 21. The applicant reviewed the draft permit language and has not requested any changes to this definition.

As a practical matter, in the context of this particular permit, the precise point at which the jack-up units become OCS sources has little if any consequence. First, although as a legal matter the regulated engines are only subject to the BACT-based emission limits during OCS Source Periods, as a practical matter these engines will meet these limits even before three legs have attached. The BACT-based emission rate limits on the regulated engines are part of the engine design itself and are certified by the engine manufacturer; these are not traditional add-on controls that can be easily turned on and off, and in fact applicable regulations specifically prohibit circumvention. *See, e.g.*, 40 C.F.R. § 60.12. Thus, adjusting the definition of the OCS attachment to a point earlier or later would have no effect on emission rates for the regulated engines. Second, the only pollutant for which the permit imposes a total mass limit (NO<sub>x</sub>) is limited by *total* emissions within the Project Area (i.e., *all* emissions of NO<sub>x</sub>, whether before, during, or after an OCS Source Period), so adjusting the definition of the OCS attachment to a point earlier or later would have no effect on the total NO<sub>x</sub> emission calculation for purposes of complying with the Phase 1 or Phase 2 caps. Third, all other criteria pollutants besides NO<sub>x</sub> have been modeled based on *all* emissions within the Project Area, and found to be compliant with their respective NAAQS, meaning again that adjusting the definition of the OCS attachment to a point earlier or later would have no effect on NAAQS compliance. For these reasons, while EPA has developed clear, objective, practically enforceable OCS source starting and ending points that are consistent with the definition of OCS source in 40 C.F.R. § 55.2, the practical consequences of choosing a different alternative would be, at most, minimal.

The only commenter offering alternatives, or requesting changes, to the draft permit's OCS source definition was ConocoPhillips, and ConocoPhillips' requested changes are inconsistent with recent (post-comment-period) Environmental Appeals Board precedent. *See In re Shell Gulf of Mexico, Inc. & Shell Offshore, Inc.*, OCS Appeal Nos. 10-01 to 10-04 (EAB, Dec. 30, 2010) ("*Shell II*"), slip op. at 39-63. In *Shell II*, the Board found it inappropriate to delegate the OCS source decision to the vessel operator, *see id.* at 55-63, and questioned whether the phrases "erected thereon" and "used for the purpose of exploration, development or production" constitute independent requirements apart from attachment to the seabed, *see id.* at 49.<sup>3</sup> Since the requested changes are inconsistent with *Shell II*, EPA declines to adopt them, and no further response is necessary.

That said, EPA does believe that the approach taken in this permit is based on a coherent interpretation of 40 C.F.R. § 55.2 and its relationship to OCSLA § 4(a)(1). In the case of

<sup>3</sup> The Board did note that OCSLA § 4(a)(1) (to which 40 C.F.R. § 55.2's definition of OCS source refers) uses the term "which may be" in connecting the "attached to the seabed" requirement to the latter two phrases. *See Shell II*, slip op. at 51 n.61; 43 U.S.C. § 1333(a)(1) (applying to "all installations and other devices permanently or temporarily attached to the seabed, *which may be* erected thereon for the purpose of exploring for, developing, or producing resources therefrom" (emphasis added); *cf. Alliance to Protect Nantucket Sound, Inc. v. United States Dep't of the Army*, 288 F. Supp. 2d 64, 75 (D. Mass. 2003) (holding that OCSLA's "which may be" clause is not restrictive, and that "authority extends to all 'artificial islands, installations, and other devices located on the seabed, to the seaward limit of the [OCS],' including, but not limited to, those that 'may be' used to explore for, develop, or produce resources"), *aff'd on other grounds*, 398 F.3d 105 (1st Cir. 2005).

Cape Wind, after consulting with the project proponent, EPA agreed with an approach where the act of establishing a stable attachment to the ocean floor with three legs of the jack-up unit serves not only to attach the unit to the seabed, but also to demarcate the point at which the unit is erected and being used for the purpose of developing resources on the OCS. Because the project proponent agrees that these conditions are all met at the point that three legs are attached, and no commenter suggested that an OCS source would exist at an earlier point in the process, the Agency is not required in this case to decide whether each of these concepts must have independent meaning, or whether the concept(s) of being “erected” for the “purpose of development” are essentially subsumed in the concept of attaching to the seafloor. EPA also reiterates that the OCS source initiation determination is source-specific, and an OCS source initiation determination for a different project, even one using similar or identical jack-up units, could differ. This determination is not intended to affect the OCS source initiation determination for any other project. *See* Fact Sheet at 21 n.8.

**Comment A7**

ConocoPhillips identifies a possible error on page 13 of the Fact Sheet, which states that “As explained in more detail in Section VI below, the OCS source will include any vessel, barge, or equipment on a vessel or barge, when the vessel or barge is *anchored within the project’s area* or tethered to a piece of equipment that is attached to the seafloor, and is performing any activity that supports the construction or operation of the project.” The permit itself does not include within the definition of OCS Source vessels attached only by anchor, and vessels that are anchored within the project area should not, without more, be considered part of the OCS Source. (ConocoPhillips)

**Response A7**

EPA agrees that the quoted sentence on page 13 of the Fact Sheet is incorrect insofar as it suggests that anchoring is sufficient to constitute an OCS attachment for the jack-up units involved in the Cape Wind project. Section VI of the Fact Sheet contains the correct description. *See* Fact Sheet at 21. Moreover, as the comment notes, the permit definitions correctly specify that attachment of jack-up legs, not anchoring, is necessary for a vessel to become an OCS Source. No change to the Final Permit is necessary.

**Comment A8**

ConocoPhillips identifies another possible error from the same sentence on page 13 of the Fact Sheet. The phrase “performing any activity that supports the construction or operation of the project” is broader than contemplated by 40 C.F.R. § 55.2, which states that “OCS source” includes vessels only when they are:

- (1) Permanently or temporarily attached to the seabed and erected thereon and used for the purpose of exploring, developing or producing resources therefrom, within the meaning of section 4(a)(1) of OCSLA (43 U.S.C. §1331 et seq.); or
- (2) Physically attached to an OCS facility, in which case only the stationary sources aspects of the vessels will be regulated.

Support vessels, such as a supply ship, could temporarily tie up to an OCS source in order to offload crew, food, etc., and that such vessels would not be performing stationary source activities. (ConocoPhillips)

**Response A8**

EPA agrees that support vessels that tie up to an OCS source but do not perform stationary source activities are not part of the OCS source. Their engines are not subject to stationary source permitting requirements.

However, 40 C.F.R. § 55.2's definition of "potential emissions" states that "emissions from vessels servicing or associated with an OCS source shall be considered direct emissions from such a source while at the source." Therefore, emissions from such vessels must be counted towards the Total OCS Emissions. Consequently, EPA has created a new category, *Non-stationary Engine Emissions*, which is designed to reflect emissions from vessels that are temporarily attached to an OCS source but are not performing stationary source activities. See Response A4.

**Comment A9**

EPA should verify that there are sufficient offsets in Massachusetts to offset the emissions increase from the project. (Cynthia Gaynor)

**Response A9**

According to the Massachusetts Department of Environmental Protection's most recent inventory update, submitted to EPA on October 23, 2009, there are many more emission reduction credits available than Cape Wind will need.

Regardless of the present availability of offsets, under Section VII.C of the permit, Cape Wind must demonstrate that it has obtained sufficient offsets no later than 30 days before the Phase 1 Start Date, i.e., at least a month before any OCS construction activities begin. Cf. 310 C.M.R. 7.00 Appendix A(6)(b) (requiring offsets to be obtained "prior to commencing operation"); CAA § 173(a)(1)(A) (requiring offsets to be obtained "by the time the source is to commence operation"). Under Section VII.D, Cape Wind is explicitly prohibited from conduct any OCS Activities until it obtains the required offsets. In other words, if for any reason Cape Wind cannot obtain the required offsets, it cannot begin construction.

**Comment A10**

A commenter states that he cannot find a description or inventory of the types of equipment that would be necessary to accomplish the project's construction, and inquires how EPA knows if it has been presented with an accurate description of the project, the work that would be necessary to accomplish it, and therefore, the air emissions. (Peter Kenney)

**Response A10**

The equipment and its air emissions are described in Cape Wind's December 2008 permit application (see especially Appendix A), as supplemented and revised in submissions dated March 12, 2009, June 25, 2009, September 23, 2009, March 2, 2010, April 23, 2010, and June 4, 2010. All of these are available from <http://epa.gov/ne/communities/nsemissions.html>. See also Fact Sheet Section VI.B.1.

The Final Permit imposes both technology-based emissions limits (expressed in g/kW-hr) in Section III and, for NO<sub>x</sub>, a total cap in Section IV. The permit requires the permittee to use only construction engines that comply with the emissions limits, and to ensure that total NO<sub>x</sub> emissions do not exceed the specified Phase 1 and Phase 2 caps. Therefore, the air emissions will not exceed the emissions authorized in the Final Permit.

**B. AIR QUALITY IMPACT ANALYSIS****Comment B1**

EPA has not modeled CWA's compliance with the new NAAQS for NO<sub>x</sub>. In addition, EPA issued a new short term SO<sub>2</sub> NAAQS. EPA should provide an analysis of these two new NAAQS as part of the final permit. (APNS)

**Response B1**

The Massachusetts plan approval regulations require that the permitting agency (normally the Massachusetts Department of Environmental Protection, or MassDEP, but here EPA) must ensure that "[t]he emissions from a facility do not result in air quality exceeding either the Massachusetts or National Ambient Air Quality Standards." 310 C.M.R. § 7.02(3)(j)(1). To assist the agency in this determination, "[a]dditional information shall be furnished upon request by the [permitting agency] including, but not limited to, air dispersion modeling." *Id.* § 7.02(5)(c)(6) (emphasis added).

EPA asked Cape Wind to conduct further modeling to demonstrate compliance with the new 1-hour NO<sub>x</sub> and SO<sub>2</sub> standards. On November 4, 2010, Cape Wind submitted additional modeling results in response to EPA's request (which Cape Wind supplemented via e-mail in November and December 2010, in response to further EPA requests). Cape Wind's modeling demonstration and supplemental responses, are included in the administrative record and incorporated by reference into this comment. EPA has reviewed Cape Wind's analysis and agrees that Cape Wind's construction emissions will not cause or contribute to an exceedance of the revised 1-hour NO<sub>x</sub> or SO<sub>2</sub> standards. See Memorandum from Brian Hennessey, EPA, to Ida McDonnell, EPA, dated December 21, 2010.<sup>4</sup>

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<sup>4</sup> As explained in Mr. Hennessey's memorandum, cable installation could result in individual hourly periods in which NO<sub>x</sub> impacts combined with background NO<sub>2</sub> could exceed the numeric level of the standard as far as 1900 meters from the cable laying activity. From this and the activity's 300 ft/hr movement, the standard could be exceeded at any location for up to 3.4 days. However, the NO<sub>2</sub> 1-hour standard's design value is specified in terms of "the annual 98th percentile of the daily maximum 1-hour average concentration." 40 C.F.R. § 50.11(f). Since 2% of 365 is approximately seven days, the NAAQS

**Comment B2**

The air emissions analysis fails to capture certain categories of air emissions. Some commenters state that the Federal Aviation Administration (FAA) has proposed to restrict the airspace for 25 square miles surrounding the project, and airplanes forced to circumnavigate this restricted airspace will have increased air emissions. Other commenters state that vessels will be forced to alter and lengthen their courses to avoid the project, and this too will increase air emissions. Some commenters offer their estimates of numbers of flights or vessel trips that must be re-routed. One commenter objected that EPA restricted its air emissions analysis to a 25 mile radius. (APNS, Cynthia Gaynor, Cliff Carroll, Peter Kenney)

