The Commonwealth of Massachusetts
Executive Office of Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114-2524

MITT ROMNEY
GOVERNOR
KERRY HEALEY
LIEUTENANT GOVERNOR
STEPHEN R. PRITCHARD
SECRETARY

Tel. (617) 626-1000
Fax. (617) 626-1181
http://www.mass.gov/envir

July 7, 2006

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

DWP NAME	: Northeast Gateway Energy Bridge Deepwater Port /Northeast Gateway Pipeline Lateral
DWP MUNICIPALITY	: N/A
DWP WATERSHED	: N/A
EOEA NUMBER	: 13473/13474
DWP PROPONENT	: Northeast Gateway Energy Bridge, LLC/Algonquin Gas Transmission, LLC
DATE NOTICED IN MONITOR	: May 24, 2006

As Secretary of Environmental Affairs, I hereby determine that the Draft Environmental Impact Report (DEIR) submitted for this DWP **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).

While the DEIR is adequate for the purpose of advancing to preparation of the Final EIR, (FEIR), the FEIR must provide additional information on a number of issues, including project alternatives, potential impacts to commercial fishermen, and cumulative impacts. The proponents for the Northeast Gateway and the Neptune LNG (EOEA # 13641) projects have proposed to locate similar delivery, regassification, and transshipment facilities in the same general area of Massachusetts Bay; the projects propose to construct separate pipelines, virtually side-by-side, to tie into the existing HubLine. I question the development of duplicative infrastructure on public trust lands, particularly where, as here, the public interest has been given even greater standing through the designation of the Ocean Sanctuaries which these pipelines

would traverse. I am therefore requiring that the FEIR provide a more complete analysis of this issue.

Project Description

As described in the DEIR, the proposed project entails the construction of a DWP (DWP) in Massachusetts Bay approximately 13 miles south-southeast of Gloucester. The DWP would consist of two submerged buoys that would connect to a 16.4-mile, 24-inch diameter pipeline that would deliver regasified LNG from the DWP to onshore markets in New England via the existing off-shore HubLine which connects to shore. The buoys would be anchored to the sea floor with eight mooring anchors. A flexible riser would connect each buoy to a 40-foot by 40-foot manifold that would rest on the seafloor at a depth of approximately 250-275 feet. Liquefied Natural Gas (LNG) would arrive at the DWP in the Energy Bridge Regasification Vessel (EBRVs) and would then be vaporized and transferred from the EBRVs through the buoys to the pipeline. Gas would travel from the EBRV into the riser, through the manifold, and into a steel flowline connecting to the pipeline, which in turn would connect to the HubLine at a subsea location approximately three nautical miles southeast of Salem Sound.

The DWP would be located in federal waters in an area bounded by the South Essex Ocean Sanctuary to the west, the North Shore Ocean Sanctuary to the northwest, the Stellwagen Bank National Marine Sanctuary to the east, the Massachusetts Bay Disposal site to the northeast, and the Boston Harbor Channel to the south. The DWP will be owned and operated by Northeast Gateway Energy Bridge, LLC, and the Pipeline Lateral will be owned and operated by Algonquin Gas Transmission, LLC. Each buoy would have three marine traffic management zones:

- a 0.54-nautical mile diameter 500-meter radius Safety Zone around each buoy whether an EBRV was moored or not, that may increase to 800 meters when the 300-meter long EBRV rotates around the buoy;
- a 1.1-nautical mile diameter 1,000-meter radius No Anchoring Area to prevent damage to the buoys and mooring system; and
- a 1.4-nautical mile diameter 1,250-meter radius Area To Be Avoided (ATBA) to ensure that other vessels do not interfere with DWP operations.

Approximately 12.5 miles of the Pipeline Lateral is proposed in Commonwealth waters and 3.9 miles in federal waters. According to the DEIR, the proponent proposes to use the post-lay plow technique to install the pipeline for nearly its entire route. The impacts associated with this construction technique include dredging a trench along the pipeline route, backfilling the trench with side-cast spoils from the trenching operations, and anchor and anchor cable impacts to the ocean floor associated with the barges installing the pipeline. The target burial depth of the pipeline in post-lay plow areas will be three feet, with a minimum of 18 inches of cover over the pipeline. For a 24-inch diameter pipe such as the one proposed, this would entail the dredging

of a trench approximately five feet deep with adequate trench spoils adjacent to the trench for backfilling. The plow has the capability of digging a six-foot trench, and the proponent intends to maximize the plow's capability. Transitional sections of the pipeline leading to crossings of two existing cables will be installed into a trench created by a diver-operated hand jet that will dig a trench into which the pipe will settle. Sand bags and concrete mats are proposed to be used to cover the pipeline in these transitional sections; in the location of the crossing itself, the pipeline will be covered with rock or concrete mats, resulting in permanent habitat conversion.

Based on a lateral extent of disturbance of 75-80 feet, plowing and jetting activities are expected to affect approximately 208 acres of seafloor, of which approximately 130 acres are located in state waters. In addition, the barge anchor sweep area would be centered on the pipeline for its entire length and would be approximately 6,000 feet wide; within this area, approximately 845 acres of seafloor are expected to be affected by anchors and cable sweep, of which approximately 640 acres are located in state waters. The pipeline will also undergo hydrostatic testing with seawater after it is buried, which may result in the entrainment of plankton and the discharge of seawater treated with a biocide. Construction of the pipeline is expected to last for seven months.

