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December 12, 2006

CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS
ON THE
FINAL ENVIRONMENTAL IMPACT REPORT

PROJECT NAME:	Neptune Deepwater Port Project
PROJECT MUNICIPALITY:	Off-Shore Waters of Manchester-by-the-Sea, Beverly, Salem and Marblehead
PROJECT WATERSHED:	Massachusetts Coastal
EOEA NUMBER:	13641
PROJECT PROPONENT:	Neptune LNG, LLC
DATE NOTICED IN MONITOR:	November 8, 2006

As Secretary of Environmental Affairs, I hereby determine that the Final Environmental Impact Report/Draft Environmental Impact Statement (FEIR/EIS) submitted for this Deepwater Port project **adequately and properly complies** with the Massachusetts Environmental Policy Act (MEPA) (G. L. c. 30, ss. 61-62H) and with its implementing regulations (301 CMR 11.00).

The Neptune project proposes to develop significant new energy infrastructure in Massachusetts Bay. A similar proposal, the Northeast Gateway (NEG, EOEA #13473), also proposes to develop a deepwater port in the same area; a Certificate determining the adequacy of NEG's FEIR was issued on December 1, 2006. Both projects are subject to federal authority under the Deepwater Port Act of 1974 (DWPA)[1], which grants the Governor the authority to approve or deny either of the projects. As described in previous Certificates, the major issues raised by these projects entail their potential impacts to marine resources and uses, including impacts to the ecology of, and public trust interest in, Massachusetts Ocean Sanctuaries, the commercial fishing industry, and marine mammals, particularly endangered whales. While the Neptune project may provide significant benefits to the energy needs of Massachusetts, it will

[1] P.L. 93-627, Sec. 3, January 3, 1975, 88 Stat. 2127, as amended, 33 U.S.C. 1501-1524.

also have environmental impacts. As described in greater detail below, I have directed that mitigation address direct and cumulative impacts to habitat and biological resources, public trust interests, the commercial fishing industry, and marine mammals. Accordingly, the proponent will provide mitigation for impacts to the marine resources and human uses of Massachusetts Bay totaling $23,500,000. This comprehensive mitigation package will ensure that the impacts of the project are appropriately mitigated.

Project Description

The proposed project entails the construction of a Deepwater Port (DWP) in Massachusetts Bay, located in the federal waters of the Outer Continental Shelf (OCS) block NK 19-04 6525 and NK 19-04 6575, approximately 22 miles northeast of Boston and approximately 7 miles south-southeast of Gloucester, in a water depth of approximately 250 feet. The deepwater port, to be named Neptune, would receive and vaporize Liquefied Natural Gas (LNG) from a purpose-built and dedicated fleet of shuttle regasification vehicles (SRVs) equipped with vaporization equipment that would convert the LNG to natural gas. The Neptune Deepwater Port would be capable of mooring up to two LNG carriers, with a capacity of approximately 140,000 cubic meters, by means of a submerged unloading buoy system. The DWP will be owned and operated by Neptune LNG, LLC.

The Port would have an average throughput capacity of 500 million standard cubic feet per day (MMscfd) and a peak capacity of 750 MMscfd. Natural gas would be sent out by means of two flexible risers and a subsea flowline. The project pipelines would consist of a 24-inch flowline approximately 2.5 miles long from the southern riser manifold to the northern riser manifold. From the northern riser manifold a 24-inch gas transmission line approximately 10.9 miles long would carry the gas from the unloading buoys to the existing 30-inch HubLine in Massachusetts Bay. From shore, natural gas would be transported to serve residential, commercial, industrial and electricity generation consumers, primarily in the New England area.

The proponent proposes to use the post-lay plow technique to install the pipeline for nearly its entire route. The Pipeline is proposed to commence at the HubLine at a point approximately 3 miles offshore of "Marblehead Neck" in Marblehead, travel approximately 9.9 miles through the waters of the Commonwealth offshore of Salem, Beverly and Manchester-by-the Sea and an additional one mile through federal waters where it connects with the Neptune Port's flowline. The preferred pipeline route would travel through approximately 52,000 feet of the South Essex and North Shore Ocean Sanctuaries.

MEPA Jurisdiction and Permitting Requirements

The DWP is undergoing review pursuant to the following sections of the MEPA regulations:

- 301 CMR 11.03(3)(a)(1)(b) Alteration of ten or more acres of any other wetlands, in this case Land Under the Ocean; and
- 301 CMR 11.03(7)(a)(3) Construction of a new fuel pipeline more than 10 miles in length.

The DWP will require numerous state and federal permits. At the federal level, the DWP will require approvals by the U.S. Coast Guard (USCG), U.S. Department of Transportation (USDOT), the Federal Energy Regulatory Commission (FERC), the U.S. Army Corps of Engineers (USACE), and the U.S. Environmental Protection Agency (EPA). The DWP will also require consultation by several other federal agencies with resource management responsibilities. The DWP is undergoing review pursuant to the National Environmental Policy Act (NEPA), with USCG as the lead federal agency.

At the state level, the project will require the approval of the Governor under the Deepwater Port Act, and a Chapter 91 License and a 401 Water Quality Certification from the Department of Environmental Protection (MassDEP). The DWP will also require federal consistency review by the Office of Coastal Zone Management (CZM) and Orders of Conditions from local Conservation Commissions (and hence, Superseding Orders of Conditions from MassDEP if the local orders are appealed).

Because the proponent is not seeking financial assistance from the Commonwealth for the DWP, MEPA jurisdiction extends to those aspects of the DWP that have the potential to cause significant Damage to the Environment as defined in the MEPA statute and that are within the subject matter of required or potentially required state permits and approvals. In this case, given the large number of state permits required and the comprehensive subject matter of the required state permits, MEPA jurisdiction is equivalent to full scope jurisdiction.

Under MEPA, a Special Review Procedure was established for the review of this project to facilitate coordination among state and federal agencies and to maximize opportunities for public participation. Pursuant to the Special Review Procedure, the project is undergoing coordinated review under MEPA and the National Environmental Policy Act (NEPA), and this FEIR has been filed as a combined Final Environmental Impact Report/Final Environmental Impact Statement.

MEPA Review Process and Approval Standards

Development of either the Neptune or Northeast Gateway projects will have temporary and permanent impacts to the marine environment and human uses of Massachusetts Bay, including impacts to areas in state waters designated as Ocean Sanctuaries. In the event that both projects are approved under the provisions of the DWPA, the pipelines would run virtually side-by-side through the Ocean Sanctuaries to the existing HubLine. The Certificate on the Draft EIR for Neptune therefore required that the proponent provide in the FEIR a more detailed assessment of the environmental, engineering, and operational feasibility of constructing one pipeline to serve both projects. The FEIR provides an analysis of these issues and concludes that a single pipeline alternative for the two projects would not be viable unless the in-service date for supplying natural gas from an LNG import terminal can be put off until at least the winter of 2008-2009.

