UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
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June 28, 2006

OFFICE OF THE
REGIONAL ADMINISTRATOR

Mark A. Prescott
USCG Deepwater Ports Standards Division (G-PSO-5)
U.S. Coast Guard Headquarters
2100 Second Street, SW
Washington, DC 20593

RE: USCG Draft Environmental Impact Statement for Northeast Gateway Energy Bridge, L.L.C. Liquefied Natural Gas Deepwater Port License Application, DOT Docket Number: USCG-2004-22219, CEQ# 20060195

Dear Mr. Prescott:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA), Section 404 of the Clean Water Act, and Section 309 of the Clean Air Act, we have reviewed the U. S. Coast Guard's (USCG) Draft Environmental Impact Statement (DEIS) for the Northeast Gateway Energy Bridge (Northeast Gateway or NEG), L.L.C. Liquefied Natural Gas Deepwater Port proposed in Massachusetts Bay.[1]

The DEIS details the Northeast Gateway proposal to construct and operate a deepwater port to import liquefied natural gas (LNG) to New England. The proposed port would be located in Massachusetts Bay approximately 13 miles south-southeast of Gloucester, Massachusetts. The deepwater port would consist of two subsea submerged turret loading buoys that would connect to a 16.4 mile, 24-inch-diameter pipeline that would deliver natural gas to the existing subsea Hubline pipeline which connects to shore. LNG would arrive at the port in Energy Bridge Regasification Vessels and would then be vaporized to natural gas using a shipboard closed-loop process. Following vaporization the natural gas would be transferred from the vessel through the loading buoys to the proposed pipeline. The proposed port would be located in federal waters. Approximately 12.5 miles of the pipeline lateral would be located in state waters and thus is subject to the Massachusetts Environmental Policy Act (MEPA). Northeast Gateway proposes to begin construction in 2007 and begin service by the end of that year.

[1] This letter serves as our comment on the DEIS, the Draft Environmental Impact Report prepared under the Massachusetts Environmental Policy Act, and the Corps of Engineers' public notice for a Rivers and Harbors Act Section 10 permit and Clean Water Act Section 404 permit for the project.

In addition to our environmental review role in this case, EPA is responsible for administering applicable provisions of the Clean Air Act and Clean Water Act. EPA also serves as a cooperating agency to assist the Maritime Administration (MARAD) and the USCG as lead agencies in preparing this EIS to fulfill all of the federal licensing agencies' NEPA compliance responsibilities. As noted in the DEIS, Northeast Gateway has submitted applications to EPA for permits under the Clean Air Act and Clean Water Act. EPA is currently reviewing those applications and expects to propose draft permits for public review and comment.

The Northeast Gateway proposal is one of two proposed LNG deepwater ports currently under review by this office, the Neptune LNG deepwater port being the other. As indicated in the DEIS, there are a number of onshore LNG terminal proposals in New England at various points in the state and federal review/approval process. How many of these facilities will ultimately be constructed is uncertain. Nevertheless, it is clear that New England's air quality has benefited greatly from the increased use of natural gas for electricity generation. EPA recognizes the need to bring additional natural gas supplies into New England. In recent years, the demand for natural gas for electric generation and heating has begun to exceed the capacity of the regional infrastructure to reliably meet that demand. As a result, the natural gas supply and distribution system must be enhanced to meet growing demand for this fuel and to maintain the environmental benefits gained over the last ten years. A well sited LNG facility that provides a new supply of natural gas to the region in an environmentally responsible manner can make a substantial contribution to maintaining our recent air quality gains and allow New England utility companies to continue to provide heat and electricity to their customers without interruption.

EPA has reviewed the DEIS focusing on direct, indirect and cumulative environmental impacts of the project and with due consideration to other existing and potential sources of impact. The proposed Northeast Gateway port is located in a portion of Massachusetts Bay bordered by the South Essex Ocean Sanctuary to the west, the North Shore Ocean Sanctuary to the northwest, the Stellwagen Bank National Marine Sanctuary to the east, and the Boston Harbor Channel to the south. According to the DEIS, this area of the ocean provides habitat for a number of marine organisms and is used for recreational and commercial fishing, whale watching, and vessel transit. In addition, the Massachusetts Bay Disposal Site for dredged material is located to the northeast of the proposed port site.

