July 17, 2006

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 Neptune Liquefied Natural Gas (LNG) L.L.C. Deepwater Port License Application, DOT Docket Number: USCG-200522611, CEQ# 20060221

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 Neptune Liquefied Natural Gas Deepwater Port proposed in Massachusetts Bay.[1]

The DEIS details the Neptune proposal to construct and operate a deepwater port to import liquefied natural gas (LNG) to New England. The proposed port would be located in federal waters of Massachusetts Bay approximately 22 miles northeast of Boston, Massachusetts, and 7 miles south-southeast of Gloucester, Massachusetts. The deepwater port would consist of two subsea unloading buoys that would connect to a 10.1 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 Shuttle 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 unloading buoys to the proposed pipeline. A portion of the pipeline lateral from the port to the existing Hubline would be located in state waters and thus is subject to review under the Massachusetts Environmental Policy Act (MEPA). Neptune proposes to begin construction in 2009 and begin service by the end of that year.

In addition to our environmental review role in this case, EPA 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. EPA is also responsible for administering applicable provisions of the Clean Air Act and the Clean Water Act. As noted in the DEIS, Neptune has submitted

[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.

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 recommend that the USCG's discussion of issues in the Neptune and NEG FEISs be consistent.

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 Neptune 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,

/s/

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 Neptune 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.

General

Throughout the DEIS are statements that certain mitigation measures "are expected to be" conditions of the DPA license and that various other measures "would be" carried out to reduce impacts on water quality, biological resources, and marine mammals. Given that it is not yet clear which of the identified mitigation measures will ultimately become enforceable license requirements, EPA recommends revising these statements generally to state either that USCG recommends the identified mitigation measures be incorporated as enforceable license conditions, or that USCG and MARAD are considering these mitigation measures and may incorporate them as enforceable license conditions.

Page 2-42, lines 38-40: corrections: The NEG Deepwater port license application (not the Neptune application) was determined to be complete on Sept. 30, 2005. Similarly, the next sentence (which currently states Neptune's estimated startup date of 2009) should be revised to note that NEG estimates project startup for commercial operation in late-2007.

Page 2-43: correction to "status" box for Broadwater Energy LNG: "~~In pre-filing process~~ NEPA review in progress."

Air issues (general)

ES-11, lines 41-44: EPA recommends the following edit to clarify this sentence: "~~Without more efficient combustion or additional controls, c~~Closed-loop shell-and-tube vaporizer alternatives ~~would~~generally have higher air emissions compared to the open-loop shell-and-tube vaporizer alternative~~, but~~. Given the Applicant's proposed air pollution control technologies for this Project, however, the closed-loop alternative is not expected to result in significantly greater amounts of air pollution compared to the open-loop alternative in this case. Moreover, the open-loop option would require supplemental warming, given cold water temperatures in this area, which would result in increased air emissions that could further reduce any marginal emissions benefits of open-loop operations. The Applicant's modeling analyses (and USCG's confirmatory modeling runs) indicate ~~modeled emissions~~that the ambient air impacts ~~would~~ of construction and operation of this Project will ~~still~~ be below CAA significance thresholds.

ES-14, lines 22-24: The DEIS states that "[l]icense conditions would be recommended to require all monitoring and compliance requirements associated with the Port's air permits to be met during the operating life of the facility." We suggest revising to state more clearly that "USCG recommends that the DPA license include conditions requiring

the Applicant to comply with monitoring and inspection provisions necessary to assure compliance with the applicable air permits."

ES-14, lines 24-27: The last two sentences of the "air quality" section are inaccurate and should be revised as follows: "USCG is currently evaluating the construction and operational emissions from the project to determine whether the emissions will conform to the Massachusetts SIP, consistent with the General Conformity requirements of the CAA. A General Conformity determination is required if the project's direct and indirect emissions of NOx or VOCs exceed the applicable thresholds at 40 CFR 93.153(b). Emissions subject to General Conformity will be found to conform to the Massachusetts SIP if (1) Massachusetts revises its SIP to specifically identify and account for these emissions, or (2) the emissions are fully offset through an enforceable mechanism – e.g., a requirement in the License that the Applicant purchase emission reduction credits. If the proposed action's emissions are below the applicable thresholds at 40 CFR 93.153(b), a General Conformity determination is not required."