In considering the proponent's response, I am mindful that MEPA review does not permit me to approve or deny a project, but rather requires that I determine whether the FEIR provides

adequate information about the project to assist the state permitting agencies in using all feasible means to avoid damage to the environment, or, to the extent it cannot be avoided, to minimize and mitigate damage to the environment to the maximum extent practicable. In this case, I note that the FEIR does not formally identify a preferred alternative but instead carries forward and analyzes a number of alternatives, while basing the emphasis of analysis on the applicant's proposed alternative. In making a determination of adequacy, the MEPA regulations require me to determine that a FEIR is adequate, even if certain aspects of the project or issues require additional analysis of technical details, provided that I find that the aspects and issues have been clearly described and their nature and general elements analyzed in the FEIR or during MEPA review, that the issues can be fully analyzed prior to any agency issuing its Section 61 Findings, and that there will be meaningful opportunities for public review of the additional analysis prior to any agency taking action on the project.

As described in more detail in this Certificate, after examining the record before me, I find that there is enough information on alternatives, impacts, and mitigation to meet that standard. While it appears likely that a single pipeline would have fewer temporary environmental impacts than the construction of individual pipelines constructed to serve both the Northeast Gateway and Neptune projects, careful review of the FEIR and the comments of the regulatory agencies does not indicate that the proponent's proposed alternative can not be permitted subject to mitigation for those impacts. While comment letters from the state agencies identify several areas where additional analysis of technical details is required, these issues can be addressed in the permitting process. The MEPA review of the project is concluded.

Compensatory Mitigation

The FEIR includes proposals for compensatory mitigation, at a general level of detail, which consider and describe mitigation related to marine mammals, habitat and other biological resources, commercial fishermen, recreational users, and impacts to interests protected by state permit or license conditions. Based on consultation with EOEA, the proponent has further clarified these mitigation measures, and committed to their implementation, in a letter dated December 1, 2006 from the proponent to EOEA. The proponent shall provide the following compensatory mitigation:

Commercial Fishermen

- $6,300,000 to capitalize a non-profit organization to buy/lease fisheries permits and Days at Sea for the inshore groundfish fleet with funding managed by the Gloucester Fishing Community Preservation Fund[2] (or alternative compensation system, to be determined)

[2] Comments by the City of Gloucester, Gloucester Fishermen Association and Northeast Seafood Coalition state that the deepwater port will have significant impacts not only to individual fishermen but more fundamentally, when considered cumulatively, in the context of the significant restrictions on groundfishing imposed by state and federal fisheries management regimes, to Gloucester's port infrastructure and the small businesses and surrounding fishing communities that rely upon Gloucester as the regional center of the groundfishing industry. I also note comments from the National Marine Fisheries Service, which state that while "the FEIR portrays the anticipated monetary losses to the commercial fishing industry as total number of jobs lost... this conclusion does not accurately assess impacts on the fishing community. Due, in part, to existing fishing effort regulations faced by the industry, a number of partieipants are currently fishing on the margin of profitability. Thus, even small impacts on certain

As described in the comments, the program would be administered by a community-based non-profit organization. Funding would be allocated directly to the non-profit organization. Initial establishment of the non-profit would be guided by a group which would include individuals representing the City, elected state officials, the groundfishing industry, and an LNG project representative. The non-profit would be established to ensure narrowly focused use of the resources, investment of principal in permits providing access to days at sea, and development of a sustaining revenue stream derived from leasing days at sea for the benefit of the local groundfishing fleet. It has been represented that between $7 and 12 million is necessary to fully support such a program; however, comments indicate that the program would provide the intended benefits, at a more limited scale, with initial funding of approximately $6 million.

While important details remain to be addressed, I endorse this approach in principle. I recognize that the economic analysis presented in the FEIR calculates an impact to the groundfish industry that is significantly less than the amount the proponent will provide as mitigation. However, after careful consideration of the proposal, review of comments received, and consultation with the City, representatives of the affected industry, and agency staff, I find that this level of mitigation is necessary to effectively address project impacts to the local infrastructure on which the industry depends, impacts to individual fishermen, and the cumulative economic and social impacts to which the deepwater port will contribute. I ask that the City and/or representatives of the affected groundfishing industry provide me in a timely manner with formal materials regarding the terms of incorporation of the non-profit and the ability of the proposed non-profit to address the interests of similarly affected groundfishermen who homeport south of the Northshore. Provided the proposed program is consistent with state and federal fishery management regulations, geographically equitable within the affected industry as that industry is described in comments by the City and others, and subject to a review of the terms of incorporation, Neptune will provide $6.3 million to establish the Gloucester Fishing Community Preservation Fund. This mitigation includes funds for unanticipated impacts to groundfish gear as a result of construction. If the fund does not materialize, for whatever reason, the proponent shall coordinate with EOEA, state agencies, the City and representatives of the groundfishing industry to develop, prior to the conclusion of the state Chapter 91 permitting process, an alternative vehicle of equal value for mitigating impacts to the affected industry.

- $1,700,000 for compensation for impacts to commercial lobstermen, including funds for unanticipated impacts to lobster gear as a result of construction, with funds to be managed by the Massachusetts Lobstermen's Association.[3]

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members of the fishing community may result in significant adverse effects." Commenters therefore recommend that mitigation should be designed to support Gloucester's ability to continue to function as a 'hub' port. To achieve this, the City and industry comments recommend that the proponent capitalize a fund to assist local fisherman in accessing permitted days at sea as an offset to the direct and cumulative impact of the deepwater port. Through a combination of voluntary permit buybacks and leasing of days at sea, the local groundfishing fleet could consolidate and stabilize at a level which would then withstand the current regulatory climate and reductions caused by the LNG projects.

[3] See discussion at page 19.

Public Trust Issues

- $5,600,000 to support infrastructure improvements to, and public transportation to the Boston Harbor Islands, with funds managed in trust and the project implemented by the Island Alliance on behalf of and subject to the approval and direction of the Boston Harbor Islands Partnership and the public landowners.[4]

I note that comments from the Department of Conservation and Recreation (DCR) recommend mitigation for impacts to ocean sanctuaries funds to enhance public enjoyment of the Boston Harbor Islands National Park; DCR's comments also state that such mitigation would continue the investments in the Harbor Islands made through the Hubline mitigation funds. (See EOEA #12355.) I strongly support continued investment in this extraordinary public trust resource, and I expect that these funds will enhance facilities and travel to and among the islands to significant public benefit.

- $600,000 to provide buoys and/or meteorological, hydrodynamic and/or other instrumentation to significantly enhance the Gulf of Maine Ocean Observing System (GoMOOS).[5]

Expansion of the GoMOOS system, through new buoys, or through the instrumentation of the passive acoustic marine mammal buoys also required as mitigation for this project, will significantly enhance the distribution and type of information that can be gathered in Massachusetts waters, with benefits to maritime commerce, commercial and recreational fishermen, recreational boaters, US Coast Guard search and rescue operations, scientific understanding and environmental management of the marine ecosystem, and other interests. This mitigation is designed to enhance the foregoing benefits by requiring that the passive acoustic buoys required as mitigation for impacts to marine mammals (described below), which will be placed in Massachusetts Bay and the shipping channel east of Cape Cod, be used as a platform for additional GoMOOS instrumentation. This will significantly extend GoMOOS coverage in Massachusetts waters.

- $350,000 to maintain and/or construct public access ramps, with funds to be managed by the Massachusetts Department of Fish and Game Office of Fishing and Boating Access.

- $150,000 to the Peabody Essex Museum, to support activities related to maritime exhibits and maritime heritage.