EPA has actively coordinated with the Coast Guard as a cooperating agency since Northeast Gateway filed its DWPA application and throughout the development of the DEIS. Our scoping comments called for consideration of the direct, indirect and cumulative impacts of the construction and operation of the project (including both the port and the pipeline) on water quality, the ocean bottom, marine organisms, and air quality, and for a full analysis of a range of project alternatives (including land based LNG alternatives and alternative LNG technologies) that could bring additional gas into New England. In addition, we requested an evaluation of various construction and operational measures that could potentially be applied to avoid and/or minimize impacts.

Finally, we offered written comments on the Interim DEIS (IDEIS) and input on the scope of analysis and content of the EIS during numerous meetings and telephone calls with the USCG and its consultants.

We appreciate the efforts of the Coast Guard and its consultants to respond to our comments on the IDEIS. Based on our review of the DEIS, we have identified certain issues that should be addressed in the FEIS and are detailed in the attachment to this letter. In general, we have offered comments and suggestions about the analysis and discussion of impacts to air and water quality and to marine organisms, as well as measures to avoid, minimize and mitigate for unavoidable impacts from the project.

We have rated the DEIS "EC-2-Environmental Concerns–Insufficient Information" in accordance with EPA's national rating system, a description of which is attached to this letter.

EPA appreciates the opportunity to offer comments on the DEIS and intends to continue our active participation with the Coast Guard and other agencies in helping to develop a sound FEIS for the Northeast Gateway project. Please feel free to contact Timothy Timmermann of the Office of Environmental Review at 617/918-1025 if you wish to discuss these comments.

Sincerely,

Robert W. Varney
Regional Administrator

Attachment

Summary of Rating Definitions and Follow-up Action

Environmental Impact of the Action

LO--Lack of Objections
The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC–Environmental Concerns
The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO--Environmental Objections
The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU--Environmentally Unsatisfactory
The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1--Adequate
EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2--Insufficient Information
The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3–Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

EPA Region One Comments on the USCG Draft Environmental Impact Statement for the Northeast Gateway Energy Bridge Deepwater LNG Port

Note: where possible we have indicated a page number and paragraph to reference our comments to a specific section of the DEIS.

Air issues (general):

ES-19: EPA recommends adding to the Executive Summary a paragraph entitled "Air Quality Impacts" that summarizes the air pollution impacts of construction and operation of the project. The paragraph should note, in particular, that (1) NEG has submitted a Clean Air Act (CAA) minor source preconstruction permit application to EPA; (2) EPA will develop and issue all applicable CAA permits to regulate emissions from the project's stationary operations; (3) USCG/MARAD will develop and issue a General Conformity determination identifying emission offsets and any other mitigation measures required to ensure the construction and operation of the project will conform with the Massachusetts State Implementation Plan (SIP); and (4) the applicant has submitted modeling analyses (and USCG/MARAD have conducted confirmatory modeling runs) to evaluate the project's impact on ambient air quality, which will be supplemented by further EPA analysis during development of the CAA preconstruction permit.

ES-29, 1st paragraph: The DEIS states (at ES-29 and pg. 6-33) that "EPA and MDEP's air quality planning process considers the NEPA air impacts assessment" described in this DEIS. EPA notes that the NEPA air impacts assessment for the NEG project is not part of either EPA's or MDEP's broader air quality planning processes. These statements should be eliminated in the FEIS and the relevant sentences revised to read: "The NEPA air impacts assessment for this project encompasses..."

Page 1-11 (Table 1-2): "SIP Conformance Determination" should be revised to read "CAA General Conformity Determination." Also, the reference to "Nonattainment New Source Review Permit for construction" should be deleted, as it is not yet clear whether NEG will be subject to a major or minor NSR permit.