Page 2-22, 2-23 ("Propulsion and LNG Vaporization"): The FEIS should note that the statements (bottom of pg. 2-22 to top of pg. 2-23) about the relative efficiencies and reliabilities of the identified propulsion and vaporization systems reflect *Neptune's* assertions in its submissions to USCG, not the independent conclusions of EPA or any other cooperating agency. Moreover, these analyses are not necessarily relevant to EPA's evaluation of available air pollution control technologies for the Neptune or other deepwater port proposals. EPA will evaluate the air pollution control technologies (and associated vaporization systems) proposed by each applicant on a case-by-case basis, as part of its development of the applicable CAA preconstruction permits.

Page 3-87, Table 3.8-1: Several corrections need to be made to the table. First, the 24-hour PM10 PSD increments take a form different from the 24-hour PM10 NAAQS. Accordingly, the table should include a footnote for the 24-hour Class I and Class II PSD increments stating "Not to be exceeded more than once in any year." Second, the "form" listed in the table for the 24-hour PM10 NAAQS is no longer effective ("99^{th} percentile"). The 24-hour PM10 NAAQS now in effect requires that the expected number of days annually with concentrations over 150 ug/m3 be less than or equal to one. As such, the following correction should be made in the second row of the table, under "form": "~~99^{th} percentile of concentrations in a given year, averaged over 3 years~~Expected number of days of higher concentrations less than or equal to one in a given year." Finally, the table (at the bottom, in footnotes) should identify as the "source" 40 CFR part 50 appendix K (the data in this table appears to have been erroneously taken from appendix N).

Page 3-89 to 3-90: The discussion of NSR requirements is not accurate. EPA recommends replacing the first three paragraphs under the "NSR" heading (pg. 3-90, lines 10-31) with a revised discussion divided into three subheadings: (1) Prevention of Significant Deterioration (PSD), (2) nonattainment NSR (NNSR), and (3) minor NSR. The term "New Source Review" encompasses all three of these preconstruction permitting programs. *All* new and modified sources (not just sources locating in

nonattainment areas, as the DEIS states) must undergo at least one of these NSR permitting processes prior to construction or modification, depending on the types and amounts of pollutants they will emit. (Note: the discussion of PSD on pg. 3-89 should be moved here to the "PSD" subheading under the broader "NSR" heading)

The PSD program applies to any *major source* of a pollutant for which the area is designated attainment. The NNSR program applies to any *major source* of a pollutant for which the area is designated nonattainment. The minor NSR program applies to all *minor* sources in all areas.

The entire Commonwealth of Massachusetts is designated moderate nonattainment for ozone. Accordingly, major sources of ozone precursors (NOx and VOCs) are subject to Massachusetts' NNSR program at 310 CMR 7.00, Appendix A. Massachusetts is designated attainment for all other criteria pollutants. Given that Massachusetts does not have its own PSD regulations, major sources of attainment pollutants (SO2, NO2, PM, CO, and lead) are subject to the federal PSD program at 40 CFR 52.21. Finally, all *minor* sources of criteria pollutants in Massachusetts are subject to the Commonwealth's minor NSR program at 310 CMR 7.02.

Under the DWPA, Massachusetts air pollution control regulations apply to the Neptune project to the extent applicable and not inconsistent with federal law. As such, the Neptune project is subject to the NSR permitting requirements that apply to sources in Massachusetts. Consistent with Massachusetts NSR requirements, the "major source" threshold for ozone precursors (NOx and VOCs) that applies to the Neptune project is 50 tpy. The applicable "major source" threshold for all attainment pollutants (SO2, NO2, PM, CO, and lead) is 100 tpy. EPA will evaluate all stationary emissions of criteria pollutants during development of the preconstruction permit to determine whether Neptune is subject to major or minor NSR requirements.

Page 3-91, lines 21-26: The discussion of General Conformity requirements should be revised as follows: "General Conformity requirements apply to the project because the Neptune port is subject to the air pollution control requirements of Massachusetts, all of which is designated nonattainment for ozone. Specifically, General Conformity requirements apply to all emissions directly or indirectly resulting from construction or operation of the port and pipeline lateral that (1) occur within Massachusetts territorial waters and the 500-meter safety zone around the port itself, and (2) exceed the applicable emission thresholds at 40 CFR 93.153(b). USCG and MARAD must evaluate these emissions and show that the action meets the applicable conformity requirements to ensure that emissions from the project conform to the Massachusetts SIP." The DEIS correctly notes that because Massachusetts is part of the OTR, the applicability thresholds are 100 tpy for NOx and 50 tpy for VOCs.