**Response B2**

1. The Clean Air Act and EPA's implementing regulations direct EPA to include, as part of an OCS source's "potential emissions," vessel emissions that (1) are emissions from vessels servicing or associated with an OCS source, and (2) are at the source, or en route to or from the source within 25 miles of the source. *See* CAA § 328(a)(4)(C); 40 C.F.R. § 55.2. Emissions from vessels (or aircraft) that are not part of the OCS source itself, not servicing or associated with the source, and not at, en route to, or en route from the OCS source, are not included within the OCS project's potential emissions and therefore not required to be part of the permit's air quality modeling analysis. Similarly, emissions from vessels that are associated with the OCS source and en route to or from the source, but beyond 25 miles from the source, are not included in the definition of potential emissions. If Congress had wished to include within an OCS source's potential emissions the emissions from vessels outside a 25-mile radius, or from vessels (or aircraft) that are unrelated to the OCS source but are altering their courses to avoid it, Congress could have written section 328(a)(4)(C) to include those emissions. Since Congress did not, EPA declines to second-guess Congress's judgment. (It is also worth noting that onshore permits generally do not count mobile source emissions at all.)
2. The commenters who provided estimates of air or vessel traffic diversions at the public hearings have not provided any documentation to support their estimates.
3. According to the FAA, the eventual wind farm (which is not the subject of EPA's permit) will "have no substantial adverse effect on the safe and efficient utilization of the navigable airspace by aircraft or on the operation of air navigation facilities" and therefore "would not be a hazard to air navigation." *See* Response C6.
4. According to the U.S. Coast Guard, the effect of the eventual wind farm on marine navigation would be minor to moderate. While it is possible that some vessels will alter their courses to avoid the wind farm, the Coast Guard has explained that the mitigation measures cannot be determined at this point. *See* Response C11. Consequently, the extent of vessel course alterations (if any), and whether those course alterations would

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is not exceeded unless the 1-hour NO<sub>2</sub> level exceeds the primary standard level for eight days or more at the same location. This is not projected to occur.

increase air emissions (and if so, by how much), cannot be quantified at this point. Since (as noted in paragraph 1) an analysis of air emissions from unrelated third-party vessel traffic is not part of the statutorily-defined scope of the potential emissions analysis, EPA declines to attempt to quantify changes in air emissions from unknown (and, according to the Coast Guard, unknowable) changes to vessel courses.

**Comment B3**

The air quality analysis does not include air emissions from dredging 50 miles of canals. (Cliff Carroll)

**Response B3**

Cape Wind has not proposed to dredge canals on the Outer Continental Shelf, and has not sought permission to emit air pollutants for any dredging. The Final Permit contains maximum NO<sub>x</sub> emission limits, in tons. See Final Permit Sections IV.B & IV.C. If for any reason Cape Wind modifies its project plans to require additional OCS activities with air emissions (e.g., dredging), emissions from those activities would be counted towards the totals provided in the air permit.

**Comment B4**

One commenter objects that EPA's air quality analysis does not include emissions from *other* power plants that must generate electricity when Cape Wind is *not* generating. (Cliff Carroll)

**Response B4**

See Response B2. Other power plants in Massachusetts are subject to Massachusetts and federal air pollution control regulations, and conditions in their own permits.

**C. SITING OF THE CAPE WIND PROJECT IN NANTUCKET SOUND****Introduction to Section C**

EPA received numerous comments raising issues with the location of a wind turbine project in Nantucket Sound. The issues included possible oil spills from the oil stored in the project's transformer platform, navigational threats to vessel and aircraft travelling near the project, and the accuracy of estimates of economic and environmental benefits.

The comments in this category do not address the draft air permit's provisions, e.g., the permitted emission rates, operational limits, air quality modeling, and Best Available Control Technology and Lowest Achievable Emission Rate emission control analyses. Indeed, many of the comments in this category address impacts of concern to the commenter that are outside EPA's Clean Air Act regulatory authority, without explicitly connecting these impacts to EPA's regulatory authorities. To the extent that commenters ask EPA to deny the air permit for OCS construction equipment on vessels simply because (for example) the eventual wind turbine project may interfere with marine navigation, EPA disagrees that these are bases to deny a Clean Air Act permit.

However, comments in this category could also be construed as pertaining to the Fact Sheet's alternative siting analysis. *See* Fact Sheet at 37-38; 310 C.M.R. § 7.00, Appendix A(8)(b) (requiring "an analysis of alternative sites, sizes, production processes, and environmental control techniques" to demonstrate that "the benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification."). Therefore, EPA has assumed, for purposes of this RTC, that all comments addressing issues outside the scope of the air permit itself are directed to the alternative site analysis, whether or not the commenter so stated.

Comments in this category can be divided into two subcategories. First, some comments directly address an issue pertaining to the overall Cape Wind project, such as its projected electricity generation, or its impacts on aerial navigation, either by supporting or challenging the predicate factual findings of MMS (or other agency) or arguing that these issues have not yet been considered. EPA has construed these comments as challenging the characterization of the Cape Wind project's "benefits" or "environmental and social costs," as appropriate. In general, EPA's responses to comments in this category adopt the findings of the federal agency with primary responsibility for the issue. Second, some comments address (or can be construed as addressing) the ultimate conclusion to be drawn, i.e., that the benefits of the project significantly outweigh the environmental and social costs imposed as a result of its location and/or construction. As explained in more detail below, while recognizing that this is a question upon which reasonable minds may disagree, EPA has determined that the applicant's demonstration regarding this question meets the requirements of 310 CMR 7.00 Appendix A(8)(b).

This Introduction to Section C is incorporated by reference into the response to each individual comment in this section.

#### **Comment C1: Need for Independent Alternative Siting Analysis**

EPA should not/cannot rely on MMS's NEPA analyses for EPA's CAA siting analysis. (APNS, Joan Hill, Megan Ottens-Sargent; implied for all other comments in this section)

#### **Response C1**

##### Legal framework

As stated in Section VI.C of the Fact Sheet, the construction phase of the project, referred to as Phase 1, is subject to the Massachusetts New Source Review (NSR) program regulations at 310 Code of Massachusetts Regulations (CMR) 7.00 Appendix A. This regulation includes a provision for an alternative siting analysis under 310 CMR 7.00 Appendix A(8)(b). The provision states:

"By means of an analysis of alternative sites, sizes, production processes, and environmental control techniques for such proposed new or modified stationary source, the owner or operator of the proposed stationary source or modification shall demonstrate to the satisfaction of the Department that the benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of its location, construction, or modification."

This provision is identical to the requirements for an alternative siting analysis found in section 173(a)(5) of the Clean Air Act (CAA), with one principal change: the Massachusetts regulation requires that the applicant must make the initial demonstration, subject to the approval (“satisfaction”) of the Department (i.e., the Massachusetts Department of Environmental Protection). (Since EPA is applying the requirements of the applicable state regulations, the applicant made its demonstration to EPA.) In other words, if the applicant’s demonstration is satisfactory to EPA, then the alternative siting analysis requirement has been fulfilled, and EPA is not obligated to conduct its own independent analysis.

It is worth noting at the outset that the Massachusetts regulation requires an alternative siting analysis of the source itself. Specifically, it requires the applicant for a “proposed stationary source or modification” to conduct an analysis of alternative sites, sizes, production processes, and environmental control techniques for the “proposed new or modified stationary source,” in which the applicant must demonstrate that the benefits of the “proposed source” significantly outweigh its environmental and social costs. 310 CMR 7.00 Appendix A(8)(b). As applied on the OCS, references to “source” in the state regulations mean “OCS source.” *See* 40 C.F.R. § 55.14(b)(1). Here, the OCS source subject to Nonattainment NSR review has been defined as all stationary source vessel activities during Cape Wind’s initial (construction) phase. *See* Fact Sheet at 24. Thus, the legal requirements of Appendix A(8)(b) could be satisfied with an alternative site analysis that focused entirely on the OCS source, i.e., the construction vessel activities, rather than the eventual planned wind farm. However, since the applicant submitted an alternative site analysis that addressed the entire Cape Wind project (i.e., including the eventual planned wind farm), EPA has reviewed that analysis, as described below. The Agency believes this is a reasonable approach because it would be difficult to analyze the implications of alternative sites or location for the construction vessels that make up the proposed source without looking at the ultimate location of the project.

To comply with the provision, the applicant relied upon information on the costs and benefits associated with the construction and location of the project that it provided to the lead federal agency for the project, the Minerals Management Service (MMS).<sup>5</sup> As stated in Section IV.C.1 of the Fact Sheet, MMS is the lead federal agency for review of the Cape Wind project under the National Environmental Policy Act (NEPA) and other statutes. As part of that review, MMS conducted an extensive process, which is summarized below.

On February 11, 2010, the ESS Group, Cape Wind’s technical consultant for this project, submitted a letter to EPA Region 1 to address the Massachusetts NSR program alternative siting analysis provision. The letter stated that Cape Wind intended to use the discussions and conclusions provided in MMS’s January 2009 Final Environmental

<sup>5</sup> As noted above, this RTC generally refers to MMS when discussing the agency before the reorganization and BOEMRE afterwards, but no significance should be attached to the RTC’s use of one or the other (or, in some cases, each) name. *See supra* note .

Impact Statement to comply with the Massachusetts NSR program alternative siting analysis requirements.

### Summary of MMS Process

The project had previously undergone a partial NEPA review with the U.S. Army Corps of Engineers (ACOE) as the lead agency. During the ACOE review process, the ACOE issued a Draft Environmental Impact Statement (DEIS), and the ACOE received approximately 5000 comment letters and email comments on the ACOE DEIS. Although NEPA review of the project was later transferred to the MMS, MMS incorporated all the previous comments originally made on the ACOE DEIS as scoping comments for the new MMS DEIS. MMS also took into account in the scoping process over 500 comments that were made at ACOE public hearings held in Yarmouth, Martha's Vineyard, Cambridge, and Nantucket, Massachusetts.

MMS notified the public of its intent to prepare an EIS, and requested comments on the proposed Project, via a public notice in the Federal Register on May 30, 2006 (71 Fed. Reg. 30,693). MMS extended the time limit for the comment period from July 14, 2006, to July 28, 2006 at the request of commenters to allow extra time for development and submittal of scoping comments.<sup>6</sup> MMS also developed a list of cooperating agencies and their assigned responsibilities.<sup>7</sup> Many of these agencies have substantial expertise and or regulatory jurisdiction regarding particular subjects. For example, the United States Coast Guard was designated the cooperating agency for issues of marine navigation and safety; the U.S. Air Force and Federal Aviation Administration were designated as cooperating agencies for radar interference and objects affecting navigational airspace respectively; and EPA was designated as cooperating agency for Clean Air Act review.

On January 18, 2008, MMS issued a notice of availability of the DEIS (73 Fed. Reg. 3,482) and opened a 60-day comment period on the DEIS.<sup>8</sup> The DEIS addressed a wide range of issues, including many or most of those raised by commenters here. Notably, it evaluated, besides the proposed action, nine geographically diverse alternative locations, three non-geographic project size alternatives, and a "no action" alternative.

In March 2008, MMS conducted four public hearings on the DEIS in Nantucket, Martha's Vineyard, West Yarmouth, and Boston. In response to requests for additional time, MMS later extended the comment period by 30 days (73 Fed. Reg. 12,759).

MMS received over 42,000 comments on the DEIS, from federal agencies (including EPA), Indian tribes, state agencies, elected officials, local agencies, nongovernmental organizations, and members of the general public. These comments covered all aspects of the Cape Wind project, including the alternatives analysis prepared under NEPA, and most or all of the various impacts attributable to the proposed project.<sup>9</sup> After

<sup>6</sup> <http://www.boemre.gov/offshore/PDFs/SummaryofScopingComments.pdf>

<sup>7</sup> <http://www.boemre.gov/offshore/RenewableEnergy/PDF/CapeWindCooperatingAgencyContacts.pdf>

<sup>8</sup> <http://www.boemre.gov/offshore/RenewableEnergy/CapeWindDEIS.htm>

<sup>9</sup> See generally <http://go.usa.gov/aLZ>

consideration of these comments, MMS issued a Final EIS in January 2009. MMS accepted comments on the FEIS for 60 days, and also (during 2009 and early 2010) conducted additional analyses under both NEPA and the National Historic Preservation Act (NHPA).<sup>10</sup> On April 28, 2010, MMS issued a Record of Decision (ROD) for the Cape Wind Project, documenting MMS's decision to select the Preferred Alternative at Horseshoe Shoal in Nantucket Sound described in the final EIS.<sup>11</sup> On October 6, 2010, BOEMRE entered into a lease with Cape Wind.<sup>12</sup>

#### Application to CAA Alternative Siting Analysis

As explained in the Fact Sheet, while MMS's review under NEPA was designed principally to meet the requirements of NEPA and its implementing regulations, *see, e.g.*, 40 C.F.R. §§ 1502.14, 1505.2, rather than whether "the benefits of the proposed source significantly outweigh the environmental and social costs imposed as a result of the location and construction of the proposed source," MMS in fact made extensive findings (and received extensive comments from a broad array of interested parties) regarding the issues required by the CAA alternative siting analysis. Based on these findings, MMS, on behalf of the United States, ultimately concluded that the project should be approved. *See* MMS ROD, at 5 ("After careful review of the project need, the various alternatives considered, the concerns expressed through years of public comment, as well as the many agency consultations that were conducted and the potential impact to Nantucket Sound and environs therein, the Department finds that the benefits to the American public justify the lease offer for the Project on Horseshoe Shoal in the Nantucket Sound.") MMS provided a detailed explanation of the rationale for its decision, including a discussion of other alternatives considered but rejected, and environmental effects of its selected alternative. *See id.* at 5-25.