Page 2-38, 3rd paragraph: need to correct first sentence – emissions from the project will be offset in accordance with major NSR requirements *only if* EPA determines that NEG is a major source of NOx. It is not yet clear whether the project will be subject to major NSR.

Page 4-126 (last paragraph), 4-136 (2nd paragraph): correction: construction emissions will be evaluated as part of CG/MARAD's General Conformity Determination, not as part of EPA's preconstruction permit development process.

Page 4-127 (3rd full paragraph): there is no section 2.2.1.3.

Page 4-127 (5th paragraph): The DEIS states that stationary emissions of the NEG project "are not likely to exceed any major source NSR/PSD thresholds." EPA has not

yet reached this conclusion and therefore recommends the EIS indicate that the applicant believes that stationary emissions are unlikely to exceed major source NSR/PSD thresholds. As part of EPA's development of the applicable CAA preconstruction permit, EPA will evaluate the applicant's proposed air pollution controls and associated compliance monitoring mechanisms to determine whether NEG is appropriately subject to major or minor NSR.

Page 4-127 (last paragraph): correction: EPA (not MDEP and other cooperating agencies) will review the information about stationary emissions at the port and develop all applicable CAA permits, which will be available for public review and comment prior to final issuance.

Page 4-136 (last line): The applicable major source threshold for ozone is 50 tpy (NOx or VOCs). The applicable major source threshold for PSD pollutants is 100 tpy. As such, the language in parentheses should be revised to the following: "(i.e., 50 tpy of NOx or VOCs, or 100 tpy of any PSD pollutant)."

Page 6-43 (Table 6.4-1): correction to row "air quality" and column "proposed action and alternatives": NOx emissions for operation are estimated at 49.9 tpy (according to NEG's air permit application), not 99 tpy.

Operational Impacts on Air Quality

Page 4-129 (table 4-26): EPA notes that NEG's unrestricted potential to emit NOx and CO exceeds the major source threshold for both pollutants (50 and 100 tpy, respectively). Therefore, in order for EPA to recognize NEG as a "minor" source, the applicant will need to demonstrate that it can comply with practically enforceable limits on its "potential to emit" ("PTE") for *both* NOx and CO emissions. EPA will evaluate the applicant's proposed air pollution controls and associated compliance mechanisms during development of the preconstruction permit to determine the applicable permitting requirements (i.e., major vs. minor NSR) and the appropriate permit conditions to meet those requirements.

Ambient Air Impacts Analyses (Modeling):

Page 3-129 (Table 3-48): Footnote b is incorrect as applied to the PM10 24-hour standard; for that particular standard, there should be a separate footnote (footnote i) stating as follows: "expected number of exceedances must be less than or equal to one each year (on average) over a 3-year period."

Page 4-125 and 4-135: It is not clear whether USCG modeled the emissions associated with construction of the pipeline and buoy system. Given that emissions from vessels involved in construction of the port and pipeline are expected to result in ~ 330 tpy NOx (see pp. 4-125 and 4-135 of DEIS), EPA recommends that USCG conduct modeling analyses to evaluate these NOx emissions as part of the NEPA air impacts assessment. Specifically, USCG's modeling analyses should support a determination that mobile

source and other construction-related emissions will not cause or contribute to NAAQS violations, based on Significant Impact Levels (SILs) and screening analyses.