Page 3-95, Table 3.8-2: EPA recommends that the FEIS briefly explain the pertinence of this table to existing or future air quality in the vicinity of the port. In addition, we note that during summer months, air temperature exceeds the seawater temperature, while

during winter months, seawater temperature exceeds air temperature. As such, the air-sea temperatures should be marked + or -, as appropriate.

Page 4-119, 1st full paragraph: First, EPA recommends that the FEIS note that, in addition to CAA permit requirements, the DPA license will also require the Applicant to implement measures identified in USCG/MARAD's General Conformity determination as necessary for the project's emissions to conform to the Massachusetts SIP (e.g., to obtain required offsets). Second, EPA recommends that the FEIS include in its discussion of environmental impacts (in Section 4) a summary of the status of USCG/MARAD's evaluation of operational and construction emissions, in consultation with USEPA and MassDEP, pursuant to the CAA General Conformity requirements of CAA 176(c) and 40 CFR part 93 subpart B. The DEIS indicates that the SRVs will burn 99% natural gas "while underway" (see ES-5, lines 38-45). EPA recommends clarifying, in the discussion of General Conformity, whether the license will require Neptune to commit to this fuel mix for the SRVs at *all* times or only during certain periods. This is important because, ultimately, USCG/MARAD's General Conformity determination must be based on an accurate assessment of the project's construction and operational emissions, including an accurate account of SRV to-and-fro emissions.

Page 6-12 (Table 6.3-1): The column "project and alternatives" and row "air quality" should be revised to note that, in addition to construction emissions, operational emissions (from operation of LNGCs and support vessels) will be evaluated as part of USCG's General Conformity review.

Ambient Air Impacts Analyses (Modeling)

ES-17, lines 18-20: The DEIS states that cumulative impact analysis is not required because modeled emissions from all 3 proposed LNG terminals are well below significance levels. 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 ~ 200 tpy NOx, EPA recommends that USCG conduct modeling analyses to evaluate these NOx emissions as part of the NEPA air impacts assessment. Specifically, we recommend USCG's modeling analyses consider whether mobile source and other construction-related emissions will or will not cause or contribute to NAAQS violations, based on Significant Impact Levels (SILs) and screening analyses.

Page 4-110 (bottom) to 4-111: The DEIS discusses only *vessel* emissions associated with construction of the port and pipelines. EPA recommends that *all* emissions associated with construction of the port and pipelines be evaluated and modeled to ensure they will not cause or contribute to NAAQS violations if they are above the relevant de minimis thresholds.

Page 4-112, lines 4-5: The DEIS states that "[m]obile source emissions are. . not subject to modeling under the stationary source permitting regulations." EPA notes that 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, 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.

Page 4-114: It is not clear whether Neptune's inventory of PM emissions included both filterable *and* condensable PM emission factors (for PM10 and PM2.5). 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, EPA recommends revising the analysis to incorporate these estimates. 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 4-117 (bottom): As critical as Neptune's selection of the OCD (EPA guideline) model to the validity of the air quality analysis is the meteorological data used to drive the model. We recommend this section specify what overland and overwater data were used to drive this application of the OCD model, including mixing height. If USCG applies Holzworth's method, which is commonly used to estimate mixing height over the land, it should provide a justification for doing so when estimating mixing heights over water.

Page 6-31, lines 12-14: EPA notes that it has not yet determined the applicable CAA permitting requirements for either the Neptune or NEG proposal (i.e., major or minor NSR). As such, we recommend the following edits: "~~The Neptune and NEG projects are both classified as minor sources under relevant air quality regulations. Therefore, degradation of air quality from operations is expected to be acceptable under existing air quality regulations.~~ Neptune and NEG each believe that stationary emissions from their projects, respectively, are unlikely to exceed major source NNSR/PSD thresholds. Given the relatively small amounts of air pollutant emissions expected from operation of these projects, and the various modeling analyses indicating that ambient concentrations of criteria pollutants resulting from construction and operation of each port will remain below all SILs, the cumulative air impacts of the three identified LNG terminals are expected to be minor."