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[4] Congress established the partnership and the Boston Harbor Islands National Recreation Area under section 1029 of P.L. 104-333 (110 Stat. 4235; U.S.C. 460kkk). Among other things, the law sets the boundary of the Recreation Area as well as generally sets forth the role of the Partnership and its partners, including the Island Alliance, a non-profit corporation.

[5] GoMOOS is a non-profit member organization that owns and maintains, under contract, an array of buoys and shore-based sensors that collect and disseminate real-time observations of weather and ocean conditions throughout the Gulf of Maine, from Cape Cod to Nova Scotia. The GoMOOS web site (http://www.gomoos.org/) provides real-time information products that integrate surface winds, currents, and physical, biological and chemical conditions in the Gulf of Maine.

- $150,000 to the New England Aquarium to support research and educational programs related to marine habitat and the marine environment of Massachusetts Bay.

- $150,000 to the Essex National Heritage Center, to support activities related to programs to preserve the region's maritime heritage.

Habitat

- $1,500,000 for seafloor mapping activities, habitat characterization with funds to be managed by the Office of Coastal Zone Management, in consultation with other resources agencies.

- $1,000,000 for a nearshore mapping and habitat characterization program in Cape Cod waters to be coordinated with CZM with the funds to be managed by Provincetown Center for Coastal Studies, in consultation with other resource agencies. The Center will provide administrative, logistical and operational support through the Marine Science Laboratory.

Seafloor mapping is fundamental to understanding and effectively managing the ocean environment. This mapping, which will include bathymetry, shaded relief, and interpretations of seafloor geology, will continue on-going mapping efforts by my Office of Coastal Zone Management, and will leverage additional funding from the US Geologic Survey. Areas to be mapped will include the offshore seafloor, where mapping is now technologically routine, and nearshore environments, where effective mapping technologies are still under development. Habitat characterization will identify and map specific habitat types, which can then be used as the basis for management decisions and long-term ocean resource planning.

- $1,400,000 to conduct surveys and assessments related to fisheries resources to be managed by the Division of Marine Fisheries:
    - $900,000 to be used for larval lobster studies
    - $500,000 to be used to study distribution and abundance of various life stages of fish in Massachusetts Bay.

Comments from the Division of Marine Fisheries (DMF) state that review of this project illustrates that the abundance and distribution of lobster larvae in greater Massachusetts Bay is not well documented. A five-year program of larval lobster assessment will be used to assess the reproductive output of the lobster resource, and, potentially, as the basis for a mechanism to predict future recruitment to the lobster fishery in Massachusetts Bay. DMF will also characterize various life stages fish distribution and abundance in Massachusetts Bay to provide estimates of fish or larval densities over time. I note that these data, in addition to benefiting fishery management efforts, will be valuable for evaluating impacts of future constructions projects that may be proposed in the region.

- $600,000 to the New England Aquarium to direct and manage a study of the biological impacts of the exclusion zone around the deepwater port.

While the exclusion area will be small relative to the size of Massachusetts Bay, over 1,000 acres of seafloor under the deepwater port will not be subject to mobile fishing gear or the effect of the mooring chains. This presents a unique opportunity to study the ecological impact of creating a protected area within Massachusetts Bay. Funds will be managed by the New England Aquarium, who will direct and manage the study in consultation with Neptune, with the participation of agency and fishing community representatives. The study shall be designed and conducted so as to not affect operation of the deepwater port.

Marine Mammals

- $3,250,000 for components of a passive acoustic buoy system, to include buoys, instrumentation, and/or management of the system.

The final design of mitigation associated with marine mammals will be influenced by continuing review under the Endangered Species Act and Marine Mammal Protection Act and discussion among the several federal agencies with regulatory and/or management oversight of marine mammals. EOEA agency staff have participated in discussions among the federal agencies and the proponent, and, while the final conditions of acoustic buoy mitigation have not been established by the Maritime Administration (MARAD), I am satisfied through my review of the FEIR, mitigation proposals informally agreed to by the federal agencies and the proponent, and consultation with agencies, that the proposed mitigation measures are appropriate and will be incorporated as conditions in any license issued under the DWPA. While I expect that appropriate mitigation will be developed under the aegis of the federal regulatory process, the proponent has agreed to provide this mitigation under the state framework as insurance against the alternative. The figure is based on materials developed in support of mitigation recommended early in the review process by the Stellwagen Bank National Marine Sanctuary, and will be credited to the proponent on confirmation that the MARAD license contains appropriate conditions as described above.

- $750,000 for right whale management and research and development of acoustic technology in Cape Cod Bay, with funds to be managed by the Division of Marine Fisheries' Right Whale Conservation Program.

The purpose of the Massachusetts Right Whale Conservation Program is to protect right whales in state waters through research, management, and education. The cornerstone of the program is the Right Whale Surveillance and Habitat Monitoring Program in Cape Cod Bay. In addition, DMF conducts programs related to fixed-gear research and acoustic monitoring of large whales. Since 2003, the Conservation program has collaborated with the Cornell University Bioacoustics Research Program in the development and deployment of a near real-time acoustic monitoring system in Cape Cod Bay, most of which is designated as right whale Critical Habitat. The passive acoustic buoy program required as mitigation for impacts to marine mammals, described above, was designed, field tested, and developed into operational capability through DMF and Cornell's work. These mitigation funds will be used to continue applied research and development of buoy and instrumentation design, expand the transmission system to inform mariners of the presence of whales, extend the detection capacity of the instrumentation to include other marine species, and to continue to refine monitoring capability by integrating

visual, aerial and acoustic data.

This comprehensive mitigation package will provide $23,500,000 to support the commercial fishing industry, important resource management research, significant improvements to recreational area infrastructure, recreational access to the waters of the Commonwealth, educational programs, and resource protection. These mitigation measures will be conditions of MassDEP's Section 61 finding for the project.

Last, I note that while not proposed as part of the environmental mitigation package, the proponent proposes to make additional voluntary payments to each of the four communities through which the Pipeline Lateral passes (Salem, Beverly, Marblehead, and Manchester-by-the-Sea).

Alternatives Analysis

In response to the Certificate on the DEIR, the FEIR presented an expanded discussion regarding the balance between the demand for and supply of natural gas in the New England region using information from United States Department of Energy (DOE) projections and the report of the 2005 New England Governors Conference, to provide context and background for the evaluation of potential project alternatives. The FEIR considered the preferred alternative, no-build alternative, renewable and non-renewable sources of energy, energy conservation, and other means of supplying gas to Massachusetts and New England, including on-shore and off-shore terminals and pipelines. The FEIR provided an adequate level of discussion and analysis of long term regional energy needs, forecasted energy growth, and existing and planned energy infrastructure, to facilitate a meaningful cross-comparison of the benefits and impacts of each alternative.

In its comments, the Massachusetts Energy Facilities Siting Board (EFSB) determines that New England will require a new supply of natural gas and associated infrastructure in the 2007-2010 timeframe. Moreover, EFSB notes that land-based LNG terminals necessarily pose greater security and public safety risks than offshore terminals, and that approval to build Neptune's import capacity may avoid the need for construction of additional land-based LNG import facilities. The Massachusetts Division of Energy Resources (DOER) comments on the FEIR describe a recently completed report entitled '*Deliverability Assessment of Off-Shore LNG Facilities and the Impact on Natural Gas System Reliability*' produced by Levitan and Associates, Inc. under retainer from DOER. The report concludes that addition of new gas supplies in New England from projects such as Neptune will create valuable operating flexibility, and potential benefits to generators including increased scheduling flexibility, reduced gas prices, dampened volatility, and lower cost imbalance resolution.