EPA has concluded that information contained within the FEIS and the ROD adequately demonstrated that the benefits of the project outweigh the costs as required by 310 CMR 7.00 Appendix A(8)(b).<sup>13</sup> To the extent necessary to support this conclusion under 310

<sup>10</sup> *See generally* <http://www.boemre.gov/offshore/RenewableEnergy/CapeWind.htm>

<sup>11</sup> <http://www.boemre.gov/offshore/RenewableEnergy/PDFs/CapeWindROD.pdf>

<sup>12</sup> [http://www.boemre.gov/offshore/RenewableEnergy/PDFs/CapeWind\\_signed\\_lease.pdf](http://www.boemre.gov/offshore/RenewableEnergy/PDFs/CapeWind_signed_lease.pdf)

<sup>13</sup> The findings of three Massachusetts state agencies also support these findings. *See Certificate of the Secretary of Environmental Affairs on the Final Environmental Impact Report, Cape Wind Project*, EEOA No. 12643 (Mar. 29, 2007), available at <http://go.usa.gov/1TM> ("MEPA Certificate"); *In re Petition of Cape Wind Assoc.*, EFSB No. 02-2 (EFSB, May 11, 2005) ("EFSB 2005 Decision"), available from <http://go.usa.gov/1T8>, *aff'd, Alliance to Protect Nantucket Sound v. EFSB*, 858 N.E.2d 294 (Mass. 2006); *In re Petition of Cape Wind Assoc.*, EFSB 02-2A (EFSB, May 1, 2008) ("EFSB 2008 Decision"), available at <http://go.usa.gov/1Te>; *In re Petition of Cape Wind Assoc.*, EFSB 07-08 (EFSB, May 27, 2009) ("EFSB 2009 Decision"), available at <http://go.usa.gov/1Ti>, *aff'd, Alliance to Protect Nantucket Sound v. EFSB*, 932 N.E.2d 787 (Mass. 2010); *In re Petition of Mass. Elec. Co. & Nantucket Elec. Co.*, DPU No. 10-54 (Mass. Dep't of Pub. Utils., Nov. 22, 2010) ("DPU Decision"), available at <http://go.usa.gov/1TJ>. To be sure, these state decisions reviewed different aspects of the Cape Wind project under different (state law) statutory and regulatory frameworks, and EPA does not rely on them. However, given the breadth of comments that EPA received addressing aspects of the Cape Wind project that these analyses *did* review, EPA notes that these analyses support the analyses that form the basis of Cape Wind's demonstration under 310 C.M.R. 7.00 Appendix A(8)(b). *See, e.g.*, MEPA Certificate at 2-4, 5-8 (explaining that Secretary reviewed onshore, state waters, and federal waters benefits, impacts, and mitigation, and concluding that

CMR 7.00 Appendix A(8)(b), EPA has incorporated the MMS FEIS and ROD into the permit record. *See In re Campo Landfill Project, Campo Band Indian Reservation*, 6 E.A.D. 505, 520-23 (1996). To be sure, MMS's NEPA analyses use different labels and terminology than does 310 CMR 7.00 Appendix A(8)(b), but notwithstanding these slight differences in analytical framework, MMS's analyses contain the relevant findings and conclusions necessary for EPA to reach its conclusion. *See Campo Landfill Project*, 6 E.A.D. at 520-23; *see also In re Borden Chem., Inc.*, Title V Petition No. 6-01-1, Order Responding to Petitioner's Request that the Administrator Object to the Issuance of a State Operating Permit (Dec. 22, 2000), at 35-44.<sup>14</sup> Specifically, the information presented therein adequately supplies the elements of the alternative site analysis, and EPA adopts those findings, as follows:

- Benefits: FEIS §§ 1.1, 5.3.1.4.2, 5.3.1.5.2, 5.3.3.1.2, 5.3.3.2; ROD § 2.2; *see also* ROD at 17-18, 22.
- Analysis of alternative sites, sizes, production processes, and environmental control techniques: FEIS §§ 3.0, 5.4, 6.0, Table 3.3.5-1; ROD § 3.0.
- Environmental and social costs imposed as a result of the project's location and construction: FEIS §§ 5.0-6.0, 3.3.6.4.2 (impacts of no action alternative); ROD § 5.0; *see also* ROD §§ 7.0-8.0.
- Conclusion that benefits outweigh environmental and social costs: ROD § 2.2.

EPA believes that it is appropriate to adopt the conclusions reached in MMS's FEIS and ROD for Cape Wind's NSR air permit, rather than for EPA to conduct its own independent alternative site analysis, for several distinct reasons:

1. EPA's review of MMS's analyses did not reveal any significant factual statements or conclusions with which EPA disagrees or has sufficient cause to doubt. First, because EPA submitted comments on the DEIS and the FEIS, EPA's concerns have already been taken into consideration in MMS's NEPA analysis. Second, on many of the issues raised by the comments (e.g., marine navigation), EPA has no special

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“[b]ased on the air quality benefits, the compensatory mitigation, and the specific mitigation identified in . . . this Certificate, I find that the environmental benefits and compensatory mitigation provided by the project are adequate to mitigate the impacts of the project occurring in Massachusetts”), 8-21 (discussing project alternatives and impacts), 21-27 (describing specific mitigation); EFSB 2008 Decision, at 23 (reviewing proposal to construct electric transmission lines to serve Cape Wind project, and finding that “[i]n considering project benefits and impacts together, the Siting Board finds that the general public interest in the construction, operation, and maintenance of the proposed transmission lines outweighs any adverse impacts of the proposed project on the local community”); DPU Decision, at xvii (reviewing power purchase agreement, finding that it is cost-effective and in the public interest, and stating that “it is abundantly clear that the Cape Wind facility offers significant benefits that are not currently available from any other renewable resource. We find that these benefits outweigh the costs of the project.”), xviii-xxi, 215-16 (finding that benefits of contract exceed its costs, both to ratepayers and non-customers). Again, these decisions addressed different aspects of the project under different frameworks, and EPA's alternative site analysis does not depend on these analyses. EPA simply notes that (1) these analyses support and are consistent with the alternative site analysis in the Fact Sheet and in this RTC, and (2) many of the concerns raised in Section C of this RTC are addressed in these documents.

<sup>14</sup> <http://www.epa.gov/region07/air/nsr/nsrmemos/borden99.pdf>

expertise. Thus, if EPA were to conduct its own independent alternative site analysis, for many of these issues EPA would simply adopt the findings of the same expert agencies (e.g., the Coast Guard) with which MMS consulted.

2. EPA concluded that conducting its own independent alternative site analysis would be duplicative of MMS's extensive analyses.
3. The comments on the draft air permit did not provide substantial new information or arguments that had not already been considered in MMS's evaluations.
4. If EPA did conduct its own independent alternative site analysis, and even assuming *arguendo* that such an independent analysis might differ in some respect from MMS's, the results of that analysis would not result in any substantial changes to the outcome of EPA's permit decision. First, it is important to note that the alternative siting analysis is primarily a *comparison* analysis. It requires the applicant to demonstrate that the project's benefits would significantly outweigh the environmental and social costs imposed by its location (as opposed to alternative sites) or construction (as opposed to alternative sizes, production processes, and/or environmental control techniques). It does *not* require EPA to determine that the project's location is the "best possible" location (i.e., the location with the least environmental and social costs, or the location where the benefits outweigh the environmental and social costs by the widest margin). Rather, it suffices if, *at the selected location*, the benefits significantly outweigh the environmental and social costs, even if another location could also offer a comparable or even superior benefit-to-environmental-and-social-cost calculus. MMS's analysis included numerous alternative geographical sites, alternative construction and operational techniques, and a no action alternative. Indeed, all of the alternative sites (and sizes) that MMS reviewed and found to be feasible are within the OCS for which Massachusetts is the corresponding onshore area, and therefore, are within the same ozone nonattainment area as the proposed site. In other words, selection of an alternative site outside of the ozone nonattainment area was not a feasible alternative.<sup>15</sup> See FEIS at 3-12 to 3-36.
5. This approach is consistent with MassDEP's interpretation of Appendix A(8)(b). When MassDEP applies that provision, it typically relies on findings made under the Massachusetts Environmental Protection Act (MEPA) and by the Massachusetts Energy Facilities Siting Board (EFSB).<sup>16</sup>

<sup>15</sup> While the alternative siting analysis provision may authorize EPA to deny a permit altogether in certain circumstances, EPA's review of MMS's analysis, including its analysis of the no action alternative, does not persuade EPA that the environmental and social costs of a wind farm project off the coast of New England are so great that it should not be built in *any* location.

<sup>16</sup> See, e.g., MassDEP, Pioneer Valley Energy Center, Conditional Approval to Construct (June 2010), at 5 ("The MEPA certificate and the EFSB approval indicate that PVEC has met the requirements of 310 CMR 7.00 Appendix A(8) and Section 172(c)(5) [*sic*] of the Clean Air Amendments of 1990, and demonstrated that the benefits of the proposed project significantly outweigh the social costs of the project as a result of its location and technology."), available at <http://www.mass.gov/dep/air/approvals/pvecair.pdf>. See also *supra* note (discussing MEPA certificate and EFSB approval for Cape Wind).

For these reasons, EPA is adopting the factual findings of MMS and other cooperating agencies with respect to characterizing the “benefits” and “environmental and social costs” of the Cape Wind project. The various comments on the draft air permit addressing these issues do not call the various agencies’ factual findings into serious question. These findings, in turn, serve as the predicates for the ultimate question, i.e., whether the benefits of the project significantly outweigh the environmental and social costs imposed as a result of its location and/or construction. Whether the benefits “significantly outweigh” the costs is not a mathematical or algorithmic exercise; rather, “the nature of the decision to be made is inherently subjective.” *Campo Landfill Project*, 6 E.A.D. at 521. For the reasons described above and in the Fact Sheet, EPA finds that the applicant has presented a satisfactory demonstration, based on information in MMS’s administrative record, that the project’s benefits significantly outweigh the environmental and social costs imposed as a result of its location and construction.

#### **Comment C2: Need for NEPA § 102(E) Analysis**

EPA must prepare an independent alternatives analysis to support its permitting decision in order to meet the requirement of NEPA § 102(E), 42 U.S.C. § 4332(E). While the Energy Supply and Environmental Coordination Act of 1974 exempts EPA’s Clean Air Act permitting decision from the requirements of NEPA § 102(C), 42 U.S.C. § 4332(C), it does *not* exempt EPA’s permitting decision from the requirements of NEPA § 102(E). NEPA § 102(E) requires that federal agencies “study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources.”

Typically, NEPA § 102(E) is satisfied by preparation of an Environmental Assessment or EIS under NEPA § 102(C). However, because the Clean Air Act permitting decision is exempted from the requirement to prepare an EIS, EPA must fulfill its obligation under NEPA § 102(E) by preparing a separate alternatives analysis. (APNS)

#### **Response C2**

EPA disagrees that it has any separate duty to prepare an analysis under NEPA § 102(E) for a Clean Air Act permit. Section 7 of the Energy Supply and Environmental Coordination Act of 1974 (ESECA) provides that “[n]o action taken under the Clean Air Act shall be deemed a major Federal action significantly affecting the quality of the human environment within the meaning of the National Environmental Policy Act of 1969.” 15 U.S.C. § 793(c)(1). Since NEPA § 102(C) applies to “major Federal actions significantly affecting the quality of the human environment,” the commenter agrees that ESECA § 7 exempts Clean Air Act permitting decisions from NEPA § 102(C).