Page 6-31, lines 18-20: The last sentence of this paragraph is not entirely accurate and should be revised as follows: "Therefore, ~~degradation of~~ the air quality impacts ~~from~~ of transiting LNGCs to the ports is expected to be ~~acceptable~~ minor when considered cumulatively with other mobile sources in Massachusetts Bay."

Page 6-31, lines 21-31: This paragraph contains several inaccuracies. We recommend the paragraph be revised as follows: "Information submitted by Neptune and NEG indicate NOx emissions during construction of each project will exceed the applicable General Conformity threshold (100 tons) and, therefore, need to be evaluated as part of USCG/MARAD's General Conformity determination. In addition, information submitted by NEG indicates VOC emissions during construction of the NEG project will exceed the applicable threshold (50 tons) and also be subject to General Conformity review. Prior to issuance of any deepwater port license, USCG/MARAD will develop and issue a General Conformity determination, including identifying any emission offsets and any other mitigation measures necessary to ensure the construction and operation of the project will conform to the Massachusetts State Implementation Plan (SIP). The draft General Conformity determination for each project will be available for public review prior to final issuance. The General Conformity regulations and applicability thresholds are at 40 CFR part 93 Subpart B."

Water/Marine Biological Impacts

ES-7, 4th paragraph: EPA notes there is insufficient information in this DEIS to support a conclusion that the impacts of the open-loop vaporization alternative on water quality would be "minor." Given that open-loop vaporization would result in substantially higher volumes (76 MGD) of seawater intake and substantial thermal discharges (at colder temperatures), in addition to biocide discharges, further analyses of these impacts are necessary before they can be characterized as "minor."

ES-8, 2nd full paragraph: The DEIS states that the project will have "short-term and long-term, minor to moderate, direct, adverse" impacts on endangered species, in particular the right whale, as a result of minor increases in commercial vessel traffic during construction and a moderate increase in large commercial vessel traffic during operations. The DEIS also states, however, that "[g]iven the critically imperiled status of the North Atlantic right whale, a ship strike on this species would be considered a population-level impact," and that the degree to which increased ship traffic increases the risk of vessels striking endangered whales cannot be quantified. (See discussion on p. ES-10.) In light of these factors, the FEIS should indicate the threat to endangered whales and appropriate mitigation will be assessed in the consultation process with NOAA under the Endangered Species Act, and the FEIS should appropriately reflect that consultation.

ES-8, 3rd full paragraph: The DEIS indicates noise impacts during construction and operations will "be consistent with existing ambient conditions in the Gulf of Maine" and are not expected to have long-term, population level impacts on endangered species. While a comparison of project noise levels to conditions in the larger Gulf of Maine may be one appropriate assessment, we recommend that the FEISs for both the Neptune and Northeast Gateway projects also reasonably assess noise levels and noise impacts in the immediate area affected by the project, focusing on potential effects on endangered species, marine mammals, and the resources of Stellwagen Bank National Marine Sanctuary.

ES-9, 1st full paragraph: The DEIS states here that the impacts of open-loop vaporization on biological resources (specifically, phytoplankton and fish and invertebrate eggs/larvae) would be long-term and "minor." The impacts of open-loop vaporization on zooplankton, on the other hand, are characterized as "minor to moderate." EPA believes that there is insufficient information in this DEIS to support a determination that the magnitude of impacts on biological resources from open-loop vaporization will be minor or moderate.

ES-10, 2nd full paragraph: The DEIS characterizes noise impacts on biological resources as "minor." It may be appropriate to indicate that the impacts will be minor if adequate mitigation measures are implemented. Ultimately, these impacts will be assessed in the context of the consultation processes with NOAA under the Endangered Species Act and under the National Marine Sanctuaries Act.

ES-13, 4th full paragraph: The DEIS states that "[r]ecommendations would be made to the Administrator that the license…would require the Applicant to comply with all environmental mitigation, standards and limitations identified in the Application, and set forth in the environmental permits issued by the regulatory agencies." This statement would benefit from clarification as follows: first, by identifying who will provide the stated recommendations; and second, by stating that these recommendations will be made to "the Administrator of MARAD." Finally, the FEIS should state that the Applicant will be required to comply with all environmental mitigation measures, standards and limitations identified in the final Deepwater Port Act *license* (not the "application"), as well as other environmental permits. The Secretary of Transportation may include appropriate mitigation conditions in the Deepwater Port Act license that may go beyond the specific commitments made by the applicant in its application. (See 33 U.S.C. §§ 1503(e) and 1508(b)(1)). The applicant can, of course, decide not to go forward with the project if it does not wish to comply with the required conditions.