Page 4-130: NEG used the OCD model, which is a preferred EPA "guideline" model. EPA guideline models are approved by EPA (after public review) as the best available models for specified purposes, and required for use in permitting air pollution sources and approving state air pollution control strategies. As such, EPA approves of NEG's selection of the OCD model to assess the effects on ambient air quality of the NEG deepwater port's operation. EPA also agrees with NEG's selection of data sites (e.g., Logan for overland surface meteorological data, Gray for overland mixing heights, and a buoy for overwater surface data). We note, however, that overwater mixing height is a critical hourly input to the OCD model. Without a mixing height, the model will not calculate a concentration; with an incorrect value, the model will produce an incorrect result. NEG's minor source permit application states that Chatham mixing heights were used for the requisite OCD overwater mixing heights. The mixing heights commonly available from upper air stations, such as Chatham, are based on Holzworth's method. This procedure (by which raw upper air sounding data are processed to yield morning and afternoon mixing heights) assumes *overland* surface properties. The Holzworth method generally should not be used for overwater mixing heights, unless a case can be made for doing so. EPA notes that it is seeking more information from NEG on how it calculated mixing heights from the Chatham soundings, and a justification for the use of such mixing heights as an input to the OCD model, to confirm that NEG's modeling analyses – which formed the basis for USCG's modeling analyses – did not underestimate the project's impacts on air quality.

Page 4-131 (Table 4-28): This table does not identify the PM10 or PM2.5 emission factors which were used to estimate PM emissions for input to the OCD modeling analysis. In particular, it is not clear whether the PM estimates entered into the modeling analysis included both filterable *and* condensable PM. EPA notes that both filterable and condensable PM should be included in the PM emissions estimates and NAAQS modeling analyses carried out as part of the NEPA air impacts assessment. If the modeling assessment did not include condensable PM emissions estimates, we would recommend incorporating these estimates in the FEIS. Furthermore, if such revised modeling analyses indicate that the ambient impacts of port operation may exceed the SIL for PM, further modeling exercises may be necessary to adequately evaluate the ambient air impacts of port operation under NEPA. EPA will include both filterable and condensable PM emissions estimates in the NAAQS modeling analyses to support EPA's preconstruction permit as well.

Page 4-133, last paragraph: correction: Although mobile source emissions are not counted for purposes of determining NSR/PSD applicability and measuring PSD increment consumption (only stationary emissions will be subject to the terms and conditions of an EPA-issued preconstruction permit), mobile source emissions do affect ambient air pollutant concentrations and must be considered in NAAQS modeling. In addition, distance from sensitive receptors does not reduce ambient air impacts as the NAAQS must be met at all receptors in the vicinity of the port, outside of the 500-meter

safety zone. Finally, if OCD modeling analyses of port operations indicate any exceedance of a SIL, further NAAQS modeling of both mobile source emissions and stationary port emissions will need to be conducted to determine whether the NAAQS are adequately protected.

Water/Marine Biological Impacts

ES-1, paragraph 4: In the last line we suggest an edit as follows: ". . . Act of 1899, and Sections 404 and 511(c) of the Clean Water Act (CWA)." We offer this suggestion because Section 1502(9)(D) of the DWPA makes deepwater ports "new sources" for Clean Water Act purposes and, therefore, requires NEPA compliance to support the NPDES permit for the facility. Of course, according to DWPA § 1504(f), the USCG's EIS serves as the EIS for all involved federal agencies, including EPA.

ES-6 to ES-8: This discussion of siting alternatives should mention the Neptune proposal. If the Neptune proposal is in the area of one of the siting alternatives for the NEG proposal, it should be mentioned here that another applicant is proposing a similar project in the location of one of the site alternatives.
ES-8, 2d paragraph: Suggested edit: "Although the STV closed-loop system would result in somewhat greater emissions of air pollutants than the open loop system, it would likely have considerably less impact on marine resources."

ES-8, 1st paragraph on pipeline routes: This discussion mentions Neptune for the first time, without explaining what is being referenced. We suggest that the description here be more comprehensive.

ES-11, last paragraph: The discussion states that no seawater would be used for regasification or the vessel's main condenser cooling. Yet in Section 4.1.2.2, in both the text and the summary of water intake and discharge (Table 4-2), it is anticipated that some seawater will be used for both regasification and cooling. We suggest that the intakes and discharges of all seawater be made clear and described consistently in tables and text.