The commenter argues, however, that this exemption is limited to NEPA § 102(C), and that NEPA § 102(E) imposes an independent obligation “here.” However, nothing in the commenter’s argument is limited to this particular permit decision. Under the commenter’s argument, *every* Clean Air Act permitting decision (not just nonattainment New Source Review permits, which explicitly require an alternative siting analysis, but also PSD permits, minor source permits issued under EPA authority, etc.) would require a

separate section 102(E) analysis. This is contrary to the purpose of ESECA § 7. Moreover, even absent ESECA § 7, the Clean Air Act permitting process provides a “functional equivalent” of NEPA § 102(E) analysis. As the Court of Appeals for the District of Columbia Circuit has explained:

If . . . § 4332(2)(E) is understood in the context of the Clean Air Act to require the EPA merely to discuss implementation alternatives, then it . . . is the functional equivalent of [a provision of the CAA]. . . . As we recognize with regard to the requirement that the agency prepare an EIS, “[c]ompliance with NEPA’s . . . requirement[s] has not been considered necessary when the agency’s organic legislation mandates procedures for considering the environment that are ‘functional equivalents’ of the [NEPA’s] process.” . . . *The NEPA is the general statute requiring agencies to consider environmental harms, whereas the Clean Air Act is the more specific and its equivalent provisions apply in place of those in the NEPA.*

*Am. Trucking Ass’n, Inc. v. EPA*, 175 F.3d 1027, 1041-42 (D.C. Cir. 1999) (quoting *Izaak Walton League of Am. v. Marsh*, 655 F.2d 346, 367 n.51 (D.C. Cir. 1981)) (some alterations in original; emphasis in final sentence added), *mod. on reh’g on other grounds*, 195 F.3d 4, *overruled on other grounds*, 531 U.S. 457 (2001).

Finally, whatever obligation may apply under NEPA § 102(E) for projects for which an EIS is *not* prepared, in this case an EIS has, in fact, been prepared. Put differently, to the extent (if any) that EPA has an obligation under NEPA § 102(E) to “study, develop, and describe appropriate alternatives to recommended courses of action” in this permitting decision, that obligation has been fulfilled by the EIS which was prepared for this decision, and in which EPA duly participated as a cooperating agency, and EPA’s alternative siting analysis through which EPA has adopted MMS’s analysis.

### **Comment C3: Inadequacy of EIS**

EPA cannot rely on MMS’s NEPA analysis to fulfill its obligation(s) under CAA § 173(a)(5) or NEPA § 102(E) because MMS’s EIS is inadequate, having failed to adequately consider and analyze alternatives to the proposed project. The commenter specifically argues that MMS failed to respond to certain comments submitted by EPA in April 2002 (on a Notice of Scoping prepared by the Army Corps of Engineers before MMS became the lead agency under NEPA) and in April 2008 (on MMS’s Draft EIS). (APNS)

### **Response C3**

EPA commented on MMS’s Draft EIS and Final EIS. *See* Letter from Robert W. Varney, EPA, to James F. Bennett, MMS (Apr. 21, 2008) (“EPA DEIS Comments”); Letter from Ira W. Leighton, EPA, to James F. Bennett, MMS (Feb. 17, 2009) (“EPA FEIS Comments”).

As the commenter notes, EPA's DEIS Comments asked MMS to improve the analysis by developing additional information, some but not all of which was provided in the FEIS. However, in its FEIS Comments, EPA focused on the need for a monitoring, mitigation, and management program:

EPA's comments on the DEIS addressed alternatives, characterization of baseline conditions and impact prediction, marine and air issues, and monitoring/mitigation. We have reviewed responses to our comments in the FEIS and continue to believe that the project scale and remaining questions regarding project impacts highlight the need for a comprehensive and adaptable monitoring, mitigation, and management program.

FEIS Comments, at 2. In other words, EPA acknowledged that not all of its DEIS Comments were fully addressed by the FEIS, but determined that the FEIS, as a whole, provided information that was sufficient for EPA to focus its remaining comments on the monitoring, mitigation, and management program.

#### **Comment C4: Project Changes**

After MMS issued its ROD in April 2010, Cape Wind has made significant changes to the proposed project that EPA must consider. Cape Wind intends to undertake a phased development in Nantucket Sound that would deviate substantially from the proposed project as approved by MMS, and that this change may increase construction emissions. (APNS)

#### **Response C4**

With respect to construction air emissions, EPA is relying on Cape Wind's air permit application and subsequent correspondence between EPA and Cape Wind, all of which are part of the administrative record for this permit. With respect to other aspects of the project, EPA is relying on the official project documents prepared or received by BOEMRE, which are publicly available through BOEMRE's web site. If Cape Wind requests a permit modification after this final permit is issued, EPA will consider and process any such request under 40 CFR part 124.

#### **Comment C5: Generation Capacity Factor**

Cape Wind's generation capacity factor may be lower than expected, and this may change the analysis of whether the benefits significantly outweigh the environmental and social costs. (Kenney)

#### **Response C5**

EPA is adopting the factual findings of MMS and other cooperating agencies with respect to characterizing the "benefits" and "environmental and social costs" of the Cape Wind project. See Response C1.

**Comment C6: Aerial Navigation**

The wind turbines will interfere with aerial navigation, including by radar interference. Some commenters also state that if the Federal Aviation Administration restricts the airspace surrounding the project, then airplanes forced to circumnavigate this restricted airspace will have increased air emissions. (Joe McGinity, Nola Cloutier, Deke Ulian, Barbara Durkin, Charles Curran, APNS, Lincoln Baxter)

**Response C6**

The Federal Aviation Administration's (FAA's) aeronautical study of the proposed Cape Wind project determined that "the structure would have no substantial adverse effect on the safe and efficient utilization of the navigable airspace by aircraft or on the operation of air navigation facilities" and therefore "would not be a hazard to air navigation" provided that it is marked and/or lighted in accordance with FAA-approved obstruction marking and lighting techniques. FAA, Determination of No Hazard to Air Navigation, Aeronautical Study No. 2009-WTE-332-OE (May 17, 2010).<sup>17</sup> See also FEIS §§ 5.1.4.10 (construction vessels that are the subject of this permit), 5.3.4.2 (wind turbine array); FEIS Appendix B (containing earlier versions of this determination); FEIS Appendix L, Comment Summary and Response Table, Response M-2; ROD at 24, 28 ("Lessees shall meet FAA guidelines for siting and lighting of facilities."), 43-44; Lease at C-28 (requiring Cape Wind to implement provisions in FAA's May 2010 Determination of No Hazard to Air Navigation). Consequently, the evidence does not suggest any increase in aviation-related air emissions. See also Response B2.

**Comment C7: Commercial Use of Nantucket Sound**

Commenters object to the use of Nantucket Sound for the commercial purpose of generating electricity for profit. Some commenters specifically object to the potential displacement of fishing vessels from the project area. (Richard Mahoney, Joanne P. Q. El-Fayoumy, Francine Kariadakis Nisbet, Barbara Durkin, Joan Hill, Cynthia Gaynor, Susanna Nickerson, Cliff Carroll)

**Response C7**

EPA does not determine whether to grant a lease for commercial use of the Outer Continental Shelf. Rather, that decision has been made by the Secretary of Interior (through MMS, now BOEMRE) under Section 8(p) of the Outer Continental Shelf Lands Act, which authorizes the Secretary to grant a lease, easement, or right-of-way on the Outer Continental Shelf for activities that "produce or support production, transportation, or transmission of energy from sources other than oil and gas." 43 U.S.C. § 1337(p). See also FEIS § 5.3.3.7; ROD § 2.2. With respect to fishing vessels, see Response C11.

**Comment C8: Construction Debris**

Construction and/or operational activities will discharge debris (such as hamburger wrappers, beverage cans, cigarette butts, condoms, construction material wrappers, Styrofoam coffee cups, boxes for parts, insulation, spilled oil and other products) into Nantucket Sound. (James H. Bodurtha, Deke Ulian, Cynthia Gaynor, Whiting Willauer)

<sup>17</sup> <https://oeaaa.faa.gov/oeaaa/external/searchAction.jsp?action=displayOECASE&oeCaseID=107807735>

**Response C8**

See FEIS §§ 5.1.1.1.6, 5.1.1.1.7, 5.1.1.1.13, 5.1.4.4, 5.1.4.5, 5.1.4.6, 5.1.5.3, 5.1.5.4, 5.1.6.4; ROD at 29 (Best Management Practices Operations); Lease at C-16. Section 301(a) of the Clean Water Act prohibits the discharge of any pollutant by any person into the navigable waters from a point source without a permit to do so. See 33 U.S.C. § 1311(a).

**Comment C9: Financial Costs**

The electricity from Cape Wind will be unduly expensive for ratepayers, and/or that various public subsidies supporting the project will be unduly expensive for taxpayers. Some commenters noted that the electricity generated by the project might not serve Nantucket, Martha's Vineyard, and/or Cape Cod, but rather be transmitted elsewhere. (Melissa Renn, Mary Reardon, Barbara Wilson, Joe McGinity, Diana Morse, Jay Stevens, Deke Ulian, Ted Giletti,<sup>18</sup> Whiting Willauer, Cynthia Cole, Peter Kenney)

**Response C9**

Regarding electricity costs, New England has a deregulated, competitive electricity market. See FEIS § 3.2.1.2, 5.3.3.1, Appendix F, & Appendix L, Comment Summary and Response Table, Responses P-4, P-23; ROD at 5-7, 61. MMS provided a comparative analysis to determine whether potential alternatives to the proposed action were sufficiently economically viable to warrant detailed analysis as reasonable alternatives to the proposed action. The actual costs of electricity from Cape Wind (or any other source) to ratepayers are determined by complex energy markets and contractual mechanisms over which EPA has no regulatory authority. Moreover, EPA is not required to estimate the costs of electricity in order to issue an air permit. The destination of the electricity generated from Cape Wind is outside EPA's purview for similar reasons.<sup>19</sup>

Regarding costs to taxpayers, see FEIS Appendix F, at 12. MMS's economic analysis (in which it determined that the selected alternative would present the lowest cost of energy of all the alternatives evaluated) includes the assumption that Cape Wind would claim a renewable energy tax credit under 26 U.S.C. § 45(a). Congress has determined the amount of the credit that eligible projects may claim.

**Comment C10: Historical Impacts**

The Cape Wind project will adversely affect historic properties or landmarks, including areas of special significance to Indians or Indian tribes. (Richard Mahoney, Barbara Durkin, Charles Curran, APNS, Megan Ottens-Sargent)

<sup>18</sup> Mr. Giletti's comments were sent and received via e-mail on July 17, 2010, after the comment period had already closed. EPA is not obligated to respond to late-received comments. However, without waiving this point, EPA has in its discretion elected to include him in the list of commenters for the points on which he commented, since Mr. Giletti's comments did not raise any points not raised by any other commenters.

<sup>19</sup> See also *supra* note (citing DPU Decision).

**Response C10**

See Fact Sheet at 52-53 & n.33; FEIS §§ 5.3.3.4.2, 5.3.3.5; Section 106 Finding of Adverse Effect;<sup>20</sup> Revised Section 106 Finding of Adverse Effect<sup>21</sup> & Appendices A-D;<sup>22</sup> Secretary's Response to the Advisory Council's Final Comments on the Cape Wind Energy Project;<sup>23</sup> Section 106 Termination Package & attachments;<sup>24</sup> ROD at 22-23, 29, 41-42, 57-58; Lease at C-3 to C-10, C-27; Response to Comments Sections E & F.