MEPA Jurisdiction and Permitting Requirements

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

- 11.03(3)(a)(1)(b) Alteration of ten or more acres of any other wetlands, in this case Land Under the Ocean; and
- 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 (DEP). 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 DEP 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.

I have received several comment letters that continue to raise significant concerns with the proposed DWP. I wish to remind commenters that under MEPA, I do not have the authority to approve or deny the DWP. Review under MEPA is not a permitting process. Rather, it is a process designed to ensure public participation in the environmental review processes conducted by state agencies with permitting authority over the DWP, to ensure that state permitting agencies have adequate information on which to base their permit decisions and their Section 61 Findings, and to ensure that the potential environmental impacts of the DWPs are described fully and avoided, minimized, and mitigated to the maximum feasible extent.

SCOPE

General

I have established a Special Review Procedure for the MEPA review of this DWP to facilitate coordination among state and federal agencies and to maximize opportunities for public participation in the review of this complex DWP. Pursuant to the Special Review Procedure, the project is undergoing coordinated review under MEPA and the National Environmental Policy Act, and this DEIR has been filed as a combined Draft Environmental Impact Report/Draft Environmental Impact Statement. The Special Review Procedure lays out the general requirements for outline and content of the EIRs. Because of the coordinated federal and state review, I have allowed the proponent to vary the format from the usual EIR format contained in Section 11.07 of the MEPA regulations. The United States Coast Guard is preparing the coordinated review document. Procedurally, the Coast Guard does not allow Northeast Gateway Energy Bridge, LLC and Algonquin Gas Transmission, LLC, as the applicants, to participate directly in the development of the MEPA/NEPA documents. I am therefore mindful that the proponents cannot control the extent to which the DEIR/S is responsive to the MEPA Certificate. I wish to clarify that where the MEPA certificate addresses "the proponent," the intended audience is both Northeast Gateway and the federal agency responsible for responding to this Certificate in the Final EIR (FEIR).

The FEIR should follow the general guidance for outline and content contained in Section 11.07 of the MEPA regulations, as modified by this Certificate. The FEIR should be circulated in compliance with Section 11.16 of the MEPA regulations and copies should be sent to those parties that submitted comments on the DEIR, and to any additional state agencies from which the proponent will be seeking permits and approvals.

Although the proposed DWP does not trigger requirements for enhanced notification and outreach pursuant to the Executive Office of Environmental Affairs (EOEA) Environmental Justice Policy, I strongly encourage the proponent to continue to reach out to the public in coastal communities in which fishing is a major component of the local economy. Copies of the FEIR should be made available for public review at local public libraries.

In general, the FEIR should provide detailed discussion and analysis of the issues below, including any measures necessary to avoid, minimize or mitigate the project's impacts. Mapping should be based on NOAA charts or other appropriate base maps at suitable scales. I note that State review of the DEIR has been complicated by the location of material germane to the MEPA process in other documents. State agency comments, including those incorporated in the following Scope, may therefore identify as absent information that is available in other venues. This information should be provided in the FEIR document itself.

Alternatives Analysis

The Scope issued for the DEIR required the analysis of 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 DEIR does provide limited information regarding each of these types of alternatives, but does not provide adequate detail regarding individual alternatives or a meaningful cross-comparison of benefits and impacts. In addition, the Scope requested that, as context for the alternatives analysis, the DEIR provide a discussion and analysis of long term regional energy needs, forecasted energy growth, and existing and planned energy infrastructure. The DEIR provides only a brief characterization of these issues. The FEIR should present a more detailed discussion regarding the balance between the demand for and supply of natural gas in the New England region, including any updated available information, to provide context and background for the evaluation of potential project alternatives. The FEIR should respond to comments from the Energy Facilities Siting Board and the Division of Energy Resources.

Deepwater Port

The DEIR summarizes 11 other alternative projects, including both on-shore and off-shore natural gas supply projects in the northeastern United States and eastern Canada that are in various stages of environmental review, permitting and development. The DEIR discusses the status of each project but does not provide an analysis of its relative merits or establish consistent criteria for comparative purposes. The DEIR does not evaluate proposed on-shore projects in detail on the grounds that they are or will be the subject of separate environmental reviews under both MEPA and NEPA; rather, these are grouped as a class under the No Action Alternative. Therefore, the DEIR provides an incomplete basis for comparing the benefits and impacts of this project to the range of other proposed projects.

The FEIR should include a more robust analysis of project alternatives using publicly available information that may have a bearing on their overall merits, or justify their elimination from further consideration. In order to compare this project with remote natural gas supply projects, such as those identified in eastern Canada and Maine, alternatives should be considered in combination with the necessary pipeline infrastructure to deliver natural gas to southern New England. The FEIR should discusses the status of each project and provide an analysis of its relative merits. The FEIR should establish consistent criteria by which to compare and contrast alternatives, and should present a clear and concise comparison of alternatives.