Several commenters advocate that the siting of major energy facilities should be guided by a regional energy facility siting plan, and that such a plan should precede action on an individual application to construct and operate an energy facility. While I support such an approach in concept, the MEPA regulations require that I act on individual projects when they are submitted. Moreover, the process by which a regional energy facility siting plan would be developed is beyond the scope and capability of any one proponent. I also note that regional

energy siting is a component of ocean management. As this office has emphasized in previous Certificates, these projects represent a clear example of the need to proactively manage our ocean resources. Accordingly, I have ensured that the mitigation package for this project contains measures that support the development of baseline ocean management information.

Deepwater Port

The FEIR summarized 5 basic deepwater port concepts that are available for use as offshore LNG ports, including: a gravity-based structure (GBS); a platform-based unit; a floating storage and regasification unit (FSRU); special purpose vessels that transport and vaporize LNG onboard, such as the SRV proposed for the Neptune project; and special purpose floating platforms that house vaporization equipment and are capable of docking with LNG carriers. The evaluation of the LNG port concept alternatives was based on environmental, technical considerations and commercial objectives. Based on the proponent's evaluation, the SRV design was the only Port design carried forward for detailed review in the FEIR.

The alternatives analysis then used a screening and site-selection process that began with the entire central New England coastal region and progressively narrowed the geographic range of locations where it would be feasible to site an offshore LNG facility. The preferred alternative area is a triangle-shaped area in Northeastern Massachusetts Bay to the north of the Boston Traffic Separation Scheme (TSS) and between the boundaries of the Stellwagen Bank National Marine Sanctuary (SBNMS) and the South Essex Ocean Sanctuary. Based on constraints from the required size of the facility footprint and the location of historic and active waste dumps in the area, there are only three alternative sites within the preferred alternative area – the Northern Port Site, the Central Port Site and the Southern Port Site. The FEIR compared the three site alternatives relative to benthic habitat, marine mammal occurrence, commercial fishing use, suitability of substrate, proximity to disposal sites, sediment contamination and proximity to shipping lanes. The Northern Port Site and the Southern Port Site were carried forward in the FEIR for detailed evaluation.

Related to the DWP installation and operations, the FEIR undertook an alternatives analysis for anchoring methods; propulsion and LNG vaporization systems; marine life exclusion systems; and biocide systems. Four anchoring alternatives including embedment anchors, suction piles, driven piles and gravity anchors were evaluated; the FEIR states that the final selection of anchor type will be made later in the design process. The proponent's preferred propulsion alternative is a diesel electric system, which will result in significantly less air emissions than other alternatives compared. The preferred vaporization system would have a closed-loop, water-glycol cycle with recirculating heat exchangers.

In its original license application, the proponent proposed to construct the deepwater port during winter months. Following recommendations from resource agencies, the FEIR considered alternative construction schedules to address environmental and socioeconomic concerns. According to the FEIR, construction during September through May would conflict with the spawning of many important species of marine mammals, fish and shellfish. Construction during May through November would coincide with the presence of fin and humpback whales. The proponent concludes that additional evaluation and consultation with resource agencies is

required to determine which construction schedule represents the best possible timeframe for biological resources.

No Action Alternative

Beyond these engineering and locational alternatives in Massachusetts Bay, the FEIR considered various scenarios under the No Action alternative. The No Action alternative refers to the continuation of existing conditions without the construction of the Neptune DWP. According to the FEIR, the insufficient supply of natural gas that could result under the No Action alternative could lead to fuel substitution, most likely in the form of fossil fuels such as coal or oil which would result in increased emissions of combustion by-products. The proponent also argues that existing and future energy conservation programs are unlikely to fully offset the projected growth in demand for energy in the northeastern United States.

The Certificate on the DEIR required that the proponent provide a more robust analysis of onshore and offshore natural gas supply projects in various stages of development in the eastern U.S. and Canada. Proposed onshore facilities are discussed under the No Action alternative, since, according to the proponent, they could be developed regardless of the outcome of any DWP application. The FEIR provided a summary discussion of 11 LNG projects that are currently proposed, permitted or under construction. The FEIR eliminated 3 of the 11 projects on the basis that they would not be able to serve the Massachusetts market. The FEIR then states that "of the remaining proposed projects in the New England states and eastern Canada, the potential safety and environmental impacts ... might be similar to or different than the impacts associated with Neptune". The proponent selected five of the projects as representative and evaluated them in more depth on 26 consistent criteria related to safety and environmental impacts.

Pipeline Lateral

The FEIR evaluated four alternative routes for the pipeline lateral connection between the Port and HubLine, ranging from approximately 9.1 miles to approximately 16.1 miles in length, depending on whether the Pipeline extends from the preferred Northern Port site or the more distant Southern Port site. These alternatives are referred to as the Direct Pipeline Route, the Northern Pipeline Route, the Southern Port Pipeline Alternative 1 and the Southern Port Pipeline Alternative 2. The FEIR provided a comparative assessment of the Direct Pipeline and the Northern Pipeline Routes from the Northern Port Site. The Northern Pipeline Route, although 1.8 miles longer than the Direct Pipeline Route, traverses only soft-bottom habitats and would result in fewer construction related impacts to fish and marine communities and a shorter installation time. In addition, although both routes traverse a historical disposal site, the Northern Pipeline Route sediment samples generally had fewer and lower levels of contaminants than did the Direct Pipeline Route samples. The National Marine Fisheries Service (NMFS) concurs that due to the importance of hard bottomed habitats, protracted recovery times, and presence of fishery resources along the Direct Pipeline Route, the northern pipeline route would result in fewer adverse impacts to benthic habitats.

The pipeline will be installed using either a dynamically positioned lay barge or an

anchored lay barge. Impacts to seafloor and biological resources will be more significant with the use of an anchored lay barge; however the noise impacts of dynamic positioning are also significant. The proponent will be required to provide further specificity on proposed construction methods and anticipated impacts during permitting. If dynamic positioning is used, the proposed acoustic monitoring program would ensure that any additional noise impacts would be within proscribed limits. The proponent has committed to burying the pipeline to a minimum of 3 feet of cover. Concrete mats would only be used for cover in areas such as the Hibernia cable crossing and at pipeline intersections. The FEIR estimates that 0.79 acres of hard bottom conversion is expected.

Cumulative Impacts

Because both the Neptune and the Northeast Gateway projects propose to construct separate pipelines to tie into the existing HubLine and both pipelines would cross portions of the South Essex Ocean Sanctuary and the North Shore Ocean Sanctuary, areas of Massachusetts waters designated to provide for special protection of the marine environment, the Certificate on the DEIR directed the proponent to consider a single pipeline to serve both projects as an alternative to the proposed separate pipelines.