ES-13, 7th paragraph: The discussion of "expected" mitigation measures to reduce impacts to protected species should be revised for the FEIS based on the consultations with NOAA under the ESA and NMSA.

ES-15, 1st full paragraph (line 11): EPA has not issued an NPDES permit for the Neptune facility or any other facility offshore of Massachusetts. As such, EPA recommends the following edit: "…coastal water quality ~~within the limitations of the existing water quality permit~~, within the limitations of the existing water quality permit, would be expected."

ES-15, 2nd full paragraph (line 36): The DEIS here identifies a number of biological resources that could experience long-term, adverse cumulative impacts from the construction and operation of the Port together with the NEG port. The DEIS also notes that marine mammals have been "severely impacted" by existing activities. It also acknowledges here, as in other places, that "[a]ny additional impact on the northern right whale is expected to have a population level effect on the species." This statement is

followed by a discussion of potential impacts on other types of species (e.g., sea turtles, marine birds, etc.). The paragraph then states the conclusion that "[t]he adverse effects on [biological] resources from construction and operation of the proposed port are expected to be minor." EPA believes the conclusions in the FEIS with respect to protected species should be conformed to the information resulting from the consultations with NOAA under the ESA and the NMSA.

ES-17, 4th full paragraph: Again, the discussion of noise impacts on protected species in the FEIS should be informed by the consultations with NOAA under the ESA and NMSA.

Page 1-17 (bottom) to 1-18 (top): The FEIS should include 16 USC 1431, et seq. (the National Marine Sanctuaries Act or NMSA), in its discussion of applicable provisions of the Marine Protection, Research and Sanctuaries Act. EPA notes that NOAA is the federal agency charged with implementation of this portion of the MPRSA.

Page 4-26, 4th paragraph: The discussion of vessel speeds for port operations is somewhat confusing and would benefit from a clearer discussion in the FEIS. In addition, the discussion of this issue should be informed by the consultation processes with NOAA under the ESA and NMSA.

Page 4-27, lines 1 – 4: The DEIS (at p. 4-26, lines 30 – 32) states that "[s]ince the potential for collision does not directly correlate to the relative number of marine animals and vessels present in a given area, the risk of increased collisions with marine animals cannot be determined." At the same time, the DEIS notes that it has been estimated that moving the TSS "would have the potential to reduce ship strikes of right whales by up to 58 percent and ship strikes of other large whales by up to 81 percent . . .." We recommend that USCG consult with NOAA about whether the methodology used to produce these risk reduction estimates could also be used, perhaps in modified fashion, to yield reasonable estimates of the risk created by increased vessel traffic associated with the Port, taking into account the mitigation measures that will be implemented. If so, the USCG should consider including such numeric estimates in both the Neptune and the NEG FEISs, with appropriate explanation of the uncertainties associated with them.

Page 4-27: The FEIS should clarify what is meant by the statement that operational noise would be "consistent" with ambient noise levels in the area, given the identified noise emissions from the SRVs during transit and regasification operations (see p. 4-21).

Page 4-28: We commend the DEIS's presentation of a specific discussion on the issue of potential impacts from noise and increased vessel traffic to designated Critical Habitat for the North Atlantic right whale. If necessary, this discussion should be modified for the FEIS based on input from NOAA during the ESA and NMSA consultation process.

Page 4-31, lines 1 – 11: The DEIS states that Port operations noise could have short-term, minor, direct adverse impacts to endangered whales and that "[m]ore substantial impacts . . could occur as a result of increased vessel traffic." The FEIS should be

consistent in how it is presenting impacts and use the terms "minor, moderate or major," as appropriate, rather than saying the impacts would be "more substantial" than certain minor impacts. The assessment of these impacts for the FEIS should be modified, as needed, in light of the consultation with NOAA under the ESA and NMSA.