**Comment C11: Marine Navigation**

The wind turbines will interfere with marine navigation, including by fishing vessels, ferries, recreational craft, and U.S. Coast Guard marine rescue missions. Several commenters questioned the U.S. Coast Guard's radar impact analysis. (Richard Mahoney, Joe McGinity, Nola Cloutier, James H. Bodurtha, Deke Ulian, Barbara Durkin, Charles Curran, Susanna Nickerson, Lincoln Baxter, Peter Kenney)

**Response C11**

The U.S. Coast Guard has concluded that the effect of the eventual wind farm on marine navigation would be minor to moderate. See FEIS §§ 5.1.4.9, 5.3.2.7.2, 5.3.4.3 (especially 5.3.4.3.2), 5.3.4.4.2, 9.3.1.6.12, 9.3.4; FEIS Appendix L, Comment Summary and Response Table, Response M-1; FEIS Appendix M; U.S. Coast Guard, Assessment of Potential Impacts to Marine Radar as it Relates to Marine Navigation Safety from the Nantucket Sound Wind Farm as Proposed by Cape Wind, LLC (Jan. 2009) ("USCG Study") (especially §§ 6 & 9.e);<sup>25</sup> ROD at 21, 23-25, 44-45, 53-55, 59, 74. The Coast Guard has also developed several potential mitigation measures. See USCG Study, §§ 9-10; FEIS § 9.3.1.6.12, Appendices B & M; ROD at 44-45; *see also* Lease at C-30 to C-34. Since EPA has no independent expertise in (nor regulatory jurisdiction over) marine radar, EPA defers to the Coast Guard's analyses of these issues.

While it is theoretically possible that some vessels will choose to alter their courses to avoid the wind farm, the extent of such course alterations cannot be determined at this point. As the Coast Guard noted, many vessels already avoid the area of the proposed wind farm. See USCG Study at 5-7. The Coast Guard has determined that buffer zones are not needed, and it may be possible to create a special channel through the wind farm. See USCG Study at 12-13. More importantly, the Coast Guard has stated that it is premature to develop mitigation measures:

It is important to keep in mind that a key component to any potential future mitigation measure —perhaps the key component—is waterway user input. It is difficult, if not impossible, to engage waterway users in a constructive dialogue regarding potential mitigation measures and their expected effectiveness before

<sup>20</sup> [http://www.boemre.gov/offshore/RenewableEnergy/PDFs/FAE\\_Final.pdf](http://www.boemre.gov/offshore/RenewableEnergy/PDFs/FAE_Final.pdf)

<sup>21</sup> <http://go.usa.gov/1bx>

<sup>22</sup> Available from <http://www.boemre.gov/offshore/RenewableEnergy/CapeWind.htm>

<sup>23</sup> <http://www.boemre.gov/offshore/RenewableEnergy/PDFs/ResponseToACHPNau.pdf>

<sup>24</sup> Available from <http://www.boemre.gov/offshore/RenewableEnergy/CapeWind.htm>

<sup>25</sup> <http://go.usa.gov/1ba>

knowing whether or not the proposed wind farm is approved. The lead Federal permitting agency, MMS, advocates an “adaptive management” approach to the permitting process. Between issuing an initial lease/permit and actual construction of the proposed wind farm, technical, economic, or other factors may change the complexion of the proposed wind farm and/or the character of mitigations.

USCG Study, § 9.e, at 14; see also *id.* § 9.b. See also Response B2.

**Comment C12: Material from Seafloor**

Harmful material may be released from the seafloor during the construction process. (Don Schaefer, WTGH)

**Response C12**

MMS has assessed the impacts from sediment suspension as negligible to minor, and has also imposed requirements related to seafloor disturbance. See FEIS § 5.3.2.5; see also FEIS §§ 5.1.1.1.9, 5.1.1.1.12, 5.1.1.1.13, 5.1.4.7, 5.3.1.1.2, 5.3.2.2.2; ROD at 17, 20, 26, 29, 32-33, 46-47, 49; *see also* Lease at C-19 to C-21.

**Comment C13: Offsite Emissions**

The air emissions involved in the fabrication of elements of the wind turbines, and in transporting these turbines to the project staging area, should be considered. (Don Schaefer)

**Response C13: Offsite Emissions**

See FEIS §§ 5.1.1.1.13, 5.1.5.5, 5.1.7.1.5, 5.3.1.5. The project’s air emissions in Massachusetts and Rhode Island that are outside the scope of EPA’s air permit have been addressed by MMS through its general conformity analysis under Section 176(c)(1) of the Clean Air Act. See Clean Air Act Final General Conformity Determination (Dec. 2009);<sup>26</sup> ROD at 17-18; Lease at C-15. MMS’s conformity determination accounted for “indirect emissions” as defined by 40 C.F.R. § 93.152. While any project may be said to involve embodied air emissions from the complete life-cycle of the equipment involved (e.g., fabrication of parts; manufacture of vessels and engines; mining and refining of metals and ores needed to construct those parts, vessels, and engines; shipping equipment from its fabrication site to the project staging area; etc.), such a life-cycle analysis is not required for the Clean Air Act alternative siting analysis. Moreover, these emissions would likely be similar for all alternatives considered in the EIS, since the emissions from turbine fabrication and transport would not change dramatically based on project location or size.<sup>27</sup>

<sup>26</sup> <http://www.boemre.gov/offshore/RenewableEnergy/PDFs/FinalCapeWindConformityDetermination.pdf>

<sup>27</sup> For the no-build alternative, these particular “life-cycle” emissions might not occur, but they would likely be replaced with corresponding (and perhaps higher) life-cycle emissions associated with building and operating another power plant to supply the same electricity demand. *See also* FEIS § 5.1.3.1.

**Comment C14: NO<sub>x</sub> Emissions**

Commenters object to NO<sub>x</sub> emissions from the Cape Wind construction process. (Charles Curran, Cynthia Cole)

**Response C14**

The final air permit controls NO<sub>x</sub> emissions to the Lowest Achievable Emissions Rate (the most stringent emissions standard for NO<sub>x</sub>) and requires Cape Wind to obtain offsets at a 1.26:1 ratio for its Phase 1 emissions. Moreover, modeling indicates that the NO<sub>x</sub> impacts onshore will be minimal. *See* Fact Sheet at 50-51; Attachment I, Memo from Brian Hennessey to Brendan McCahill, dated June 3, 2010; ROD at 17-18. *See also* Response C13 and Response to Comments Section B.

**Comment C15: Oil Spills and Other Emergencies**

Commenters are concerned about possible oil spills from wind turbines, construction or maintenance vessels, and/or the electrical service platform; preventive measures to minimize the chance or severity of spills; and spill response plans. (Richard Mahoney, Don Schaefer, James H. Bodurtha, Diana Morse, Jay Stevens, Deke Ulian, Barbara Durkin, Cliff Carroll, Peter Kenney)

**Response C15**

*See* FEIS §§ 2.6, 5.2, 9.3.5.2, Appendix D; ROD at 29, 31; Lease at C-16.

**Comment C16: Other Alternatives**

Other locations (e.g., onshore or further at sea) for wind power generation would have fewer negative environmental or social costs. (Melissa Renn, Barbara Wilson, Nola Cloutier, Diana Morse, Jay Stevens, Joan Hill, Ted Giletti, Cynthia Cole, Lincoln Baxter)

**Response C16: Other Alternatives**

*See* FEIS §§ 3.0, 5.4, 6.0, Table 3.3.5-1; ROD § 3.0. With respect to land-based alternatives in particular, *see* FEIS § 3.3.4.1.

**Comment C17: Project Repair and Decommissioning**

Commenters question whether the turbines and their infrastructure will be properly removed, whether because the turbines have been physically damaged, because the owner/operator no longer finds it financially feasible to operate the wind farm, or because the project's useful life has ended. One commenter expressed concern about air emissions from decommissioning. (Richard Mahoney, Don Schaefer, Joe McGinity, James H. Bodurtha, Deke Ulian, Cynthia Cole)

**Response C17**

*See* FEIS §§ 2.5; FEIS Appendix L, Comment Summary and Response Table, Responses D-1, D-2, D-11, D-14, D-15; *see also* Lease, at 4, B-10, B-11.

EPA's air permit limits the emissions from vessels that maintain the wind farm during the life of the project. EPA has decided not to impose specific requirements on the

decommissioning of the wind farm at this time, but is instead requiring Cape Wind to submit a decommissioning plan and, if appropriate, modified permit application. See Fact Sheet at 49.

**Comment C18: Species and Habitat Impacts**

The wind turbines will harm birds, fish, horseshoe crabs, and other species, including endangered and/or migratory species, either directly or through habitat loss. (Richard Mahoney, Melissa Renn, Nola Cloutier, Diana Morse, Barbara Durkin, Deke Ulian, Charles Curran, Megan Ottens-Sargent, Susanna Nickerson, MWT)

**Response C18: Species and Habitat Impacts**

See FEIS §§ 5.1.4-5.1.6, 5.3.2.3-5.3.2.9, 5.4.1.2.10-5.4.1.2.16, 5.4.2.2.10-5.4.2.2.16, 5.4.3.2.10-5.4.3.2.16, 5.4.4.2.10-5.4.4.2.16, 5.4.5.2.10-5.4.5.2.16, 5.4.6.2, 6.2.3-6.2.7, 6.3, 9.3.1, 9.3.3, 9.3.5.4-9.3.5.6, Appendices G, H, J, N; Finding of No New Significant Impact;<sup>28</sup> ROD at 20, 21, 26-28, 33-40; Lease at C-19 to C-26; Fact Sheet at 51. See also Response to Comments Section D.

**Comment C19: Tourism Impacts**

The wind farm project will adversely affect tourism. (Mary Reardon, Francine Kariadakis Nisbet, Barbara Wilson, Charles Curran, Susanna Nickerson)

**Response C19**

See FEIS §§ 5.3.3.6, 5.4.1.2.23, 5.4.2.2.23, 5.4.3.2.23, 5.4.4.2.23, 5.4.5.2.23, 5.4.6.2.23, 6.2.12; ROD at 23; Lease at C-27.

**Comment C20: Visual Impacts**

The wind farm project is aesthetically harmful to visual resources. (Nola Cloutier, Susanna Nickerson, Charles Carlson)

**Response C20**

See FEIS §§ 5.1.1.1.11 (construction vessels), 5.3.3.4 (wind turbine array), 6.2.10; see also ROD at 22-23, 29, 53; Lease at C-27; Response C10.

**Comment C21: Wind Turbine Meteorological Effects**

Wind turbines will create wind turbine microclimates, e.g., artificially created sea fog. Wind turbine blades can form mist or fog. This phenomenon is occurring at Scroby Sands Wind Farm in Norfolk, England, where the warmer moist air from the sea creates mist when mixed with the cooler, drier air from above. Scroby Sands is often under clouds created by the turbine blades and surrounded by artificially created sea fog.

Wind turbines may also affect sub-surface wind patterns and cause large scale climate changes. A Canadian Academy of Sciences report ("The influence of large-scale wind power on global climate," Sept. 2004) suggests that the weather and rainfall pattern

<sup>28</sup> <http://www.boemre.gov/offshore/RenewableEnergy/PDFs/CapeWindFONNSI.pdf>

changes from large scale wind farms need to be better understood. (David W. Geyer, Charles Curran)

**Response C21**

EPA is not aware of any microclimate that may be produced by the project. See FEIS § 5.3.1.4, 6.2.17; FEIS Appendix L, Comment Summary and Response Table, Responses D-19, E-4, M-1.

The Canadian Academy of Sciences study found that large scale (i.e., 100 times current world-wide wind power development) wind power development may have a non-negligible climate change impact on a continental scale. The study does not draw any conclusions on any single wind farm project.

**Comment C22: Wind Turbine Maintenance**

Commenters are concerned about potential environmental impacts of maintenance activities such as repair or maintenance of turbine blades, repainting of turbine monopiles, and changing oil. (Don Schaefer, Diana Morse, Cynthia Gaynor)

**Response C22: Wind Turbine Maintenance**

See FEIS §§ 5.1.1, 5.1.5. Section 301(a) of the Clean Water Act prohibits the discharge of any pollutant by any person into the navigable waters from a point source without a permit to do so. See 33 U.S.C. § 1311(a).