Pipeline Lateral

The DEIR evaluated four alternative routes for the pipeline lateral connection between the DWP and the HubLine. These included two relatively short and direct routes that pass through areas of both soft- and hard-bottom habitat, and two longer routes that avoid hard-bottom areas and pass primarily through soft-bottom habitats. The proponent's preferred alternative (Alternative Route 4) is 16.1 miles long, including 12.5 miles within state waters. Based on the results of surveys of the ocean floor described in the DEIR, this route avoids exposed bedrock and surface boulders, passes through limited areas of cobble and coarse till, and is characterized by predominately fine-grained sediments. Despite their greater length, the two alternative routes passing mostly through soft-bottom habitat appear to offer the greatest potential for avoiding or minimizing significant short- and long-term impacts from construction of the pipeline to benthic habitat and water quality.

To the extent that these alternatives avoid hard-bottom areas, they have several advantages over other alternative routes reviewed in the DEIR. Specifically, work in soft sediments is likely to progress faster, shortening the construction period and minimizing the duration of the impact and number of species affected. Additionally, comments indicate that soft-bottom habitats are more likely to recover from impacts faster, and the use of a plow through soft sediments has been shown, in the case of the HubLine, to cause relatively localized turbidity impacts (but see request for additional discussion of impacts to soft bottom, below). In light of the advantages of a soft-bottom pipeline route, the FEIR should further analyze whether the shorter route of Alternative 1, the other alternative through predominately soft-bottom habitat, has fewer or less significant impacts on ocean sanctuaries than Alternative 4.

The DEIR indicates that concrete mats and/or sand bags are proposed to be used as trench fill and to cover the pipeline, but does not address concerns previously raised. The FEIR should describe the rationale for covering the pipeline where necessary with rock or concrete mats and sand bags, especially because at the proposed pipeline depth, the potential for scour is not likely. The proponent should consider a pipeline cover method that avoids the long-term maintenance issues associated with mats and bags, which may break down over time.

Cumulative Impacts

The DEIR indicates that any cumulative impacts from the construction of pipelines for the Northeast Gateway and Neptune DWPs would be minimal based on the assumption that the two-year separation in the construction schedules for each DWP would allow for the recolonization of the Algonquin pipeline. This determination does not accurately reflect recent experience with pipeline construction in Massachusetts Bay[1], and is premature because it precludes the consideration of a single pipeline serving both DWPs. Moreover, although the DEIR raises several issues regarding the infeasibility of the single pipeline alternative, it does not discuss the extent to which these issues would determine if a joint pipeline approach is a reasonable alternative, given that it would result in reduced environmental impacts. The DEIR states that the review process applicable to a formal application for a single pipeline would frustrate the objective of providing natural gas within the timeframe requested by the applicants. The MEPA regulations at 301 CMR 11.07(6)(f)(1) require "a description and analysis of alternatives to the Project including: all feasible alternatives...." The regulations require that *subsequent* analysis of feasible alternatives consider "the objectives of the Proponent and the mission of any Participating Agency...." (11.07(6)(f)(3)) The applicant's objective to enter the market for natural gas as quickly as possible may render the single pipeline alternative undesirable, but it has not been demonstrated to be infeasible.

In addition, the fact that both of the proposed pipelines would cross portions of both 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, argues strongly, given the regulatory mission to protect Ocean Sanctuaries, for serious consideration of any alternative that could significantly reduce impacts to Ocean Sanctuary resources. I have carefully considered comments from DEP, the Energy Facilities Siting Board, the Division of Energy Resources, and the National Oceanic and Atmospheric Administration that recommend that a single pipeline should be the presumptive mitigation measure to meet the standard for minimization of impact, because it would significantly reduce (by an estimated 35 percent) the environmental impacts of constructing separate pipelines to serve the two proposed DWPs. I agree that this alternative merits serious consideration, and direct that the FEIR develop a more detailed assessment of the engineering, environmental, and operational feasibility of constructing one pipeline.

<u>Impacts to Land Under the Ocean</u>

The DEIR does not discuss the project's compliance with the Massachusetts Wetlands

1 See discussion at page 11: The DEIR appears to rely heavily on the initial benthic and aquatic environmental impact data coming from the HubLine's post-construction monitoring in predicting a low significance of impact resulting from the Northeast Gateway DWP. Reaching conclusions on the dredge-related impacts based on preliminary HubLine data may be premature given that recovery has not been documented at some HubLine sites, surface restoration of the ocean bottom was not accomplished in all cases, and inadequate burial depth was a problem during construction.

Protection Act. The construction of the pipeline will result in impacts to Land Under the Ocean, and will require Orders of Conditions from several coastal municipalities. The FEIR should provide such a discussion and demonstrate that the DWP meets any applicable performance standards, including necessary measures to minimize adverse effects on 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.

The DEIR does not provide a detailed discussion of the impact of benthic topographic changes and the standard to which the bottom topography must be restored upon completion of construction. The performance target for the placement of the pipe should be the full restoration of the topography and composition of the sea floor 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 to accommodate scour effects that would remove some of the cover material.