The FEIR provides an analysis of this issue and adequately describes the engineering, environmental, and operational feasibility of constructing one pipeline and compares its advantages and disadvantages, including cost, permitting and environmental considerations, against constructing two separate pipelines. Currently, the Neptune and NEG project each propose separate 24-inch diameter pipelines, 13.1 and 16.1 miles long, respectively, which would each require an approximately 65-ft wide plowing corridor. The FEIR examined the engineering feasibility of constructing a 7.6-mile 30-inch combined pipeline and a 12.7-mile 36-inch combined pipeline. Installation of both the 30- or 36-inch would require two passes of the burial plow and additional jetting in order to achieve target burial depth and cover. According to the FEIR, a 30-inch combined pipeline would result in a total combined pipeline length of 22.0 miles, a reduction of approximately 7.6 miles than the combined length of the separately proposed pipelines, and a total area of impact to seafloor of 1,438 acres, a reduction of 355 acres (20 percent). Similarly, a 36-inch combined pipeline would result in a total combined pipeline length of 20.0 miles, a reduction of approximately 9.4 miles, and a total area of impact to seafloor of 1,382 acres, a reduction of 411 acres (23 percent).

The FEIR states that while there would be undeniable reductions to environmental impacts associated with a single pipeline, there would be significant contractual, logistical and regulatory challenges inherent in selecting this alternative and that would be virtually impossible to resolve in time for NEG to meet their desired in-service date of the winter of 2007-2008. The FEIR determined that installation of either single pipeline alternative would extend the construction duration by approximately 3 months. There are also additional jurisdictional and permitting processes that would be required for a single pipeline that would forestall construction start-up until 2008. Finally, the FEIR highlights potential problems with the availability of construction materials and equipment in the short term.

In their comments, the state resource and permitting agencies state that a single pipeline

would minimize overall environmental impacts. The assessment shows that a shared 30' or 36' pipeline could result in a reduction of 20-23%, respectively, of the sea floor area impacted as compared to the installation of two 24' pipelines, as well as reduce the range of environmental and socioeconomic impacts arising from two sets of construction vessels operating at different times. MassDEP concludes that these additional impacts strongly support a single pipeline to minimize impacts to tidelands and Ocean Sanctuaries. In addition, while the two projects are proceeding through the environmental review process simultaneously, Neptune is scheduled to construct its pipeline two years after NEG's scheduled construction, with a portion of Neptune's pipeline in close proximity to NEG's construction corridor. Consequently, MassDEP is concerned that the proximity of the two pipelines for a portion of the route is likely to result in a re-disturbance of the benthic habitat within the NEG corridor by Neptune's construction activities. The potential extent of cumulative impacts and mitigation measures in the area where the two pipelines converge will necessitate more detailed analysis in the dredge permit application review and the establishment of construction and post-construction mitigation monitoring conditions.

Review of the FEIR and the comments of the regulatory agencies does not clearly indicate that the benefit of a single pipeline would be significant or actual; nor does such review indicate that the preferred alternative can not be permitted subject to mitigation for temporary construction or Ocean Sanctuary impacts. (See below for additional discussion of Ocean Sanctuaries.) The installation of a larger pipeline will disturb more seafloor and require a longer and more intensive construction period than a smaller project-specific pipeline, and the relative environmental advantage of a larger combined pipeline will only be realized if both single pipeline projects are built. The magnitude and duration of impacts may be greater with project-specific pipelines, but if a single pipeline were required for Northeast Gateway, it could still be the case that the Neptune project would not construct its connecting lateral until another construction season. In that case, it appears that some or all of the benefits of a single pipeline posited by MassDEP would not be realized. In sum, I believe that the proponent has adequately described the alternatives and proposed mitigation for impacts associated with the proposed alternative that may not be avoided. I acknowledge that the agencies have identified technical issues that remain to be addressed, but I am satisfied that these can be addressed in the permitting process.

Pipeline Burial

In its comments on the DEIR, MassDEP noted that short-term and long-term benthic impacts vary depending on the measures selected to achieve pipeline burial under different scenarios. Achieving the target depth to burial is a core mitigation measure to achieve full restoration of the benthic habitat. The performance target for the installation of the pipe should be the full restoration of the topography and composition of the sea floor to the extent feasible with sufficient burial of the pipeline to ensure adequate sediment depth for biological activity for the recolonization of the area, and to prevent damage to fishing gear. The amount of cover should also be sufficient in the event that scour effects remove some of the material. This standard will inform the evaluation of corrective action alternatives.

The pipeline construction process in the FEIR proposes to bury the pipe with 3 feet of

cover, which would entail dredging the trench approximately 5 feet deep with adequate trench spoils adjacent to the trench for back filling. Comments from MassDEP indicate support of the proponent's commitment to 3 foot depth to burial, but raise concerns that due to the nature of the construction methods and environmental conditions it may not be feasible to achieve that target depth consistently along the entire 11 mile route, and there is no minimum depth of cover proposed. The proponent appears to propose replowing as the sole means to achieve the target depth, rather than the substitution of hard cover such as concrete mats or clean stone. The FEIR indicates only the possible use of concrete mats or grout bags to protect pipeline structures at tie-ins and manifolds.

While the replacement of soft cover with hard cover is generally discouraged because it results in habitat conversion and long term impacts, replowing may not be feasible in all instances given the extent of the seafloor that replowing disturbs in order to correct what may be a short segment with only moderately insufficient cover. The FEIR's assertion that replowing will not result in increased disturbance of the seafloor does not acknowledge the additional turbidity and larger mounds of sidecast sediment that would likely impact benthic organisms, and complicate the restoration of the seafloor. A consultative process should be established to distinguish between circumstances when a second plow pass may be necessary to achieve adequate burial depth or where restoration would be better accomplished using cover material in the form of diver-placed sand bags or concrete mats, or with clean material placed with a tremmie tube.

Construction Best Management Practices and Mitigation Measures

With regard to the installation of the pipeline lateral, the FEIR includes a proposed Section 61 Finding commitment to conduct a pre-construction and benthic resources survey in 2008 that will supplement the 2005 survey database and will provide important baseline information on the geography and habitat diversity of the seafloor in the construction corridor. The list of proposed pipeline mitigation measures briefly describes the combination of plowing/backfilling to cover the pipeline to a depth of three feet, jetting at tie-ins and hydrostatic testing necessary to install the pipeline. The proponent should also note MassDEP's recommendation to flood the pipeline prior to backfilling to prevent buoyancy and ensure that it remains at maximum depth in the trench.

In its comments, MassDEP states that it believes that the use of the post-lay plow through predominately soft sediments appears to offer the greatest potential for avoiding or minimizing significant short and long-term impacts. However, based on the experience with the Hubline construction, and acknowledging the deeper waters in which this project is proposed to be constructed, it is likely that unforeseen conditions may arise during construction that could require modifications to the proposed construction procedures.

The proponent has committed to conduct monitoring during construction that will provide real time data on the status of the trenching and covering operations. To make the construction monitoring program more than a data collection effort, MassDEP and CZM have recommended, and I concur, that the monitoring results be promptly communicated to a standing committee including representatives of regulatory and resource agencies having a role in this

project. The committee should receive regular progress updates, particularly regarding conditions not foreseen prior to construction, so that solutions may be developed quickly in order to minimize environmental impacts. I also support MassDEP's recommendation that the proponent employ an independent observer to report to MassDEP, in conjunction with the standing committee, during the in-state waters construction period and monitor the project's compliance with permit conditions.