**Comment C23: Wind Turbine Project Benefits**

Commenters support the project and/or EPA's air permit. Some commenters note that the eventual wind turbine project will have positive benefits, such as generation of energy with lower air emissions than other sources, and potential aesthetic or tourism benefits. Other commenters note that the draft air permit applies a stringent level of control to the construction air emissions. Other commenters acknowledge that the project will have some negative environmental impacts but state that the benefits will outweigh the costs. (Cape Wind, Caroline Marshall, Victoria Merson Pickwick, Chris Fried, Richard Toole, James Liedell, Ariel Walcutt)

**Response C23**

The eventual wind farm's potential benefits were considered in MMS's NEPA process and have thus been incorporated into EPA's alternative site analysis. See Response C1.

**Comment C24**

EPA's standard of evaluating alternative sites, sizes, production processes, and environmental control techniques to demonstrate that the benefits of the proposed source significantly outweigh the "environmental and social costs" does not specifically mention "culture" or cultural costs. (WTGH)

**Response C24**

The cited standard derives from 310 C.M.R. § 7.00 Appendix A(8)(b) and in turn from CAA § 173(a)(5). Nevertheless, cultural impacts may be part of an alternative siting analysis, under the rubric of “social costs,” and that the alternative siting analysis presented in the Fact Sheet, Response to Comments Section C, and cited materials addresses and considers cultural impacts.

**Comment C25**

A commenter expressed concern about noise generated by wind turbine blades. (Susanna Nickerson)

**Response C25**

See FEIS §§ 5.1.5.7, 5.3.1.2.2, 5.4; ROD at 17, 27. See also FEIS §§ 5.1.1.1.8, 5.1.3.5, 5.1.4.2, 5.1.6.7, 5.4.

**Comment C26**

Because the Cape Wind project will involve an electric grid connection in Barnstable, hundreds or perhaps even “an infinite number” of additional power plants will be built to take advantage of that grid connection. The potential impacts of the Cape Wind project should therefore be multiplied substantially to consider these cumulative impacts. (Charles Carlson)

**Response C26**

In reviewing a CAA § 173 alternative siting analysis, EPA is not required to consider potential cumulative effects that are, at best, speculative.

**Comment C27**

Several commenters state general opposition to the project and/or its location. (Ara Charder, Cynthia Gaynor, David Moriarty)

**Response C27**

See Introduction to Section C in general, and comments in Section C for specific issues.

**D. ENDANGERED SPECIES****Comment D1**

EPA has an independent duty to comply with the Endangered Species Act (ESA). The current ESA record does not cover EPA’s air permit. EPA is named as a cooperating agency for the U.S. Fish and Wildlife Service (FWS) Biological Opinion (BO), but the FWS BO does not include any discussion of EPA’s air permit or air quality issues. The BO prepared by the National Marine Fisheries Service (NMFS) does not even mention EPA, and also does not address EPA’s air permit or air quality issues. Therefore, EPA’s air permit is not covered by MMS’s lead agency ESA consultation process and ESA administrative record. Rather, EPA must prepare its own Biological Assessment. (APNS)

## Response D1

Pursuant to Section 7 of the Endangered Species Act (ESA), 16 U.S.C. § 1536, and its implementing regulations at 50 C.F.R. part 402, EPA is required to ensure that any action authorized, funded, or carried out by the Agency is not likely to jeopardize the continued existence of any federally-listed endangered species or threatened species, or result in the destruction or adverse modification of such species' designated critical habitat. Section 9 of the ESA prohibits the taking of endangered fish or wildlife species. Where more than one federal agency is involved in an action, ESA implementing regulations provide that section 7 consultation responsibilities may be fulfilled through a lead federal agency. *See* 50 C.F.R. § 402.07.

On January 18, 2008, MMS issued a DEIS for the Cape Wind project. The DEIS explained that Cape Wind would be seeking an OCS air permit regarding air emissions from certain vessels during both construction and operational phases, and also included estimates of these emissions. *See* DEIS, section 1.2.1.5, at 1-4; *see also id.* at 5-5, 5-14, 5-18, Table 5.3.1-7, Table 5.3.1-8.

In a May 19, 2008 letter from MMS to the National Marine Fisheries Services (NMFS) and the United States Fish and Wildlife Service (FWS), MMS requested formal consultation under Section 7 of the ESA on behalf of itself and, as lead federal agency, of EPA and the Army Corps of Engineers. MMS's May 2008 letter explained that "Section 1.2 of the MMS draft Environmental Impact Statement outlines the respective approval or permitting authorities of these agencies with respect to this proposed action." MMS's Biological Assessment included the DEIS, including its information regarding air emissions, as part of the ESA consultation package. *See* Biological Assessment, at 1-3.

On November 21, 2008, FWS issued a Biological Opinion (BO). FWS's BO explained that "MMS, the lead federal agency, is also consulting with the Service on behalf of the Army Corps of Engineers (ACOE) and the Environmental Protection Agency, the additional federal agencies with approval or permitting authorities for the Cape Wind Project." It focused on impacts to piping plovers and roseate terns, arising principally from the proposed wind farm itself (collision risk, habitat loss and disturbance, piers as fish attractant devices, barrier/displacement effects, increased predation, lighting, and oil spill risk), but FWS also analyzed short-term impacts (mainly to roseate terns) from construction and maintenance activities. *See* FWS Biological Opinion, at 32-65. FWS concluded that "the level of take is not likely to have jeopardized the continued existence of the piping plover and roseate tern." *Id.* at 73. Finally, FWS provided an Incidental Take Statement (focused on roseate terns and piping plovers) and provided reasonable and prudent measures (RPMs) as well as terms and conditions necessary for exemption from the prohibitions of ESA § 9. *See id.* at 75-76.

Similarly, on November 13, 2008, NMFS issued a Biological Opinion (BO). While NMFS's BO did not specifically mention EPA, NMFS's BO considered the construction and operation aspects of the project, along with the effects of exposure to construction and operation related noise and construction and operation/maintenance vessel traffic.

NMFS concluded that these impacts: (1) may adversely affect loggerhead, Kemp's ridley, leatherback, or green sea turtles, but are not likely to jeopardize their continued existence; (2) are not likely to adversely affect right, humpback, or fin whales, nor jeopardize their continued existence, (3) will not affect hawksbill turtles, shortnose sturgeon, or sperm, blue, or sei whales, (4) will not affect critical habitat for any species, and (5) may result in a level of incidental take of loggerhead, Kemp's ridley, leatherback, or green sea turtles that is, in NMFS's view, reasonable. *See* NMFS Biological Opinion, at 97-101. NMFS's BO included an Incidental Take Statement (focused on loggerhead, Kemp's ridley, green and leatherback sea turtles) and provided reasonable and prudent measures (RPMs) as well as terms and conditions necessary for exemption from the prohibitions of ESA § 9. *See* NMFS Biological Opinion, at 100-104.

In developing the draft air permit, EPA relied on MMS's lead agency ESA consultations with NMFS and the FWS to fulfill EPA's obligations under the ESA for this project. Specifically, EPA understood MMS, NMFS, and FWS to have determined that the project, including the activities that EPA's draft OCS air permit regulates, are not likely to jeopardize the continued existence of any endangered species or threatened species, or result in the destruction or adverse modification of such species' designated critical habitat. Based on the results of these consultations, and after a review of the terms, conditions, and RPMs in the FWS and NMFS BOs, EPA included a condition within the draft OCS air permit requiring that, if at any time during the life of the project, FWS requests that ESA consultation be re-initiated, withdraws an Incidental Take Statement, or determines that the requirements of the ESA are not being satisfied, Cape Wind must notify EPA. *See* Fact Sheet at 51.

To further ensure that all issues were appropriately addressed as part of the ESA consultation before issuing the final permit, EPA contacted both NMFS and FWS, explaining that EPA was unaware of any information suggesting that the air emissions from the construction equipment and vessels regulated by EPA's air permit would be likely to take any endangered species, jeopardize the continued existence of any endangered species or threatened species, or result in the destruction or adverse modification of such species' designated critical habitat, and requesting the services' concurrence in this determination. *See* Letter from Stephen Perkins, EPA, to Thomas Chapman, FWS (Oct. 25, 2010); E-mail from Ida McDonnell, EPA, to Julie Crocker, NOAA (Nov. 2, 2010). (In the case of NMFS, BOEMRE had re-initiated formal consultation anyway after an atypically high number of right whales were sighted in Rhode Island Sound and nearby waters.) As EPA noted in these communications, the project's emissions have a minimal onshore air impact. Since the project is located several miles out in the ocean, the vast majority of the emissions during construction and operations will remain well away from any onshore habitat. Moreover, even with respect to the offshore air impacts, Cape Wind's highest emission rates are short-lived and occur only during the first year of construction. The emissions and associated air impacts during the second year of construction and during commercial operations are far less. Furthermore, EPA's review of Cape Wind's emissions impact analysis shows that the project's peak emissions will not result in exceedance of any currently attained primary

or secondary National Ambient Air Quality Standards (NAAQS). While eastern Massachusetts is not currently attaining the ozone NAAQS, Cape Wind's air emissions will not exacerbate regional ozone concentrations because ozone precursor (NO<sub>x</sub>) emissions will be offset at a 1.26:1 ratio.

#### 1. FWS Concurrence Letter

In response to EPA's request, on December 17, 2010, FWS wrote to EPA and stated:

The Service concurs that the proposed EPA action of issuing an OCS air permit for the Cape Wind Project is a related and necessary component for a larger action (issuance of an OCS lease) that the Service has already reviewed and for which the Service has issued a final, non-jeopardy biological opinion. In that respect, it is important to note that EPA's proposed air permit examines the same project that the Service previously reviewed. Thus, our underlying analyses of the proposed activities remain relevant and unchanged. However, because our November 2008 opinion to MMS did not explicitly discuss air quality effects with regard to listed roseate terns and piping plovers, this letter addresses that point and clarifies whether any of the estimated take of roseate terns and piping plovers is apportioned to EPA for its part of the larger proposed action.

As noted in your October 25, 2010 letter, EPA is not aware of any information that suggests air emissions from the construction equipment and vessels regulated by EPA's air permit would be likely to take or cause the take of any [threatened] or endangered species, or result in adverse modification of habitat designated as critical. You have further noted that most of the emissions are far from shore, are short-lived and will be considerably less during the second year of construction. EPA's review of Cape Wind's emissions impact analysis shows that the project's peak emissions will not result in exceedance of any currently attained primary or secondary National Ambient Air Quality Standard.

The Service is similarly unaware of any information that suggests roseate terns and/or piping plovers are acutely sensitive to changes in air quality.

\* \* \*

Based on the above analyses, we concur that the air permitting activities over which EPA has authority are not likely to adversely affect these or other listed species. We also conclude that EPA's proposed issuance of an OCS air permit for the Cape Wind Project will not cause "take" of those species. The Service's biological opinion finds that incidental take of roseate terns and piping plovers will be caused solely by collision with the turbines and other structures associated with the Cape Wind Project.

EPA's actions authorize construction of the wind turbines and regulate the construction vessels' air emissions, but do not authorize or in any way regulate the eventual wind turbines once constructed. Although the biological opinion was prepared for each of the action agencies, and its analyses remain relevant, incidental take coverage for EPA is unnecessary, given our finding that listed species are not likely to be adversely affected by air permit-related activities.

Through this correspondence, we officially conclude this consultation, subject to potential future need for reinitiation.

Letter from Thomas R. Chapman, FWS, to Stephen Perkins, EPA (Dec. 17, 2010).

## 2. NMFS Revised Biological Opinion

On December 30, 2010, NMFS issued a revised Biological Opinion in response to BOEMRE's request to re-initiate consultation. As NMFS explained in its cover letter, "[t]he enclosed [revised] Opinion supersedes the Opinion issued on November 13, 2008; however, the conclusions are the same." Letter from Patricia A. Kurkul, NMFS, to James J. Kendall, BOEMRE (Dec. 30, 2010), at 2. With respect to air emissions in particular, NMFS's revised Biological Opinion agreed with EPA's analysis, and stated:

EPA has stated that Cape Wind's highest emission rates are short-lived and occur only during the first year of construction. The emissions and associated air impacts during the second year of construction and during commercial operations are far less. EPA has also explained that the project's peak emissions will not result in any exceedance of any currently attained primary or secondary National Ambient Air Quality Standards (NAAQS). Primary NAAQS are set to protect public (human) health with an adequate margin of safety, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary NAAQS set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. EPA has also explained that while eastern Massachusetts (and all of southern New England) is not currently attaining the ozone NAAQS, Cape Wind's air emissions will not exacerbate regional ozone concentrations because ozone precursor (NOx) emissions will be offset at a 1.26:1 ratio. As such, any effects to air quality from the proposed action are likely to be insignificant. At this time, there is no information on the effects of air quality on listed species that may occur in the action area. However, as the emissions regulated by EPA will have insignificant effects on air quality, it is reasonable to conclude that any effects to listed species from these emissions will also be insignificant.