ES-12 to ES-13: The organization of the section on potential impacts to biological resources is unclear. The introductory section on p. ES-12 doesn't mention the risk of vessel strikes during construction and operation. The vessel strike issue is, however, mentioned further below. The section on "Marine Mammals and Sea Turtles" only discusses the threat from construction vessels, whereas the threat from vessels during the operational phase of the project is discussed in the DEIS section on "Threatened and Endangered Species." This portion of the DEIS seems to focus on the right whale because it is "the only critically endangered species" of concern, but all *threatened or endangered species are of concern and EPA recommends that potential impacts to all threatened and endangered species should be addressed in the FEIS.* The FEIS should exercise care not to suggest that only "critically endangered" species warrant analysis.

ES-13, 2d full paragraph: The DEIS states that there will be only minor impacts to whales from EBRV entrainment of their food sources (e.g., zooplankton, sand lance and herring) in seawater withdrawals. The EIS should specify that this conclusion is based on the relatively low volume water withdrawals proposed for the project. The impacts might not be minor if significantly larger volumes were at issue. (This point is adequately captured with respect to Essential Fish Habitat species on p. ES-14, 2d paragraph.)

ES-17, 1st paragraph: The DEIS states that the license will require the applicant to comply with "all environmental mitigations, standards and limitations set forth in the environmental permits issued by the regulatory agencies." This text should be revised to make clear that the DWPA license will require the applicant to comply with any mitigation measures deemed necessary to (1) ensure that facility "will be constructed and operated using best available technology, so as to prevent or minimize adverse impact on the marine environment" under DWPA§ 1503(b)(5), (2) ensure that issuance of the DWPA license will comply with other applicable federal statutes (e.g., the Endangered Species Act, the Magnuson-Stevens Act, the Coastal Zone Management Act), and (3) ensure compliance with all permit requirements under the CAA, CWA and any other applicable federal licensing statutes.

ES-18 to ES-19: There may be a conflict between the vessel speed restrictions for port construction and operation that are listed here (i.e., 13 knots or less), and the discussion of vessel speed concerns and vessel speed restrictions (especially for the EBRVs) on p. ES-13. This should be clarified.

ES-24, 2d full paragraph: We suggest adding the language indicated by underlining: "... so there would be no large volume discharge of <u>either heated or</u> chilled water and ..."

ES-25, 3rd full paragraph: We do not believe that the second sentence in this paragraph can be substantiated, and we suggest that it either be deleted or edited as follows: "~~Generally, regional~~ <u>In some cases,</u> onshore power plants that operate at substantially higher intake rates have not been shown to have major negative impacts on these communities, but ..."

ES-29, last paragraph: We are not aware of any deepwater port proposals in the Gulf of Maine. The point of this last paragraph is unclear.

Page 1-6, § 1.2: The text in the first paragraph should indicate that the EIS is intended not only to support the Secretary of Transportation's licensing decisions, but also the licensing decisions of the other federal agencies. That appears to be the intent indicated on p. 1-1, 4th paragraph, and would be consistent with DWPA Section 1504(f).

Page 2-36 to 2-37: Based on the facts of this case, as discussed in the evaluation presented in the DEIS, we recommend that the USCG consider screening out the option of utilizing the STV technology in an open-loop mode. We believe that the analysis in the DEIS is adequate to support a decision that further detailed evaluation of that option is not necessary. There are several reasons for our recommendation. First, the applicant