Impacts to Land Under the Ocean

All pipeline route alternatives appear to connect to the HubLine in waters deeper than 80 feet and proceed through even deeper waters to the Port. Therefore, the Pipeline will impact Land under the Ocean beyond the nearshore area (see 310 CMR 10.25). The Certificate on the DEIR required that the proponent provide a discussion of the project's compliance with the MA Wetlands Protection Act and demonstrate that the DWP meets any applicable performance standards. The FEIR did not address impacts to wetland resources areas subject to the jurisdiction of the MA Wetlands Protection Act nor is this permit listed in Table 1.5-1, entitled Major Permits, Approvals, and Consultations for Natural Gas Deepwater Ports, on page 1-18 of the FEIR. The project will require Orders of Conditions from the Marblehead, Manchester-by-the-Sea, and Salem Conservation Commissions, as well as Superceding Orders of Conditions from MassDEP if the local Orders are appealed. During the Notice of Intent process, the proponent will be required to demonstrate that it will avoid or minimize impacts to wetland resources, marine fisheries and shellfish habitat caused by: alterations in water circulation; alterations in the distribution of sediment grain size; and changes in water quality, including turbidity and pollutant levels.

Chapter 91 Waterways

The pipeline lateral component of the project, which is proposed to be located in Commonwealth waters, is subject to the Chapter 91 Waterways Regulations, 310 CMR 9.00. The regulations at 310 CMR 9.12(b)(1) classify "marine terminals and related facilities for the transfer between ship and shore, and the storage of, bulk materials or other goods transported in waterborne commerce" as a water dependent industrial use. Applying these provisions to the project, the Neptune Port would need to be considered to be a "marine terminal" and the Pipeline a "related facility" to be determined a water-dependent use. The FEIR acknowledges that a Chapter 91 License application is required for the project and would be a condition of the DWP license.

The Waterways Regulations at 310 CMR 9.00 protect existing water-dependent uses such as commercial fishing and navigation. The project will have impacts on marine uses that extend beyond the Port structures due to the establishment of Safety Zones and "Areas to Be Avoided" around the buoys. The proposed Section 61 Findings include necessary mitigation measures such as issuing a Notice to Mariners during the construction period; minimizing the exclusion zones to the extent feasible; setting up a compensation fund for lost gear; and standard navigational procedures to be followed by the LNG tankers. Based on comments received during the public comment period on the Chapter 91 License application for the project, MassDEP will determine

whether additional mitigation measures, including any related to access to the Massachusetts Bay Disposal Site, are necessary.

Ocean Sanctuaries

Under the Massachusetts Ocean Sanctuaries Act ("The Act," or "OSA"; M.G.L., Chapter 132A, sections 13-16 and 18) and implementing regulations (302 CMR 5.00 et seq.), the Department of Conservation and Recreation (DCR) is responsible for the care and control of the five state-designated ocean sanctuaries. The proposed Neptune LNG Deepwater Port facility will not lie within the boundaries of the North Shore Ocean Sanctuary (NSOS) or the South Essex Ocean Sanctuary (SEOS). However, the proposed pipeline route, connecting the Deepwater Port facility with the existing HubLine will cross a portion of both sanctuaries.

The Ocean Sanctuaries Act (OSA) calls for jurisdictional sanctuaries to "be protected from any exploitation, development, or activity that would significantly alter or otherwise endanger the ecology or the appearance of the ocean, the seabed, or subsoil thereof" (MGL c. 132A, 14) and the regulations prohibit the building of any structure on the seabed or under the subsoil. The Certificate on the DEIR stated that the project "must be found not to seriously alter the seabed and must be found to be of public convenience and necessity in accordance with the Act and its implementing regulations." The FEIR does not provide justification to demonstrate compliance with the six factors associated with public necessity and convenience. Prior to initiation of the permitting process, the proponent must demonstrate to permitting agencies including MassDEP, CZM and DCR that the project meets the OSA standards for public necessity and convenience. I also direct the proponent to specific comments from DCR regarding the project's impacts to resources protected pursuant to the OSA.

Water Quality

The FEIR states that a combination of long- and short-term direct minor adverse impacts on water quality would result from the project. Impacts would include resuspension of sediments that would occur during Port and pipeline installation. Longer term impacts would include an increase in turbidity from scour created by the mooring lines and flexible pipe risers. Other impacts are associated with the discharge of water from hydrostatic testing of the pipelines; discharges from construction and support vessel engine-cooling water, barge and carrier deck drains; and other miscellaneous drains during Port construction and operations. The FEIR's analysis of potential impacts to water quality concludes that the project would not degrade water quality of cause irreplaceable harm to human health, aquatic life or beneficial uses of the aquatic ecosystem. No federal or state water quality criteria or water discharge criteria would be violated.

In response to comments from CZM, the FEIR provided the results of updated model results for potential suspended sediment concentrations and a discussion of compliance with water quality standards. The proponent performed modeling that estimated turbidity, the size of the sediment plume, and the estimated sediment drape associated with construction and long-term scour. The FEIR also analyzed contaminated sediment concentrations, particularly focusing on the presence of arsenic at 6 out of 10 monitoring stations at levels which may cause toxicity

related effects in some species.

The FEIR presents updated Section 61 Findings that detail the techniques and procedures that will be applied to conduct turbidity monitoring and sampling during all construction activities including real time measurements that will be used to halt construction until the turbidity levels are in compliance with the criteria to be established in the WQC. The FEIR also confirms that a Spill Control and Countermeasures Plan (SPCC) will be implemented. Further details on the construction components of the SPCC will be developed in conjunction with the USCG and be incorporated into MassDEP's Water Quality Certificate.

Various commenters remain concerned about the presence of hazardous waste in the vicinity of the pipeline and proposed Port. According to NMFS, permits issued by the Army Corps of Engineers in the 1950s authorized the dumping of radioactive, chemical and toxic waste in close proximity to the pipeline route and project. The FEIR states that sediment quality within the northern pipeline corridor and the northern port area has been assessed. NMFS recommends that in order to avoid and minimize potential exposure of fishery resources and habitats to hazardous materials resulting from resuspension of contaminants during construction that additional sampling and monitoring for radioactive and hazardous wastes should be considered. The National Marine Sanctuary Program (NMSP) suggests that data from sediment sampling be linked to all available video data from video surveys and acoustic profiles to map rubble fields surrounding the Massachusetts Bay Disposal Site and that locations of all known radioactive deposits should be integrated into these maps. I recommend that this issue be addressed by MassDEP in the permitting process through a review of materials provided in comment letters and, if appropriate, the development of a contingency plan for handling such materials if encountered in the field.

Marine Habitats and Fisheries

The proposed location of the DWP and pipeline lies within productive fisheries habitat supporting numerous species of finfish and invertebrates, including Essential Fish Habitat (EFH). These areas support historically important commercial fisheries such as lobstering, dragging and gill netting, as well as recreational fishing. Construction of the LNG terminal and pipeline will likely have both short- and long-term impacts on the numerous species of finfish and invertebrates in Massachusetts Bay. These impacts include direct mortality of juveniles and adults within the footprint of the terminal and pipeline during construction, as well as permanent loss of habitat within and adjacent to the construction footprint. Larval life-stages will experience mortality due to entrainment.