Section 4.2: The FEIS should make clear whether or not the mitigation measures detailed in Chapter 4 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 4-51, lines 4-5: The DEIS notes that Neptune's seawater intake will be a fraction of a percent of the amount of seawater intake at the Seabrook Nuclear Power Station. The DEIS then states that "after 7 years of monitoring, it was determined that the effect of the Seabrook Nuclear Power Station on phytoplankton was indistinguishable from natural variability (NAI 1998)." This statement reflects an assessment of the efficacy of a particular sampling method used to monitor phytoplankton populations – i.e., it indicates that the monitoring method used was not effective in detecting changes in phytoplankton populations potentially caused by the Seabrook Nuclear Power Station's operations. The statement does not indicate that Seabrook's operations had no impact on phytoplankton populations. EPA recommends deleting this reference to the Seabrook data from the FEIS to avoid any confusion.

Page 4-56 to 4-57: EPA recognizes the relatively low entrainment numbers associated with closed-loop SRV operations. We do not, however, find the comparison of finfish losses by SRV 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 entrainment of fish in a cooling system is an adverse byproduct of that process. Of course, this byproduct may be insignificant in a given case. An alternative 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 SRV.

Page 4-62, lines 25-26: The DEIS states that "[s]creens on the seawater intake structure would prohibit most juvenile and adult fish from being impinged/entrained in the seawater intake." The statement that screens will help to reduce impingement may be in error. Intake screens may help to reduce entrainment of organisms that are larger than the mesh size of the screen but, as a result, such screens may increase impingement by catching the organisms on the screens. (See 69 Fed. Reg. 41599 (July 9, 2004). At the same time, the discussion of low intake velocities (see, e.g., p. 4-36, last paragraph), seems to indicate that most or all juvenile and adult fish would be expected to be capable of swimming away from the SRVs' intake structures. Finally, EPA also notes that it will be evaluating various aspects of the SRV intake structures – including screens and intake

velocity – as part of its development of applicable NPDES permitting requirements to ensure that the intake structures reflect the Best Technology Available for minimizing adverse environmental impacts, in accordance with the requirements of Section 316(b) of the CWA.

Page 4-74: EPA understands the "open-loop vaporization" option discussed here to be the same option as the "hybrid" option discussed in Chapter 2. The description of the "hybrid" option in Chapter 2 identified supplemental heating needs associated with this option (during months when the ocean waters are not warm enough to serve as the primary heating medium), but no such needs are identified in this more-detailed discussion of the "open-loop vaporization" option. The FEIS should clarify the supplemental heating needs for the "open-loop" (or "hybrid") alternative at different times of year, and the concomitant air pollution impacts of those additional heating needs.

Page 4-74: EPA notes that the DEIS characterizes the impact of the open-loop option on phytoplankton, zooplankton and meroplankton as "long-term, minor, direct and adverse" (see p. 4-74, lines 3 – 5), but later characterizes the impact to zooplankton and right whales as "long-term, minor to moderate, direct, and adverse, depending on right whale abundance in the Project area." These statements appear to conflict, at least as to zooplankton. Furthermore, the USCG's view of the import of a low abundance of right whales in this context is not immediately clear given the extremely low population figures currently estimated for this species. The conclusions stated in this regard in the FEIS should be informed by the consultation with NOAA under the ESA. In addition, it is unclear why the impacts on zooplankton were assessed based on a total seawater intake of 61 million gallons per day (MGD) (see p. 4-74, line 15), when the DEIS states that each SRV would withdraw 76 MGD, and two SRVs would overlap operations for 9 hours every 6 days from January to March.

Page 4-74: With respect to the DEIS's comparison of fish losses from the Port to the total fish taken in all Massachusetts recreational and commercial fish landings, EPA's view, as stated above, is that this is not the most useful comparison. Please refer to comments above regarding DEIS pages 4-56 to 4-57.

Page 4-74: The DEIS states that the "discharged water would be 1°C (17 °F) cooler than the ambient seawater temperature." There appears to be an error in the text indicating that 1°C and 17°F are equivalent temperatures.

Page 4-74: EPA does not believe there is sufficient information in the DEIS to determine the magnitude of impacts on biological resources from open-loop vaporization. Furthermore, 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 operating 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 operate 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 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. 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, supplemental warming would be required during most months of the year, which would increase the air emissions and energy use of the alternative. 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.