has proposed to use STV technology in a closed-loop mode and *not* in an open-loop mode. Second, open-loop operations could result in significantly greater impacts from the entrainment and impingement of marine life – see DEIS, pp. 4-8 and 4-39, regarding seawater use required for open-loop operations – including entrainment and impingement of zooplankton, sand lance, and herring, which are an important food source to endangered whales residing in and transiting the vicinity of the project (see DEIS, p. 4-68). Third, open-loop operations without the addition of pollution prevention and mitigation measures would also result in greater pollutant discharges (e.g., thermal discharges). Fourth, while the DEIS mentions that open-loop operations would result in lower air emissions and energy use, the marginal differences are not significant. Fifth, as the DEIS also mentions, cold water temperatures prevailing in the project area would render open-loop operations either infeasible or less reliable and effective than closed-loop operations. To enable open-loop operations, the DEIS points out that supplemental warming would be required during most months of the year, which would increase the air emissions and energy use of the alternative. See DEIS, p. 4-39. In light of all these factors, we believe it would be reasonable to screen this alternative out from further detailed analysis in the FEIS. We would note that if the USCG decides to screen out this alternative, it should identify it as an alternative considered but not to be analyzed in further detail and explain why.

Page 2-53: The careful attention being given to issues related to the North Atlantic right whale is warranted given its current population figures. The EIS should also give careful attention to other endangered species, however, and should avoid creating any impression that only the right whale requires such care. Repeated statements that "the North Atlantic right whale is the only critically endangered species with habitat in the project area," without corresponding discussions of issues related to other endangered species in the project area, run the risk of creating that misimpression.

Page 4-3 (bottom) to 4-4 (middle): We recommend that the FEIS note that hydrostatic testwater discharges will be subject to NPDES permit requirements and, in particular, application of EPA's ocean discharge criteria (in federal waters) or MA water quality standards for discharges into state waters. Also, the location of the hydrostatic testwater discharges should be identified.

Page 4-4 to 4-6: In section 4.1.2.2 on page 4-4, the total discharge from food waste, graywater, and disinfected sewage that will be is reported to be 0.87 mgd while the EBRV is in port. In the next paragraph (page 4-5), it is reported that only 0.005 mgd will be discharged while the vessel is in port and the rest will be stored and disposed of out of port under MARPOL. This contradiction should be resolved and the actual anticipated discharges made clear.

Page 4-6: The DEIS presents information regarding seawater withdrawals and wastewater discharges for various aspects of the EBRV operations. It should be made clear whether or not these figures are *per vessel* values, which we interpret them to be, as opposed to values for the entire port. The DEIS should also then make clear the extent to which the port might have two EBRVs engaged in regasification operations

simultaneously, so that the maximum values for the port can be identified along with the relative frequency that such maximum values would occur. This discussion should then be expanded in an appropriate manner in the cumulative impacts analysis section to consider the effects with both the Northeast Gateway and Neptune deepwater ports in operation (for air, water, and marine organism impacts)—see comment below.

Page 4-8, paragraph 5: The DEIS appears to state that the temperature of discharges from the EBRV using the STV system would be the same whether it is operated in the open-loop or closed-loop mode. Is this correct? Also, a larger volume of water heated (or chilled) to a particular temperature will have a greater heating (or cooling) effect on the receiving water than a smaller volume of water heated (or chilled) to that temperature. This greater heating (or cooling) effect should be identified and discussed.

Page 4-33: In the discussions of operational impacts to phytoplankton and zooplankton, arguments are made regarding monitoring results and conclusions with respect to the Seabrook Station power plant. We do not necessarily agree with the way that the import of those results is characterized here. Rather, we think a better way for the EIS to demonstrate the stated relative insignificance of the entrainment effects here is to refer to the relatively low withdrawal volumes and correspondingly low levels of entrainment that will occur.

Page 4-43, 4-47: EPA recognizes the relatively low entrainment numbers associated with closed-loop STV operations. We do not, however, find the comparison of finfish losses by EBRV entrainment to the total numbers of fish harvested by Massachusetts commercial and recreational fishermen to be a helpful point of comparison. This comparison says nothing about the significance of the losses from the vicinity of the deepwater port, the state of the stocks of the species in question, or whether the landings statistics represent what is considered to be excessive fish pressure. It is also true that fish harvested by fishermen represent what is considered to be a beneficial use of the natural resource, while fish entrained in a cooling system is an adverse byproduct of that process. Of course, this byproduct may be insignificant in a given case. A better way to demonstrate such insignificance might be to identify what percentage of a species' population in the area of the facility would be lost to entrainment by the EBRV.