The FEIR should propose measures that would minimize the addition or substitution of hard material for soft bottom at planned tie-ins and crossings of the pipeline and unanticipated exposure of the pipe where it may be buried insufficiently or where the backplow may not fully bury the pipe. The FEIR should also examine alternative techniques and materials that may be used to armor the pipeline where it cannot be buried and mitigation measures that could be used to minimize impacts from the placement of hard cover material. A benefit of the significant surveying and geophysical sampling conducted in the course of delineating a soft-sediment pipeline route will be a greater degree of confidence that the target depth to burial of the pipe can be achieved. Even where the pipe is buried to the target depth, the experience with the HubLine project demonstrated that the pipe could become buoyant when filled with gas, and breach the cover, unless proper stabilization procedures are employed. The FEIR should examine the procedures necessary to prevent buoyancy and incorporate them into the proposed mitigation program.

The FEIR should also analyze the relative impacts of deviations from the target depth to burial and consider whether certain sections of the pipeline route would be susceptible to causing adverse impact by the addition/substitution of hard material for soft material. This will inform the process by which the permitting agencies establish conditions in their permits that will ensure the restoration of the sea floor to the maximum practicable extent. To assist the permitting agencies, the FEIR should compare the environmental costs and benefits of replowing versus hard cover in sections of the pipeline where the necessary depth is not achieved on the first pass of the plow. The FEIR should also discuss how biological considerations for restoring benthic habitat may affect the proposed depth of burial.

One necessary component of the restoration decision process is real time monitoring of whether the appropriate depth of burial is being achieved in order to plan for and implement timely and appropriate steps to correct pipeline exposures/depressions so that habitat alteration is

avoided and natural topography is restored. The FEIR should describe the basic components of such a monitoring plan and integrate it into the Section 61 Findings and the monitoring required by the Federal Energy Regulatory Commission.

Chapter 91 Waterways

The pipeline lateral component of the project, which is proposed to be located in Commonwealth waters, is subject to the Chapter 91Waterways Regulations, 310 CMR 9.00. The pipeline proponent has filed an application for a Chapter 91 License with DEP, which discusses the DWP's conformance with the applicable regulations.

The Waterways Regulations at 310 CMR 9.37(4) require that pipelines be buried so that they will not present a hazard to navigation or to fishing gear, will be protected from scour and sediment transport processes, and in a manner that restores bottom contours to the extent feasible. As discussed in greater detail above, the FEIR should specifically discuss how the DWP will meet these requirements and describe the means by which pre-and post-construction contours will be measured to determine the extent to which these standards have been met. The FEIR should also discuss in more detail how the DWP would be permittable under the Ocean Sanctuaries Act. While not a prohibited activity, the DWP 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.

Additional issues associated with state tidelands regulation are addressed in appropriate sections of this Certificate, and include:

- Displacement of existing water dependent uses;
- Minimization/justification of impacts to Ocean Sanctuaries; and
- Mitigation

Water Quality

The DEIR briefly reviews turbidity and pollutant discharge impacts from trenching and anchor cable impacts and concludes that there is little detrimental effect from these sources. The Water Quality Certificate application submitted to DEP in July 2005 addressed these issues more fully and reviewed the relevant regulatory requirements, but did not propose to conduct water quality monitoring during construction activities or to provide the results of a bio-assay that may be required prior to construction in the siltier portions of the pipeline route. The FEIR should review the need for water quality monitoring during construction based on factors including TOY restrictions, species present in the area during construction, and turbidity and pollutant impacts.

According to the DEIR, the proponent has substantially reduced its proposed seawater usage from 54 million gallons per day (mgd), as presented in the ENF, to approximately 5 mgd

per ship. This reduction in seawater usage will decrease the numbers of eggs and larvae entrained at the DWP to an estimated 16 million eggs and 2.5 million larvae per ship annually. This converts to about 14,000 age-1 adult fish. In addition, the DEIR estimates that the annual entrainment of lobster larvae at the DWP will be equivalent to 50 age-1 lobsters per ship.

However, the DEIR did not describe model results for potential sediment concentrations under various scenarios, ranging from high sediment concentration/low dilution to lower sediment concentration/greater dilution, and it did not include a discussion of compliance with water quality standards. This discussion is important for evaluating the potential impact that the plowing and jetting activities would have upon non-motile benthic resources. In particular, the FEIR should provide an assessment of the amount of sediment drape on demersal fish eggs in the project area footprint. Because the DEIR relied upon the National Oceanic and Atmospheric Administration's (NOAA) icthyoplankton data, impacts to demersal eggs could not be assessed. The turbidity data gathered from the monitoring of the HubLine are not sufficient to estimate impacts to benthic resources unless the turbidity values can be transformed to sediment burial rates or depths. The FEIR should include an assessment of demersal eggs that may be buried during pipe plowing and jetting so that the full impact of these processes can be evaluated. This assessment should include a review of the literature describing impacts to benthic resources as a result of sediment drape.

The FEIR should also provide a better description of the measures that would be included in the proposed Spill Control and Countermeasures Plan. It should also list all chemicals (including oils, grease, and other normal ship operations materials) to be used onboard the ships and describe containment plans for these chemicals. The DEIR provided a general description of contaminants within sediments in the project area. The FEIR should include a map showing the location of samples and highlighting where contaminants were found to be above regulatory thresholds.