The FEIR considers the impacts of alternative construction schedules on marine habitats and resources. The Winter Construction Schedule would reduce impacts on EFH during spawning periods such as hake, silver hake and witch flounder, but coincides with the spawning of others such as cod, haddock, winter flounder, and Pollock. The Alternative Construction Schedule 1 would occur during the peak of eggs and larvae for species such as yellowtail flounder. Lobsters would be present during four months of the Winter Construction Schedule, three months of the Alternative Construction Schedule 1, and for a month and a half of the Summer Construction Schedule. Compliance with time of year restrictions should be a core

measure of the Project's obligation to minimize its adverse impacts, and these restrictions will be incorporated into MassDEP's permits. The Massachusetts Division of Marine Fisheries (DMF) comment letter recommends a number of conditions regarding pre-construction baseline characterizations, time of year restrictions and monitoring that I expect will be considered in the permitting process.

DMF states that the analysis and evaluation of the project's potential impacts to marine habitats and fisheries resources have been hampered by the limited amount of spatially and temporally comprehensive data available for the project area. As a result, DMF believes that the potential severity of impacts and direct mortality resulting from the project have likely been underestimated, and conversely, that the potential biological benefits to be derived from the exclusion of fishing in the project area have been overestimated. The FEIR provided additional analysis of fisheries data as required by the Certificate on the DEIR, but notes the limitations and uncertainty associated with the analysis and limited available data. For these reasons, it will be necessary to develop appropriate monitoring studies to accurately assess the biological impacts of the project during the permitting process. I expect that the draft Comprehensive Monitoring Plan, as presented in the proposed Section 61 Findings in the FEIR, which provides a sound basis for proposed monitoring, will be modified during the permitting process to reflect ongoing discussions between the proponent and the resource and regulatory agencies.

The construction of the proposed pipeline and Port would result in temporary adverse impacts to approximately 418 acres of seafloor. In addition, permanent impacts to the benthic environment would result from the operation of the Port. Approximately 63.7 acres will be permanently impacted due to continual chain sweep which will preclude the recovery of benthic habitats. Port installation would result in 7.5 acres of conversion of soft sediments to hard bottom substrated.

According to the FEIR, the project's anticipated water demand would average 2.39 million gallons per day (mgd) for ship operations and ballast water. The estimates of water usage for ship operations and ballast water in the FEIR do not include water usage occurring during approach, docking and transit. Impacts resulting from seawater intake include entrainment of fish and invertebrate eggs and larvae passing through the intake screen. The FEIR updated estimates of annual entrainment impacts to reflect an overlap of two SRVs for 9 hours, every 6 days. According to analysis presented in the FEIR, approximately 688 million eggs and 2.5 million larvae, or 240 pounds of eggs and 2,240 pounds of larvae would be entrained each year for the life of the proposed project.

The FEIR considered the impacts to the commercial fishing industry as a result of the Port construction and operations. Commercial fishing would be temporarily excluded from the vicinity of construction activities between 4 and 6 months depending on the construction schedule. According to the FEIR, the projected net present value of the impact of the fishing exclusions during construction would be $125,925. Based on the assumption that all fishing activities would be excluded from a 5-square mile "Area to Be Avoided" (ATBA) around the Port, the FEIR identifies the gross economic impact from Port operations on the Massachusetts fishing industry as $3.24 million over the 20-year life of the project.

The FEIR does provide additional information and analysis, as requested by the Certificate on the DEIR, to characterize inshore groundfishing in the vicinity of the project. However, I have received comment letters from DMF, NMFS, the groundfish industry and representatives of fishing communities on both the Draft and Final EIRs (see footnote #2) that challenge the ability of the data and methodology used to determine this figure to accurately characterize impacts. In addition to significant disagreement over the calculated direct impacts of displacement through loss of catch, potentially increased vessel transit time to and from the grounds, and reallocation of effort to other fishing grounds, commenters assert that the proposed project will have significant indirect and cumulative impacts. After careful review of the Draft and Final EIRs and comment letters, it is clear that there remain significant discrepancies between the impacts calculated by the FEIR and the impacts postulated by state and federal fisheries management agencies and the affected industry. As I discuss in the section on mitigation above, I have determined that significant mitigation is appropriate to effectively address project impacts to the local infrastructure on which the inshore groundfish industry depends, impacts to individual fishermen, and the cumulative economic and social impacts to which the deepwater port will contribute.

The project will also have significant impacts to the commercial lobster industry in the form of temporary impacts from the placement of the pipeline lateral and permanent impacts from the displacement of lobster fishing in the area occupied by the deepwater port. Mitigation for these impacts is described above. I wish to note that in determining the adequacy of mitigation associated with impacts to the inshore groundfish and lobster industries I have carefully considered the distinction between mitigation necessary to preserve the localized infrastructure in support of a regional groundfish industry (preservation of a viable 'hub' port) and mitigation based on the impact to individual lobstermen within an industry widely dispersed among numerous ports. I believe that the mitigation to be provided by the proponent has been appropriately tailored to address the circumstances unique to the respective industries.

Marine Mammals

The proposed DWP would be located in an area important to marine mammals, including endangered North Atlantic right, humpback and fin whales. The construction and operation of this DWP would place these species in increased jeopardy of direct mortality from ship strike as well as disruption from high levels of noise, potential entanglements, and the loss of the waters that will be occupied by this DWP. Of particular concern are the DWP's potential impacts to the North Atlantic right whale because this species is so critically endangered that the loss of even a single individual is unacceptable; the coast of Massachusetts provides very important foraging habitat for a large portion of the population; and the proposed location of the DWP is in an area of high use by right whales. Comments from the Natural Heritage and Endangered Species Program on the DEIR state that the operation of the DWP will render the area it occupies, as well as its immediate surroundings, unavailable for foraging by right whales, other endangered whales, and marine turtles.

The FEIR provides additional data and analysis on the impacts of the proposed project on marine mammals, and includes proposed measures by which impacts may be avoided, minimized and mitigated. Consultation with NMFS and staff from the National Marine Sanctuary

Program/Stellwegen Bank National Marine Sanctuary (NMSP) has been completed and was included as an appendix to the FEIR. Information about marine mammal activity in Massachusetts Bay was based on a study commissioned with the Whale Center of New England. Comments from The Whale Center of New England are critical of both the data and conclusions in the FEIR regarding marine mammal populations and behavior and the potential impacts of the project to marine mammals. The Whale Center states that the proposed project cannot be made compatible with conservation of endangered whales, other marine mammals, and the marine environment overall.

Comments from NMSP state that the information and conclusions in the FEIR are not consistent with plans developed through consultation under the National Marine Sanctuaries Act to mitigate increased risk to marine mammals from noise and ship strikes. NMSP recommends a 10 knot year-round vessel speed limit within the marine sanctuary for the LNG vessels and an integrated management approach to minimize vessel-whale interactions. NMSP has also requested further clarification on how various elements of the proposed acoustic monitoring program relate to one another. In addition, further information is required on proposed ship-quieting technology and impacts to acoustically-active fish species.

The FEIR notes that MARAD will require as a condition of the DWP license for the project that the proponent install and operate an array of near-real-time acoustic detection buoys, the number, duration and specific location for which will be approved in advance by MARAD and the National Oceanic and Atmospheric Administration (NOAA) as part of a detailed monitoring and mitigation plan prepared by MARAD. EOEA agency staff have participated in discussions among the federal agencies and the proponent, and, while the final conditions of acoustic buoy mitigation have not been established by MARAD, I am satisfied through my review of the FEIR, mitigation proposals informally agreed to by the federal agencies and the proponent, and consultation with agencies, that the proposed mitigation measures are appropriate and will be incorporated as conditions in any license issued under the DWPA.