NMFS Revised Biological Opinion (Dec. 30, 2010), at 121.

**Comment D2**

Both the FWS and NMFS BOs are defective, and therefore EPA must begin again with a new ESA consultation process. Specifically, (1) “MMS unlawfully allowed [Cape Wind] to dictate the terms of the incidental take statement for impacts to birds,” (2) FWS determined, based on inadequate data, that estimated take to birds would not rise to the level of jeopardy to the species, (3) FWS ignored its own guidance, and (4) FWS failed to require Cape Wind to shut down the turbines on a temporary and seasonal basis to reduce bird kills. The ESA BOs are currently under challenge in court. (APNS)

**Response D2**

The commenter cites numerous alleged defects in the FWS BO, pertaining to the impact of wind turbines on migratory birds. EPA, which is issuing an air permit regulating air emissions from construction equipment, is entitled to rely on the BOs prepared by FWS and NMFS as long as they are reasonable (which, in EPA’s view, they are). These agencies, besides being specifically charged by Congress with administering the ESA, have considerable expertise in assessing potential impacts to listed species and discretion to specify measures to minimize any anticipated take. If, as a result of litigation or for any other reason, either FWS or NMFS requests that ESA consultation be re-initiated, withdraws an Incidental Take Statement, or determines that the requirements of the ESA are not being satisfied, EPA will evaluate what, if any, action to take at that time. See Final Permit, Section XI.B.

**E. HISTORIC PRESERVATION****Comment E1**

The Cape Wind project will adversely affect historic properties or landmarks, including areas of special significance to Indians or Indian tribes. (Richard Mahoney, Barbara Durkin, Charles Curran, APNS, Megan Ottens-Sargent)

**Response E1**

See Response C10; see also Response to Comments Section F.

**Comment E2**

EPA may not rely on the Department of the Interior for compliance with Section 106 of the National Historic Preservation Act (NHPA). The commenter acknowledges that, on December 1, 2009, EPA sought to designate MMS as the lead federal agency for compliance with NHPA § 106. The commenter states that while MMS’s December 15, 2009 response granted EPA *consulting party* status under 36 C.F.R. § 800.3(f)(3), it did not effectively accept EPA’s designation of MMS as the lead federal agency under 36 C.F.R. § 800.2(a)(2). Thus, the commenter argues that EPA must individually comply with NHPA § 106, and may not rely on MMS’s NHPA § 106 process. (APNS)

**Response E2**

EPA’s designation of MMS as lead federal agency for NHPA Section 106 was effective. 36 C.F.R. § 800.2(a)(2) provides:

If more than one Federal agency is involved in an undertaking, some or all the agencies may designate a lead Federal agency, which shall identify the appropriate official to serve as the agency official who shall act on their behalf, fulfilling their collective responsibilities under section 106. Those Federal agencies that do not designate a lead Federal agency remain individually responsible for their compliance with this part.

Section 800.2(a)(2) provides no specific form by which this designation must be made. Additionally, the Advisory Council on Historic Preservation has neither prescribed nor recommended a method or procedures that should be followed to make the lead federal agency designation in its guidance. In the Council's *Section 106 Regulations Section-by-Section Questions and Answers*,<sup>29</sup> the following question was posed:

How does the "lead agency" arrangement (§800.2(a)(2)) get documented? Does it have to be in writing or communicated to anyone in particular?

In response, the Council answered:

The regulations require neither documentation nor notification when agencies decide on lead federal agency arrangements. . . . It would certainly be a prudent practice for agencies to make a formal decision for Section 106 purposes and convey that to consulting parties and the public.

In accordance with the Council's written advice, on December 1, 2009, EPA wrote a letter to MMS designating MMS as the lead federal agency:

In accordance with 36 CFR § 800.2(a)(2), as the United States Environmental Protection Agency's (EPA) designee, MMS will identify the appropriate official to serve as the agency official to fulfill the collective responsibilities of EPA and the MMS under section 106. In addition, although EPA recognizes that as the lead Federal agency, MMS will take the lead on drafting relevant agreements as part of the NHPA section 106 process, EPA would appreciate the opportunity to review and, if appropriate, be a signatory to these documents.

On December 15, 2009, MMS responded: "The MMS is the lead agency reviewing the Cape Wind Energy Project proposal." As the commenter notes, MMS then invited EPA to participate as a consulting party under section 800.3(f)(3). Cf. EPA letter (Dec. 1, 2009) ("[A]lthough EPA recognizes that as the lead Federal agency, MMS will take the lead on drafting relevant agreements as part of the NHPA section 106 process, EPA would appreciate the opportunity to review and, if appropriate, be a signatory to these documents.") However, this in no way nullifies EPA's designation of MMS as the lead agency, which was effectuated through EPA's December 1, 2009 written designation ("In accordance with 36 CFR § 800.2(a)(2), as the United States Environmental Protection Agency's (EPA) designee, MMS will identify the appropriate official to serve as the

<sup>29</sup> <http://www.achp.gov/106q&a.html>

agency official to fulfill the collective responsibilities of EPA and the MMS under section 106.”) and confirmed through MMS’s December 15, 2009 written response (“The MMS is the lead agency reviewing the Cape Wind Energy Project proposal.”).

As noted above, part 800 imposes no specific procedural requirements on lead agency designation. In fact, EPA and MMS abided by the Council’s advice and took the “prudent step” of memorializing the request by EPA for MMS to accept, and the acceptance by MMS to take, lead agency status. This letter exchange was conveyed to other consulting parties and the public. No more is required by federal law or policy.

The fact that MMS did not (as EPA had requested) sign at the bottom of EPA’s December 1, 2009 letter, but instead drafted its own letter, and that this letter cited section 800.3(f)(3) rather than section 800.2(a)(2), is irrelevant. EPA’s letter effectuated the lead agency designation, and the fact that MMS took a further step and made EPA a consulting party does not nullify that designation.

### **Comment E3**

EPA did not comply with its duties as a consulting party during the NHPA § 106 process. EPA was not included as a consulting party until December 2009 (eight years after project review first began, and shortly before the Section 106 process finished). EPA was passively involved, rather than truly working in cooperation with MMS to ensure that the proper process and consideration were being given to the section 106 consultation. (APNS)

### **Response E3**

EPA complied with all duties under NHPA § 106 and 36 C.F.R. part 800. As described elsewhere, the NHPA regulations explicitly provide for designation of a lead federal agency to fulfill collective section 106 responsibilities where more than one agency is involved in an undertaking. EPA’s designation of MMS as lead agency, and MMS’s completion of the required procedures, satisfies all legal requirements. The commenter cites no source establishing any additional requirements for specific activities or involvement of a non-lead federal agency in the section 106 process. In addition, EPA believes that the Agency was more than “passively involved” in the process. On January 13, 2010, EPA participated in a full Section 106 consultation meeting in Washington, D.C., convened by the Secretary of the Interior, and attended by various federal, state, tribal, and local officials, and non-governmental organizations (including the commenter). EPA designated MMS as lead agency for the Section 106 process in December 2009, just one year after Cape Wind submitted its December 2008 air permit application, and seven months before EPA issued its June 2010 draft air permit.

### **Comment E4**

EPA may not rely on the Department of Interior’s decision to terminate the Section 106 consultation and decline to follow the recommendations of the Advisory Council on Historic Preservation (ACHP). Rather, under 36 C.F.R. § 800.7(a), the act of terminating consultation removes *only* the terminating party from Section 106 responsibility. EPA

must either continue the Section 106 consultation process, or itself terminate its involvement in the process. (APNS)

#### **Response E4**

EPA disagrees that EPA must either continue the Section 106 consultation or separately terminate that process. The NHPA § 106 regulations at 36 C.F.R. § 800.7(a) provide that any of three parties may terminate consultation: “[1] the agency official, [2] the SHPO/THPO, or [3] the Council.” Section 800.7(a) does not specifically address the situation of multiple federal agencies involved in an undertaking. However, where, as here, a federal agency has designated a lead federal agency to fulfill its Section 106 responsibilities, the designated lead federal agency carries out the duties of “the agency official” for all aspects of the undertaking. *See* 65 Fed. Reg. 77,698, 77,717 (Dec.12, 2000). It is thus appropriate for the “agency official” acting pursuant to section 800.7(a) to be the agency official whom the lead federal agency has “identify[ed] . . . to serve as the agency official who shall act on [the other federal agencies’] behalf, fulfilling their collective responsibilities under section 106.” *See* 36 C.F.R. § 800.2(a)(2). In terminating consultation and addressing the ACHP’s comments, MMS (or the Department of the Interior) thus appropriately acted on its own behalf and on behalf of all agencies (including EPA) that had designated it as lead federal agency.

#### **F. TRIBAL CONSULTATION**

##### **Comment F1**

The Wampanoag Tribe of Gay Head (Aquinnah) questions why the draft permit was issued without discussion with the Tribe’s cultural department. (WTGH)

##### **Response F1**

As explained in Section XV of the Fact Sheet, EPA consults with affected Indian tribes under two related but distinct frameworks. First, in certain cases, an Indian tribe may, through its Tribal Historic Preservation Officer (THPO) or otherwise, be an appropriate party with which NHPA § 106 consultations should be conducted. EPA has designated MMS as lead federal agency for purposes of NHPA § 106 compliance and has relied on MMS’s NHPA process, including MMS’s consultation with affected Indian tribes, for that purpose. The Wampanoag Tribe of Gay Head (Aquinnah), through its THPO, participated in the NHPA process for several years before EPA issued its draft permit. *See* ROD at 68-71 (summarizing timeline from November 2005 forward); FEIS § 7.2.

Separate from the NHPA, EPA, as part of the federal government, also has a government-to-government relationship with federally-recognized Indian tribes, consistent with the federal trust responsibility to such tribes. In keeping with this responsibility, before issuing the draft permit, EPA contacted and consulted with nearby Indian tribes to ensure that their concerns and interests were considered before EPA made any decision that could affect the tribal environment. Before draft permit issuance, EPA initiated numerous contacts with the environmental program staff of each of the three potentially affected Indian tribes. *See* Fact Sheet at 54. In the case of the Wampanoag Tribe of Gay

Head (Aquinnah), these initial contacts were primarily with Bret Stearns (the Tribe's Natural Resources Director) and Jim Miller (the Tribe's Environmental Coordinator).

Section XV of the Fact Sheet provides a timeline of EPA's tribal coordination and consultation activities regarding the draft air permit, through June 9, 2010. After issuance of the draft air permit, and continuing after the close of the comment period, EPA has conducted further tribal coordination and consultation activities with the Mashpee Wampanoag Tribe and the Wampanoag Tribe of Gay Head (Aquinnah). The following is a summary of these post-draft-permit activities (and should be read as an addendum to the timeline on p.54 of the Fact Sheet):

July 15, 2010: Mr. Perkins met with Bettina Washington, the THPO for the Wampanoag Tribe of Gay Head (Aquinnah), on Martha's Vineyard. Ms. Washington familiarized Mr. Perkins with views to the project location, cultural and historical information about the tribe and tribal practices, and other sites of importance to the tribe. Ms. Washington and Ms. Perkins discussed the draft air permit and issues including the consultation process, alternative site analysis, and water quality impacts.

July 28, 2010: Mr. Perkins sent an e-mail to Ms. Washington (and Mr. Green of the Mashpee Wampanoag Tribe) addressing certain questions raised by Ms. Washington and Mr. Green concerning the nature of the ongoing consultations.