Marine Habitats and Fisheries

General

Maps and data showing the extent and nature of the seafloor environment are critical to understand the affected environment and environmental impacts of the project. In its comments on the Environmental Notification Form, CZM requested that the DEIR fully describe all survey results, including sidescan sonar, sub-bottom profile, multi-beam bathymetry, grab samples, sediment profile imagery, and other data collection efforts. CZM had also requested that bottom areas determined to be unsuitable for pipeline burial be identified on the maps, and the rationale for the determination of unsuitability be discussed in the DEIR. The DEIR lacks a thorough description of the seafloor environment for the project area and does not appear to contain any new data on the sedimentary environment in Massachusetts Bay. While the DEIR lists the geophysical investigations conducted for the DEIR, no data, maps, or other depictions are shown for any of these surveys.

Sediment thickness is important to evaluate the proposed lateral pipeline route, and information regarding surficial grain size and sediment classes are necessary in order to understand the potential distribution of benthic organisms and demersal fishes and crabs, and any potential impacts to these benthic resources. The lack of data in the DEIR hinders the ability to understand the affected environment and environmental consequences of this proposed DWP. Therefore, at a minimum, the FEIR should include maps showing the distribution of sediment thickness, surficial grain size and sediment classes in relation to fish habitat.

I understand that much of the data requested by CZM is contained in project applications filed with the U.S. Coast Guard. As discussed above, this information should be provided in the FEIR. The proponent should consult with CZM to determine whether additional information will be necessary for State federal consistency review.

Benthic Communities

The primary impact resulting from construction of the DWP is the plowing and backfilling to lay the proposed 16-mile pipeline. Construction-period impacts associated with pipeline construction include discharge of dredged material into the water column, disturbance of benthic habitat due to the trenching and anchor-related impacts, and changes to bottom contours. The pipeline construction would result in both direct and indirect impacts, some of which are temporary, and others of which are long-term effects related to the habitat disturbance and recovery period. A wide variety of microfauna, shellfish and crustaceans could be directly and adversely impacted by the burial of the pipeline, sediment dispersion, anchor placement and anchor chain sweeps. Given the nature of the construction methods, these impacts cannot be avoided or minimized, except to the extent that the appropriate depth to burial of the pipeline can be achieved with a single pass of the plow and by the minimum amount of substitution of soft sediment by hard cover. The DEIR generally characterizes these impacts as minor to moderate.

A key factor in evaluating the extent of the long-term impacts to the benthos is the timing and character of the recolonization. The DEIR provides examples from other dredging projects with a recovery period ranging from one to five years and different potential outcomes on the density and diversity of the post-construction fauna. The DEIR appears to rely heavily on the initial benthic and aquatic environmental impact data coming from the HubLine's post-construction monitoring in predicting a low significance of impact resulting from the Northeast Gateway DWP. Reaching conclusions on the dredge-related impacts based on preliminary HubLine data may be premature given that recovery has not been documented at some HubLine sites, surface restoration of the ocean bottom was not accomplished in all cases, and inadequate burial depth was a problem during construction. Therefore, definitive conclusions about the impacts of the Northeast Gateway DWP should not rely not exclusively on HubLine data.

The antidegradation provisions of the Massachusetts Surface Water Quality Standards require that existing uses be maintained and protected. In addition to taking necessary measures

before and during construction to avoid and minimize impacts, the proponent must document post-construction effects on the ecological functions of the benthos along the pipeline route. An essential component of the assessment and mitigation of the DWP's impacts on benthic characteristics and ecology is an effective pre- and post-construction monitoring plan. The DEIR does not include a proposed plan to monitor habitat recovery from construction impacts. The proposed Section 61 Finding contends that because the substrate along the preferred pipeline route is relatively homogeneous, extensive baseline monitoring should not be required and recommends the establishment of post-construction benthic monitoring stations. In comparison, the HubLine established control stations to compare pre- and post-construction physical and biological conditions to determine if remedial measures or compensation would be necessary to mitigate for actual impacts. The FEIR should evaluate these two monitoring methodologies and assess which method, or combination of methods, would provide the most relevant data. To the extent feasible, the FEIR should present the proposed monitoring program, including the results of pre-construction surveys, methods for collecting and analyzing post-construction data, statistical analyses, and evaluation techniques.

In its comments, CZM states that it does not believe that the described beneficial aspects of increased turbidity on the benthic community are supported by the scientific literature. Furthermore, the comparison of the increase in turbidity from chain scour at the DWP project area to episodic disposal of dredged material at the Massachusetts Bay Disposal Site (MBDS) is inappropriate because chain scour will be relatively constant while disposal occurs infrequently. While there may be an initial opportunity for scavenging benthic creatures to feed on impacted benthos in the chain scour areas, the long-term and relatively constant scour in these areas will likely not allow the benthic community to recover. The lack of recovery will diminish prey abundance important to benthic organisms and demersal fishes and crabs while the DWP is in operation. Increased turbidity from chain scour will likely reduce habitat quality for foraging creatures in the area, and will also likely decrease foraging efficiency because of reduced water clarity, making this area less suitable to a variety of creatures including mobile crabs, squid and fishes. The FEIR should thoroughly address this issue.