Contingency Planning

The Certificate on the DEIR required that the proponent provide additional information regarding the appropriate planning and contractual commitments that need to be in place to minimize the risk that bad weather or unanticipated events will disrupt the approved construction schedule and potentially increase adverse impacts from project construction to priority aquatic resources and the fishing community. The FEIR presents a construction schedule that factors in additional time to respond to contingencies, such as weather, equipment failure, and other unforeseeable circumstances. It also provides additional information regarding Neptune's field preparation for contingencies, including the use of separate vessels for laying and plowing of the pipeline and additional vessels for diving support and surveying.

The absence of appropriate contingency measures and an implementation process was a chief cause of the HubLine project's failure to meet its approved construction schedule, resulting in considerable intrusion into the Time of Year restricted period. The proponent relies on its pipeline route selection and geophysical characterization of the construction corridor to avoid the pipeline installation difficulties the Hubline project faced due to unexpected subsurface

conditions. The proponent should note comments from MassDEP than an over-reliance on risk reduction measures that lead to a shortfall in contingency resource availability will not excuse the proponent's obligation to comply with the WQC's condition and mitigate for consequential environmental impacts.

Air Quality

The FEIR adequately describes the project's air quality construction and operational impacts. While nitrogen oxide (NOx) and volatile organic compounds (VOC) emissions from Port operations are estimated to be substantially below the 100 tons per year (tpy) threshold to require a General Conformity Determination, the construction related emissions for both those pollutants exceed the 100tpy trigger. The proponent has initiated the applicable federal and state air quality permit approval processes, including the acquisition of certified emission reduction credits to fully offset its emissions, and considers the Port a "facility" as defined under 310 CMR 7.00 for purposes of obtaining the necessary air quality permits.

Historic Resources

In its comments on the DEIR, the Massachusetts Board of Underwater Archaeological Resources (BUAR) and the Massachusetts Historical Commission (MHC) expressed concern that the proposed project could adversely impact both known and potential historical cultural resources and well as potential submerged prehistoric archaeological sites. In response, the proponent conducted marine archaeological reconnaissance surveys and reports that were detailed in the report *Marine Cultural Resources Analysis of Remote-Sensing Survey Data Associated with Neptune LNG Project, Offshore Massachusetts* and reviewed by BUAR, MHC and the Minerals Management Service (MMS). The report evaluated potential impacts on cultural resources associated with the project, its potential alternatives, and the No Action alternative.

The FEIR concludes that the proposed project will have no effect on submerged cultural resources listed on or eligible for listing on the National Register of Historic Places provided that location and routing plans avoid bottom features likely to signal the presence of submerged cultural resources; in their comments on the FEIR, BUAR concurs with this conclusion. The report also included a draft plan for how to address unanticipated discoveries. Further formal avoidance and anchor handling plans will be developed in consultation with BUAR and MHC. BUAR notes that additional consultation and survey will be required if the Direct Pipeline Route or the Southern Port Pipeline Alternative 2 is selected. The proponent should note comments from BUAR that should heretofore unknown submerged cultural resources be encountered during construction that steps should be taken to limit adverse impacts and notification should be undertaken to the appropriate agencies.

Non-Compensatory Mitigation

The FEIR presents draft Section 61 Findings for use by state permitting agencies that include a comprehensive summary of the potential environmental impacts associated with the construction and operation of the Neptune DPW as well as proposed mitigation measures to

minimize these impacts where they cannot be avoided. These mitigation measures will be incorporated into state agency permits issued for the project and include:

- Construction phase mitigation measures to minimize impacts as they apply to construction of the DPW, the Pipeline Lateral, and both the DPW and Pipeline Lateral;
- Operational mitigation measures focused on minimizing impacts on air quality, water quality, marine mammals, the fishing industry, marine traffic and other resources in Massachusetts Bay;
- Mitigation measures related to the decommissioning of the DPW; and
- A Comprehensive Monitoring Program (CMP) to measure impacts and/or recovery of impacted resources and the time period for these resources to return to pre-construction, baseline levels.

I expect that the state agencies will incorporate these mitigation measures into Section 61 Findings and permits, as appropriate.

Conclusion

The proposed project requires no further review under MEPA and may proceed to permitting. The permitting agencies shall forward a copy of their final Section 61 Findings to the MEPA Office for completion of the project file.

December 12, 2006
Date

Robert W. Golledge, Jr.

Comments received:

11/7/2006	Nahant SWIM, Inc.
11/9/2006	Susan Waller
11/10/2006	Esta Nickas
11/10/2006	Mehmet Oktay Kaya
11/13/2006	Fredric C. Heys
11/13/2006	Andrea G. Heys
11/14/2006	Melissa Gallant
11/14/2006	Kathi Duffy
11/14/2006	Vickie Cowie
11/14/2006	Debra A. Troutman
11/14/2006	Patrick C. Griffin
11/14/2006	Carolyn A. Kirk
11/15/2006	Nancy Hodgson Smith

11/15/2006 Karla J. Fischer
11/15/2006 Kathy Hurlburt
11/15/2006 Janice M. Paik
11/16/2006 Dolores A. Czarnecki
11/16/2006 Karen Ray
11/16/2006 Teresa M. Costello
11/17/2006 Jen Urbach
11/17/2006 Massachusetts Marine Trades Association
11/22/2006 Alessandro & Kathy Cagiati
11/22/2006 Massachusetts Board of Underwater Archaeological Resources
11/24/2006 Capt. Marc Cunningham, Captain Bill and Sons Whale Watch
11/24/2006 The Whale Center of New England
11/24/2006 Capt. Jeff Eagan
11/24/2006 Mary Rodrick
11/27/2006 Rebecca Lee Garnett
11/28/2006 Helen McNulty
11/28/2006 Maureen Farley
11/28/2006 Students from Triton Regional High School, Byfield, MA (39 letters)
11/29/2006 United States Coast Guard, supplemental information to DEIS/DEIR
11/30/2006 Nahant SWIM, Inc.
11/30/2006 New England Energy Alliance
11/30/2006 City of Gloucester, Office of the Mayor
11/30/2006 City of Boston, Office of Environmental and Energy Services
11/30/2006 Massachusetts Division of Energy Resources
12/1/2006 Neptune LNG, LLC
12/1/2006 Polly Bradley
12/1/2006 Duke Energy Gas Transmission
12/1/2006 Nahant SWIM, Inc.
12/1/2006 Massachusetts Historical Commission
12/1/2006 Conservation Law Foundation
12/1/2006 Massachusetts Division of Marine Fisheries
12/4/2006 Roberta Bennett
12/4/2006 National Oceanic and Atmospheric Administration
12/4/2006 United States Environmental Protection Agency
12/5/2006 Department of Conservation and Recreation
12/6/2006 Renee M. Mary
12/6/2006 Massachusetts Office of Coastal Zone Management
12/7/2006 City of Gloucester, Office of the Mayor
12/7/2006 Gloucester Fishermen Association
12/8/2006 Metropolitan Area Planning Council
12/8/2006 Northeast Seafood Coalition
12/8/2006 Massachusetts Ocean Partnership Fund
12/8/2006 Massachusetts Energy Facilities Siting Board
12/8/2006 Department of Environmental Protection

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