December 10, 2010: Mr. Spalding and Mr. Perkins met for approximately four hours with Cheryl Andrews-Maltais, Chairwoman of the Wampanoag Tribe of Gay Head (Aquinnah), on Martha's Vineyard. See Memorandum from Stephen Perkins, EPA, to File, dated December 20, 2010, for a summary of the issues discussed at this meeting.

December 13, 2010: Mr. Perkins sent an e-mail to Chairwoman Andrews-Maltais forwarding copies of the draft permit and fact sheet as well as a November 17, 2010 letter from Cape Wind concerning the location of the land (staging) base for the construction of the project. Mr. Perkins also noted that if the Wampanoag Tribe of Gay Head (Aquinnah) wished to provide written comments about the proposed permit, it would need to do so soon.

EPA has carefully listened to and considered the issues raised by the tribes at these meetings and appreciates the tribes' perspectives. EPA understands the tribes' principal concern to be the siting of the proposed wind farm, not construction vessel air emissions or air quality more generally. EPA's decision to issue the Final Permit under the Clean Air Act is fully described and explained in the Fact Sheet and elsewhere in this Response to Comments. See Response to Comments Section C (discussing alternative siting analysis), Response F2 (NHPA issues).

**Comment F2**

The siting analysis undertaken by MMS and finalized in the FEIS was inadequate because it failed to adequately incorporate tribal perspectives. (WTGH)

**Response F2**

EPA signed on to the NEPA process as a cooperating agency. MMS took the lead role in consulting with Indian tribes as part of that analysis, and did in fact consult with, and consider the views of, federally recognized Indian tribes. See FEIS § 7.2; ROD at 65-71; *see also* Secretary's Response to the Advisory Council's Final Comments on the Cape Wind Energy Project, at 3-8;<sup>30</sup> Briefing Document for Termination of NHPA Section 106 Consultation for the Cape Wind Energy Project, at 3-5 (summarizing history of tribal consultations), 7-8 (listing mitigation measures proposed by MMS);<sup>31</sup> Response C10. As for EPA's own government-to-government consultations with Indian tribes regarding EPA's OCS air permit, see Response F1.

**G. ISSUES REGARDING THE PUBLIC HEARINGS****Comment G1**

Commenters on Martha's Vineyard state that it was hard to find the public notice of the public hearing(s). Some seek details about how EPA provided public notice of the hearings, and the legal requirements for such public notices. Others state that the *Cape Cod Times* is not widely read on Martha's Vineyard, and that Vineyard residents or visitors are more likely to read the *Martha's Vineyard Times* or the *Vineyard Gazette*. One commenter states that EPA's public hearing on Martha's Vineyard was "fraudulent." (Megan Ottens-Sargent, Olga Church, Charles Carlson)

**Response G1**

EPA's legal notice of the public hearings was adequate because it was published in a daily newspaper of general circulation in the area affected by the issuance of the draft permit, thereby satisfying the requirements of 40 C.F.R. § 124.10(c)(2)(i), which governs public notice of permit actions and the corresponding public comment period. That regulation requires "publication of a notice in a daily or weekly newspaper within the area affected by the facility or activity" for all "major permits." EPA's publication of notice in two daily newspapers (the *Cape Cod Times* and *The Boston Globe*) with distribution in "the area affected" by the Draft Permit thus satisfies EPA's obligations.

On June 11, 2010, EPA issued the draft permit for public comment, published notice of the public hearings, and specified that the public comment period would conclude on July 16, 2010. In accordance with 40 C.F.R. § 124.10(b)(2), this notice was published at least 30 days prior to the first hearing, which was held on July 13, 2010 on Nantucket. Subsequent hearings were held on July 14, 2010 on Martha's Vineyard, and July 15, 2010 in West Yarmouth. (EPA was not required to hold three public hearings on the draft permit, but deemed it appropriate to do so in light of significant public interest.

<sup>30</sup> <http://www.boemre.gov/offshore/RenewableEnergy/PDFs/ResponseToACHPNau.pdf>

<sup>31</sup> [http://www.boemre.gov/offshore/RenewableEnergy/PDFs/CapeWind/Tripathi/Appendix\\_2\\_CW106.pdf](http://www.boemre.gov/offshore/RenewableEnergy/PDFs/CapeWind/Tripathi/Appendix_2_CW106.pdf)

Like the notice itself, the hearings were distributed across both islands and the mainland so as to facilitate interested citizens' ability to attend, regardless of where they reside.)

*The Boston Globe* and *Cape Cod Times* were selected as the vehicles by which the Agency's notice could reach the largest number of potentially affected parties, due to their greater circulation and more widespread availability throughout the *entire* "affected area" – the Cape and Islands community. Specifically, notwithstanding the commenters' assertions about which newspapers residents of Martha's Vineyard are more or less likely to read, the print editions of *The Boston Globe* and the *Cape Cod Times* are in fact available for sale at newsstands on Martha's Vineyard (as well as Nantucket and Cape Cod), as well as accessible online.

EPA sought to maximize the notice's potential viewership – and thus, its impact – by publishing it in sources that the Agency believed had the greatest capacity to simultaneously reach residents of *all* locations where a hearing would be held. In this way, EPA sought to provide information and access to the process to the greatest number of potentially interested parties as efficiently and effectively as possible. This approach is both consistent with and in furtherance of the Agency's desire to craft an outreach process that would maximize public participation.

By publishing notice in two daily (not just weekly) newspapers that are available for sale in the *entire* affected area, EPA's notice was reasonably calculated to apprise potentially interested parties throughout the entire Cape and Islands community. *See In re SEI Birchwood, Inc.*, 5 E.A.D. 25, 28 & n.3 (1994). The actual extent of the readership of the newspaper(s) selected is not a factor in determining the legal sufficiency of the notice. Rather, the paper(s) selected must simply be a daily periodical of "general circulation" in the affected area, as the underlying purpose of the publication requirement is to ensure that information about the hearing is made generally available. *The Boston Globe* and, for the Cape and Islands community, the *Cape Cod Times*, meet this definition.<sup>32</sup>

While EPA's formal notice of the public hearings, standing alone, meets the minimum legal requirements described above, it is worth noting that EPA also made the public aware of the hearings through other direct actions. The Agency mailed notice of the hearings to a list of known interested persons obtained from MMS. *Cf.* 40 C.F.R. § 124.10(c). Furthermore, in addition to the tribal-specific outreach discussed in Section XV of the Fact Sheet, EPA notified the President/CEO of the Alliance to Protect Nantucket Sound by telephone on the day the public notice was issued. *See* e-mail message from Timothy Timmermann, EPA, to Ronald Fein, EPA (June 14, 2010).

News sources also published informational articles based on this EPA-supplied information, further demonstrating that the Agency's notice was effective in apprising

<sup>32</sup> *See Reppert v. Marvin Lumber & Cedar Co.*, 359 F.3d 53, 57 (1st Cir. 2004) (describing *The Boston Globe* as "a Massachusetts newspaper of general circulation"); *Thrifty Rent-A-Car Sys., Inc. v. Thrift Cars, Inc.*, 831 F.2d 1177, 1179 (1st Cir. 1987) (describing the *Cape Cod Times* as "a newspaper of general circulation servicing Cape Cod, Martha's Vineyard, and Nantucket"); *Thrifty Rent-A-Car Sys., Inc. v. Thrift Cars, Inc.*, 639 F. Supp. 750, 751 (D. Mass. 1986) (same).

members of the public of the upcoming opportunities to participate by offering feedback on the permitting process. On June 23, 2010, the *Cape Cod Times* published an article that included information about all three hearings. *See Cape Cod Times*, “Hearings Scheduled for Wind Farm’s Air Quality Permit” (June 23, 2010).<sup>33</sup> A second article, which provided both a schedule for the hearings and information about how and when to submit written comments to EPA, was published after the first hearing. *See Cape Cod Times*, “Quiet Debate Generated over Cape Wind Permit” (July 14, 2010).<sup>34</sup> Both news features were (and are) accessible through a basic Internet search for “Cape Wind” as well as through the *Cape Cod Times*’ website.

### **Comment G2**

The public hearing is a mere formality (“check the box”). EPA should have been here earlier and if not, why are they here now. (MWT)

### **Response G2**

EPA participated as a cooperating party in the NEPA processes beginning in 2002, for which first the Corps of Engineers and now BOEMRE has the lead agency role. *See, e.g.*, FEIS Appendix B, at 49-50 (July 7, 2006). EPA conducted three public hearings in the summer of 2010 because EPA is responsible for the air permit. EPA has carefully considered and responded to all comments submitted at the public hearings.

## **H. OTHER OR UNCLASSIFIABLE**

### **Comment H1**

Who is issuing the Clean Water Act permit for Cape Wind? (WTGH)

### **Response H1**

EPA is the Clean Water Act permitting authority for point sources in federal waters (and, as it happens, in Massachusetts). However, Cape Wind has not applied to EPA for a Clean Water Act permit. If Cape Wind does apply for such a permit, EPA will review it when received.

### **Comment H2**

One commenter states that Horseshoe Shoal (and Nantucket Sound) is not the Outer Continental Shelf, as it is completely surrounded by land. Another commenter states that “you are responsible for the State side inside of the three mile boundary, from the edge of the coast out to the Federal footprint.” (MWT, Cliff Carroll)

### **Response H2**

The Outer Continental Shelf is defined by section 2 of the Outer Continental Shelf Lands Act as “all submerged lands lying seaward and outside of the area of lands beneath navigable waters as defined in section 1301 of this title, and of which the subsoil and

<sup>33</sup> <http://www.capecodonline.com/apps/pbcs.dll/article?AID=/20100623/NEWS/6230318/0/rss04>

<sup>34</sup> [http://www.capecodonline.com/apps/pbcs.dll/article?AID=/20100714/NEWS/7140311/-1/NEWSMAP&utm\\_source=twitterfeed&utm\\_medium=twitter&utm\\_campaign=wind\\_power\\_home](http://www.capecodonline.com/apps/pbcs.dll/article?AID=/20100714/NEWS/7140311/-1/NEWSMAP&utm_source=twitterfeed&utm_medium=twitter&utm_campaign=wind_power_home)

seabed appertain to the United States and are subject to its jurisdiction and control.” 43 U.S.C. § 1331(a); *see also* CAA § 328(a)(4)(A) (cross-referencing this definition). The definition of “lands beneath navigable waters” is complex, but for practical purposes may be stated as extending seaward from each state’s coast for three geographical miles. *See* 43 U.S.C. §§ 1301(a)-(c). In sum, Horseshoe Shoal is part of the Outer Continental Shelf because it is more than three miles seaward from the coast line of Massachusetts.

EPA’s OCS air permitting authority applies to an “Outer Continental Shelf source,” which is defined to include only sources that are “located on the Outer Continental Shelf or in or on waters above the Outer Continental Shelf.” CAA § 328(a)(4)(C)(iii). An OCS source’s potential emissions include emissions from vessels en route to or from the OCS source within a 25 mile radius, and that radius may well (and does here) include state waters. Therefore, the permit’s calculation of total emissions includes all emissions from vessels in transit within the “Project Area,” which includes portions of state waters.

### **Comment H3**

In correspondence from ESS dated April 23, 2010, page A2 contains an illustration that does not show a scour mat or armoring. (Peter Kenney)

### **Response H3**

Based on EPA’s communications with Cape Wind, EPA understands that the foundations of the turbines will be either mats or rock armoring. As EPA understands from Cape Wind, the construction air emissions would be greater with armoring. Cape Wind assumed in its emissions estimates (which were used to develop the permit, including the Phase 1 emissions cap) that it would use armoring. *See* Cape Wind’s April 23, 2010 permit application revision.

### **Comment H4**

How are you going to govern Spanish companies? That's what they're looking to hire to come in here and do the work. It is probably who they are going to sell this company to. (Cliff Carroll)

### **Response H4**

The Final Permit explicitly applies to Cape Wind’s successor(s) in operating the permitted project; its contractors; and any agents or parties acting on its behalf. *See* Final Permit, Section II (definition of “owner/operator”). It also explicitly applies to subsequent owners. *See* Final Permit, Section XIII. Under OCSLA, foreign companies or persons operating on the Outer Continental Shelf are subject to the laws of the United States. *See* 43 U.S.C. § 1331(a)(1).