Last, the proponent should develop in consultation with the state and federal agencies an on-going operational monitoring program to determine whether assumptions regarding project performance and projected impacts are valid.

Shellfish and Mollusks

The DEIR did not include an assessment of the distribution and abundance of burrowing shellfish species, such as Atlantic surf clam and ocean quahog, in the project area, thereby hindering an adequate evaluation of potential impacts to this resource. Rather, the DEIR simply identified the potential for suitable shellfish habitat, and did not depict the presence or absence of shellfish species based on empirical data. Based on discussions with state agencies and the proponent, I understand that this determination was inferred from surficial geological data not presented in the DEIR. The FEIR should provide this information and the proponent should

consult with appropriate agencies to develop a satisfactory characterization of this resource and potential impacts.

The construction of the project will have both short- and long-term impacts on American lobster within Massachusetts Bay, including direct mortality of juveniles and adults during construction, and permanent loss of habitat within and adjacent to the project footprint. The lobster fishery in Massachusetts Bay is currently in a depressed state and the project is proposed to be located in open water adjacent to high quality productive lobster habitat. The potential disturbance of hard-bottom habitat is of particular concern, although adult lobsters make use of soft-bottom habitat as well. As a component of the operational monitoring plan, the FEIR should include a component that provides for on-going assessment of impacts to lobster resources.

Finfish

Although direct mortality to finfish resulting from the operation of the DWP is likely to be limited, mortality is likely due to entrainment of fish eggs and larvae. Disruption of the benthic habitat caused by the plowing/jetting and turbidity associated with the construction of the pipeline will also have an indirect impact on finfish, which use the benthos for feeding. The DEIR notes that impacts on cod and yellowtail are of particular concern because their populations are extremely stressed, but, according to the fisheries agencies, very likely underestimates losses due to the limitations of the data used. The DEIR did not present new data on finfish, and the three datasets summarized are not adequate to characterize the abundance and distribution of fish in the project area, thereby hindering the ability to assess impacts to fish species in the area.

The Essential Fish Habitat (EFH) Assessment presented in the DEIR includes an adequate review of the habitat requirements of federally-managed fish species, clams and squid. However, the understanding of habitat requirements for all life stages of EFH-designated species is rudimentary; this lack of knowledge is particularly relevant here, given the DEIR's assumption that cobble areas are more important habitat than other seafloor environments. While cobble substrate is valuable to several exploited species, most notably Atlantic cod, many federally-managed species along with non-managed benthic organisms, such as worms and anemones prefer soft sediments. Construction of the DWP will disturb relatively stable soft sediment habitats, and will particularly affect flounder species, hakes and burrowing clams. The FEIR should summarize the impacts to soft sediment habitats and flounder species and justify the characterization that soft substrate will recover relatively quickly compared to other seafloor environments based on a thorough review of existing literature on habitat recovery and impacts to commercial fish species.

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 increased noise levels, 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: the 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 for the Natural Heritage and Endangered Species Program 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. Based on comments received, the mitigation proposed in the DEIR does not adequate to address these concerns.

The FEIR should further assess potential impacts based on additional supporting scientific literature and/or specific data on whale abundance and behavior in the project area. Specifically, the FEIR should more fully address the characterization of ambient noise levels; and the influence of increased noise associated with the construction and operation of the DWP and lateral pipeline.

The use of ship-based visual observation is not an effective method to reliably detect the presence of whales, particularly right whales. The use of acoustic buoys may be an effective means of detecting the presence of whales in the project area and within the shipping lanes approaching the DWP. The proponent is also investigating the applicability of active acoustic technology that could allow the LNG vessels to avoid whales. The proponent is currently discussing with state and federal agency staff the need for, and necessary components of, measures to avoid, minimize, and mitigate impacts to whales. These may include an acoustic array deployed around the site with protocols established that will avoid the exposure of right whales to levels of noise that are considered by the National Marine Fisheries Service (NMFS) to cause a disturbance to the species. After construction, approaching ships may be required to use the Traffic Separation Scheme and the Automated Identification System to provide information on ship speed, position and heading. Based on the outcome of these discussions, the FEIR should provide additional information regarding the extent of potential impacts, and identify all measures taken to avoid, minimize and mitigate impacts. The Draft Section 61 Findings should reflect this information.

Construction Time-of-Year

The DEIR provides a comprehensive analysis of the wide range of shellfish, crustaceans, finfish and mammals that reside in or migrate through the project area, including several species that are endangered or under protection due to their depleted populations. The DEIR also documents that during their various life stages and migratory patterns, these populations are somewhere present within the project area throughout the year. Therefore, it is infeasible to select a seven-month work window within which impacts to all species can be avoided or minimized. The DEIR reviewed three alternative construction windows - January to July, May to

November, and November to May - without selecting a preferred construction period. However, the proposed Section 61 Findings submitted by the proponent selects the May to November period. Identifying the preferred alternative or ranking each alternative is a key component in evaluating contingency plans and mitigation strategies. Based on the assessments of the state and federal marine resource agencies, the FEIR should recommend a preferred work window(s) based on an analysis of factors including:

- the potential for impacts to certain species (e.g., whales) balanced against impacts to other species (e.g., lobsters) based on anticipated impacts to benthic habitat;
- the potential impact of weather conditions for prolonging the construction period;
- the likelihood that mitigation measures can substantially reduce impacts to species and life stages affected by the preferred construction window; and
- the probability that sequencing construction activities can reduce impacts by avoiding significant habitats and locales.