Sections 4.5, 4.6 and 4.7: Section 4.5 discusses potential effects on marine recreation and visual resources, Section 4.6 addresses socioeconomic effects, and Section 4.7 addresses navigation impacts. Somewhere in this discussion, the potential effects of the construction and operation of the Port on commercial whale watching businesses should have been discussed and should be addressed in the FEIS. The passing mention of whale-watching vessels on p. 4-85, line 15, does not identify possible impacts and discuss their significance. Perhaps a map could be developed juxtaposing any areas that would be closed to navigation around the Port and the favored navigational routes to Stellwagen Bank of the local whale watch companies.

Page 6-11, 6-12: EPA notes that the FEIS's assessment of the cumulative impacts of project-related noise on endangered species and their critical habitat, marine mammals, and the Stellwagen Bank National Marine Sanctuary should reflect the consultations with NOAA under the ESA and the NMSA.

Page 6-15, line 25-26: correction: Neptune (not NEG) has proposed to operate its SRVs without any discharge of cooling or ballast water.

Page 6-17 to 6-23: EPA notes generally that while some reference to the larger Gulf of Maine might be an appropriate framework for assessment of cumulative impacts, the FEIS should, if possible, seek also to address the cumulative impacts specifically in Massachusetts Bay. This is especially important for purposes of assessing cumulative impacts on biological organisms, including endangered species.

Sections 6.3.5, 6.3.6 and 6.3.7: As noted above, we recommend that the FEIS include a more complete discussion than the brief mention on p. 6-29 of the cumulative impact of the project, including any navigational exclusion areas, on the whale watch industry.

Appendix D: This Appendix should be updated based on more recent correspondence between NOAA and the USCG/MARAD.

Construction Issues and Schedule

The DEIS does not select a preferred alternative for the construction schedule. The document does a reasonable job outlining which marine resources and users would be present at various times of the year, but presents all of the resources as if they raise issues of equal weight. Given the precarious state of the remaining population of North Atlantic right whales, as discussed in the DEIS, EPA recommends that potential impacts to that species be weighted more heavily and that selection of a summer construction schedule be seriously considered. An added benefit of a summer construction schedule would be a shorter duration of construction. In any event, selection of a construction schedule should be appropriately informed by the consultations with NOAA under the ESA and NMSA as well as the Magnuson Stevens Act.

For the analysis of pipeline construction impacts, the USCG should assume that the Northeast Gateway pipeline will be constructed prior to the initiation of the Neptune construction. Since the pipeline routes for the two projects are virtually identical, we recommend that the FEIS assess how the presence of another pipeline will affect construction of Neptune's pipeline. Neptune has suggested that it may use anchored barges or dynamically positioned vessels for the construction. The FEIS should explain whether the presence of another pipeline makes dynamically positioned vessels a preferable construction option, and whether the construction duration is negatively affected by the presence of the first pipeline.

The USCG should consider having the FEIS address issues such as noise impacts during construction from the use of dynamically positioned vessels, including sound produced when the vessels are underway as well as when they are on the buoys.

We recommend that the USCG consider including in the FEIS a figure depicting various critical noise contour levels emanating from various relevant source points (e.g., the port while SRVs are engaged in regasification operations; SRVs in transit to the port).

Cumulative Impacts

EPA recommends that the cumulative impact analysis describe the impacts assuming both the Neptune and Northeast Gateway 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. We recommend that the FEIS present a series of figures depicting various critical noise contour levels showing areas of potential sound overlap for the cumulative impact analysis, with the various classes of vessels anticipated from both Neptune and Northeast Gateway. 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. The USCG should

consider documenting and analyzing the potential impact from these mobile sound waves.

Monitoring

We recommend that the FEIS 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 along with the construction and the ongoing operation of this facility. Decisions in this regard should be informed by the ESA and NMSA consultations with NOAA. We recommend that the USCG and MARAD consider requiring as a DPA license condition ichthyoplankton sampling to provide an estimate of the quantity of fish eggs and larvae lost during the operation of this facility. Any such monitoring requirements should be informed by the EFH consultation with NOAA, and EPA will also consider the need for such sampling as a condition of the NPDES permit.

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. EPA understands that such propellers are quieter than standard propellers and can make the vessel more fuel efficient. Further details on the potential 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.

Miscellaneous

The FEIS should also evaluate the option of using Tremmie Tubes for the placement of additional backfill material if it is required for the pipeline trench. Also, the FEIS should provide the target depth of burial for the pipeline.