Page 4-48: Section 4.2.4 is identified as covering "non-endangered marine mammals and sea turtles found in the proposed Project area," whereas threatened and endangered marine species are discussed in section 4.3 (see p. 4-74). There are, however, no species of sea turtle encountered in the proposed Project area that are neither threatened nor endangered. (See DEIS, Table 3-22.)

Pages 4-60, 4-69, 4-71, 4-80: The DEIS addresses the issue of vessel speed as it relates to the risk of vessel strikes to endangered species. Final decisions on precisely how to address this issue, as well as other mitigation measures for endangered/threatened species and marine mammals, will require consultation with the NOAA.

Pages 4-68 to 4-71, 4-83 (§ 4.3.6): The EIS should make clear whether or not the mitigation measures detailed in Section 4.2.4.6 are being proposed (or recommended) by the USCG to be included in any future DPA license that may be issued by MARAD for the Project. This appears to be the intent, but the DEIS is vague on this point.

Page 4-74 and Table 4-14: The text on p. 4-74 indicates that "[s]ince 1885" there have been 26 known ship strikes of threatened or endangered whales in the Massachusetts Bay area, but the earliest of the 26 ship strikes reported in Table 4-14 is from 1976. Why does the text refer to occurrences "since 1885?"

Sections 4.9 and 5.4.2: These sections discuss potential impacts on vessel transportation in Massachusetts Bay and the designation of various types of safety zones that will affect navigation. It will be important to coordinate, as appropriate, with the U.S. Navy and the State Department to ensure that there are no problematic conflicts with U.S. military vessels or submarines or any international navigational rights. See DWPA, 33 U.S.C. §§ 1509(d)(1) and 1518(c). (We have seen confusion in this regard with other, past offshore project proposals. The USCG may have already taken care of this, but since we do not see it reflected in the DEIS, we offer this comment.)

Page 6-15, 3rd paragraph: The text indicates that fish stocks have declined over the decades due to cumulative effects of "heavy fishing pressure, nearshore water quality degradation from point and non-point pollution sources, pipeline projects, and anthropogenic habitat modification (e.g., from dredging, offshore spoil/waste disposal)." The effects of cooling water intake structures should be added to this list of cumulative influences on fish stocks.

Page 6-20, 4th paragraph: We do not believe the first sentence of this paragraph can be substantiated. Therefore, it should either be deleted or edited as follows: "~~Generally, regional~~ In some cases, onshore power plants that operate at substantially higher intake rates have not been shown to have major negative impacts on these communities, but ..."

Pages 6-21 to 6-22: The DEIS does not adequately support the stated conclusion that "even under open-loop vaporization, both projects would still only produce a minor adverse impact to plankton and age-1 equivalent communities" in the proposed area of both the NEG and the Neptune projects. As stated above, using total commercial and recreational landings for all of Massachusetts as a point of comparison to establish this conclusion is not persuasive. In addition, the DEIS as currently written does not support a conclusion that open-loop cooling might not cumulatively have a significant effect on endangered whales by adversely effecting their food sources (e.g., zooplankton, sand lance, herring, etc.). Having said this, the relatively low volume water withdrawals associated with closed-loop operations by both the NEG and Neptune projects would result in correspondingly low entrainment levels and would be unlikely to pose significant cumulative effects.

Construction Issues and Schedule

The DEIS reviews the current status of the North Atlantic right whale population and describes it as critically endangered (Section 3, pages 3-77 to 3-79). The document cites the most recent population estimate as 291 (Page 3-78) and states that even the loss of one individual whale could result in a population level impact (Page 2-53).

The DEIS does a good job of detailing the timing of various construction activities and the presence of various marine species. While great care must be taken to avoid or minimize threats to all endangered species, the DEIS points out that right whales are critically endangered and due to this fact, this resource should receive special consideration. EPA agrees that the potential impacts from the construction of this project to marine resources are not all equal. If construction impacts to right whales are a concern, then a construction schedule that takes into account their peak abundance should be considered.