Commercial Fishing and Recreational Boating

The Chapter 91 Waterways regulations require that projects constructed in state waters (i.e., the pipeline) not disrupt existing water-dependent uses. The DEIR documents that the construction of the pipeline would exclude access to both commercial fishing and recreational boating from approximately 14 square miles during the seven-month construction period, and that this would result in an expected economic impact to commercial fishermen of approximately $350,000 to $378,000. Additionally, the operation of the DWP will result in the loss of public access to 2,300 acres, or approximately 3.9 square miles, of watersheet and seafloor in Massachusetts Bay through the designation of exclusion zones, and permanent impacts on approximately 47 acres of fisheries habitat affected by anchor sweep in the project area.

The DEIR estimates that $2.4 million in revenue would be lost to the commercial fishing industry over the reported 25-year lifespan of the project and that the number of fishing jobs lost directly due to the project as three jobs during the construction period and six jobs over the lifespan of the project. Additionally, the exclusion zones would require commercial fishing vessels and recreational boats to alter their navigation routes, thereby resulting in increased time and fuel costs. However, comments from the Division of Marine Fisheries state that this may underestimate the potential impact and comments from the National Marine Fisheries Service (NMFS) question whether the analysis accounts for potential indirect costs to associated shoreside businesses.

A clear comparison of the project's benefits and impacts to the public interest requires that the potential economic impacts to commercial fishermen be accurately characterized. I am mindful of the comments from the Mayor of Gloucester, which express significant concern that because of existing restrictions on fishing, many members of the fishing community are operating on the margin of profitability and even small impacts to individual fishermen may result in significant adverse ripple effects through the local economies of coastal communities. The FEIR should consider the comments submitted regarding the socio-economic impacts of the

project. Given the role of the NMFS under the provisions of the Magnuson-Stevens Fishery Conservation and Management Act, which includes assessing the socio-economic impacts of fishery management measures, I recommend that the proponent consult with NMFS and determine whether additional economic analysis is warranted. The FEIR should present this revised analysis of potential impacts.

The FEIR should describe proposed measures to communicate with commercial fishermen during the construction period, establish a gear replacement program that provides compensation for gear lost during and subsequent to the construction period if the pipeline becomes exposed and presents a hazard to fishing gear. The FEIR should present a program to monitor the pipeline to determine whether, in the normal course of events or as a result of extreme weather events, the pipe becomes uncovered, potentially resulting in loss of habitat, fishing gear entanglement and other intrusions with existing uses. The FEIR should discuss the frequency and/or likelihood of the pipeline becoming exposed, present options to address the problem, including their relative advantages and disadvantages, and appropriate mitigation or compensation.

Contingency Planning

The FEIR should provide additional information regarding the appropriate planning and contractual commitments that would need to be in place to minimize the risk that bad weather or unanticipated events would disrupt the construction schedule, based on approved TOY restrictions, and thereby potentially increase adverse impacts from the DWP construction to priority aquatic resources and the fishing community. The FEIR should provide as much detail as feasible regarding contingency planning, including, for example:

- the ability to mobilize additional equipment if schedule disruptions occur; and
- the use of an adequate number, kind and size of vessels and appropriate construction methodologies to minimize the construction period and ensure compliance with the depth to burial performance standards.

Contingency planning should consider what steps will be taken if construction is unavoidably delayed such that construction activities planned for certain times to avoid or minimize adverse impacts are unable to be completed on schedule. Contingency planning should also consider the respective roles that federal and state regulatory agencies would play in reviewing contingency-based revisions to the terms and conditions of licenses and permits, and how those reviews could be facilitated in the interest of environmental protection.

Air Quality

The DEIR addresses the general conformity requirements of the U.S. Clean Air Act and the General Conformity regulations promulgated by the US Environmental Protection Agency (USEPA) and the applicability of the regulations to the DWP with regard to air emissions during

construction. The emissions of volatile organic compounds (VOC) (61 tons per year) and nitrogen oxides (NOx) (330 tons per year) during construction of the DWP will exceed the thresholds in the General Conformity regulations (50 tons per year of VOC and 100 tons per year of NOx) and a conformity determination is required. In order for USEPA to determine that the project is a "minor source" of emissions, the proponent must demonstrate that it can comply with the enforceable limits on its "potential to emit" for both NOx and CO. USEPA will evaluate the proponent's proposed air pollution controls and associated compliance mechanisms during development of the pre-construction permit to determine the applicable permitting requirements and appropriate permit conditions to meet those requirements.

Eastern Massachusetts is designated as a moderate ozone non-attainment area under the eight-hour ozone standard. The criteria for determining conformity for ozone non-attainment areas are as follows (see 40 CFR Part 51.858):

1. The total of the direct and indirect emissions from the DWP are included in the State Implementation Plan (SIP);
2. The state air agency makes a determination that the total of the direct and indirect emissions from the DWP would not exceed the emission budgets in the SIP;
3. The state air agency makes a commitment to a SIP revision to achieve the necessary reductions prior to the federal action; or
4. The total of the direct and indirect emissions from the DWP are fully offset within the same nonattainment area through revision to the SIP or a similarly enforceable measure that affects emission reductions so that there is no net increase in emissions of that pollutant.

The anticipated emissions from the project do not meet the first three criteria and, as the DEIR indicates, offsets will be required to demonstrate conformity with the SIP.

Once the DWP is in operation, it would be considered a stationary source during the regasification process. I commend the proponent on the commitments it has made since the initial proposal of the project to substantially reduce emissions through innovative retrofits to its EBRVs. The proponent should consult and work with DEP and USEPA to identify mitigation measures to meet the conformity requirements. To the extent practicable, the FEIR should report on the results of these consultations.

Mitigation and Compensation

The construction and operation of a DWP of this scale will result in unavoidable impacts to coastal and marine resources. The MEPA process can serve an important role in coordinating the requirements for compensation and mitigation related to this DWP. The MEPA process should be used as an opportunity for resource and management agencies to recommend mitigation requirements at an early stage so that a comprehensive program that addresses priority issues related to the DWP can be developed in a coordinated fashion. This is particularly important for large infrastructure projects such as this one that involve multiple agencies, and

raise important policy issues regarding the use of public trust resources. The permanent occupation of the seafloor by the DWP may preclude or detrimentally affect other potential long-term future uses of the surrounding seabed and marine resources. Therefore, the FEIR should include proposals for compensatory mitigation, in consideration of the predicted 20-year life expectancy of the DWP versus any proposed restrictions on activity within the proposed safety exclusion around the DWP and potential impacts to marine habitat and fisheries and their anticipated recovery periods. In addition to regulatory mitigation requirements, compensation may be required for this project under Chapter 91. In addition, the DWP Act at Section 1504(h)(2) and (3) provides for the potential payment of a fee to the adjacent state for the construction and operation of a DWP, subject to various conditions and limitations. The proponent should consider and describe mitigation related to natural resources, the fishing economy, energy infrastructure, recreation, and ocean management data.

The DEIR contained preliminary recommendations for proposed mitigation measures. The FEIR should include a summary of all mitigation measures to which the proponent has committed, based on the outcome of the ongoing consultation process. The FEIR should also include Draft Section 61 Findings for use by the state permitting agencies that are consistent with the outcome of the consultation process and that include clear commitments to implement mitigation measures, including costs and the schedule for implementation. Comprehensive contingency planning and a valid monitoring program are two core components of an effective mitigation strategy.

Responses to Comments

At a minimum, the FEIR should respond to the substantive concerns raised in the comment letters to the extent that they are within MEPA jurisdiction. I also encourage the proponent to review the comments submitted into the USCG public record and to use this opportunity to address concerns that may not have been formally raised in the MEPA process. The FEIR should include a copy of each comment letter submitted to the Secretary of Environmental Affairs (listed at the end of this Certificate) and respond to each substantive comment. The proponent should circulate a hard copy of the FEIR to each state and local agency from which the proponent will seek permits or approvals.

Circulation

To save paper and other resources, I will allow the proponent to circulate the FEIR in CD-ROM format to individual commenters, although the proponent should make available a reasonable number of hard copies available on a first come, first served basis, to accommodate those without convenient access to a computer. In the interest of broad public dissemination of information, I encourage the proponent to send a notice of availability of the FEIR (including relevant comment deadlines, locations where hard copies may be reviewed and electronic copies obtained, and appropriate addresses) to those who submitted comment letters to the USCG. This

notification may take the form of electronic notification for those comments submitted via e-mail.

July 7, 2006
Date

Stephen R. Pritchard

Comments received:

07/06/06	Metropolitan Area Planning Council
07/06/06	Brewster Lee
07/06/06	Lauren Zion
07/03/06	National Oceanic and Atmospheric Administration
07/03/06	Massachusetts Division of Fisheries and Wildlife
06/30/06	City of Boston Office of Environmental and Energy Services
06/30/06	City of Gloucester Office of the Mayor
06/30/06	Massachusetts Division of Energy Resources
06/30/06	Massachusetts Energy Facilities Siting Board
06/30/06	Gloucester Fishermen's Wives Association
06/30/06	Island Alliance
06/30/06	Northeast Gas Association
06/30/06	Northeast Gateway Energy Bridge, LLC and Algonquin Gas Transmission, LLC
06/30/06	Northeast Seafood Coalition
06/30/06	Renée Mary
06/29/06	Massachusetts Department of Environmental Protection
06/29/06	Massachusetts Division of Marine Fisheries
06/29/06	U.S. Environmental Protection Agency
06/29/06	Nahant SWIM, Inc
06/28/06	Nahant SWIM, Inc.
06/27/06	Alessandro Cagiati
06/22/06	Massachusetts Historical Commission
06/27/06	Massachusetts Department of Conservation and Recreation
06/26/06	Massachusetts Office of Coastal Zone Management
06/23/06	Mass Energy Consumers Alliance
06/22/06	Massachusetts Marine Trades Association
06/20/06	Massachusetts Board of Underwater Archeological Resources

SRP/RAB/rab