The DEIS should provide more detail on what assumptions have been made in each of the alternative schedules for weather delays. The Hubline LNG pipeline project in Boston Harbor greatly underestimated delays due to weather and equipment availability. Both of those factors have the potential to influence the construction of this project. Due to the massive quantity of rebuilding occurring after Hurricane Katrina, construction materials and equipment are in short supply. A contingency plan should be in place that will address this potential delay factor.

The DEIS states that a Tremmie Tube will be used to place backfill material more precisely during construction of the pipeline. The Hubline pipeline project developer stated that a Tremmie Tube would be used in that project but it was deemed to be "unsafe" to do so, and as a result, backfill material was dropped from the near surface with a wide dispersion pattern. The FEIS should discuss whether it is realistic to assume that Tremmie Tubes can be used with this project and if there are any weather/sea conditions that would preclude their use.

Monitoring

The DEIS should contain a discussion on the scope of monitoring that should occur before, during and after construction. EPA recommends that recovery of the benthic community be monitored along the gas pipeline route and in the vicinity of the port. We also recommend that a comprehensive assessment of marine mammal use of this area should be completed with the construction and the ongoing operation of this facility. Ichthyoplankton sampling could reasonably be conducted to provide an estimate of the quantity of fish eggs and larvae lost during the operation of this facility. Monitoring marine mammals in a rigorous, quantitative fashion is difficult. Marine mammal monitoring might be best covered by a tiered monitoring approach. The initial tier may be more qualitative in nature, followed by more quantitative monitoring as needed.

Mitigation

EPA recommends that the FEIS explore possible mitigation measures for specific impacted resources, and indicate whether the applicant is willing to undertake compensatory mitigation projects for unavoidable impacts. The DEIS mentions the use of passive acoustic sonar arrays as a way to detect whales and potentially reduce the risk of ship strikes during construction as one possible mitigation alternative. In addition, to mitigate noise impacts, ships can be equipped with quieting technology, such as more efficient and aerodynamic propellers. These propellers are quieter than standard propellers and make the vessel more fuel efficient. Further details on the efficacy of these measures during construction and operation of the project could reasonably be explored in the FEIS. It is important that the FEIS clearly distinguish between *possible* mitigation measures and those which will be *required* as license conditions. If the USCG is not prepared to state in the FEIS which measures will be incorporated as license conditions, the FEIS should discuss, and clearly distinguish between impacts with and without mitigation.

Second Generation LNG Vessels Impact Analysis

In section 2.1.1, the second paragraph describes existing EBRVs that will be used that have the capacity to transport 138,000 m^3 of condensed natural gas. Also mentioned are 150,900 m^3 capacity EBRVs that are currently the trend and "potentially larger" EBRVs that may utilize the port with up to 250,000 m^3 of condensed natural gas. The FEIS should include the environmental impacts of different sized vessels that the buoys are being designed to accommodate. This analysis should include estimates of entrainment, air emissions and noise impacts.

Cumulative Impact Analysis

EPA recommends that the cumulative impact analysis describe the impacts assuming both the Northeast Gateway and Neptune deepwater ports are constructed and assuming each has the next class of tankers at all four of their buoys at the same time. This appears to be a reasonably foreseeable operating scenario at this point in the process for both projects. Figure 4-4 provides a good presentation of the noise generated from one of the existing class of vessels for only one project. A series of similar figures depicting various critical noise contour levels showing areas of potential sound overlap should be produced for the cumulative impact analysis, with the various iterations of vessels from both Northeast Gateway and Neptune. Moreover, the noise impact analysis could reasonably consider sound produced when the vessels are underway as well as on the buoys. Data produced by NOAA's Stellwagen Bank Marine Sanctuary shows that the sound waves produced by vessels travel great distances and move along with the vessel. We recommend that the potential impact from these mobile sound waves be documented and analyzed.