



COMMONWEALTH OF MASSACHUSETTS  
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
ONE WINTER STREET, BOSTON, MA 02108 617-292-5500

DEVAL L. PATRICK  
Governor

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Lieutenant Governor

IAN A. BOWLES  
Secretary

ARLEEN O'DONNELL  
Commissioner

February 23, 2007

Mr. George McLachlan  
Manager, Environmental  
Algonquin Gas Transmission, LLC  
890 Winter Street  
Suite 300  
Waltham, MA 02451

**RE:** Written Determination Pursuant to M.G.L. Chapter 91  
Waterways Application No. W06-1814  
Northeast Gateway Pipeline Lateral and Weymouth Metering Station Modifications  
Flowed Tidelands of Massachusetts Bay and Filled Tidelands of Weymouth Fore River  
Manchester-by-the-Sea, Beverly, Salem, Marblehead, and Weymouth

Dear Mr. McLachlan:

The Department hereby issues this Written Determination, pursuant to M.G.L. Chapter 91, the Public Waterfront Act and 310 CMR 9.00, the Waterways Regulations, of its intent to approve the referenced application, subject to the attached conditions.

The proposed project includes the construction of a 24-inch diameter natural gas transmission pipeline that will carry natural gas from a proposed offshore liquefied natural gas ("LNG") terminal located outside of state waters to the existing HubLine pipeline. The length of the proposed pipeline within state waters is approximately 12.5 miles. The pipeline project also includes accessory structures and fill such as a hot tap connection to the HubLine, and pipeline shrouding such as concrete mats, rocks, and/or sand bags. The project will also include modifications to the existing meter station in Weymouth within the grounds of the existing facility.

The proposed pipeline will pass through approximately 9.7 miles of the South Essex Ocean Sanctuary and approximately 2.8 miles of the North Shore Ocean Sanctuary. The Department of Conservation and Recreation is responsible for the care and control of the state-designated Ocean Sanctuaries and provided comments to the Department, including conditions under which the project may comply with the Ocean Sanctuaries Act, M.G.L. c. 132A, §§13-16 and 18, and its regulations at 302 CMR 5.00. In accordance with 310 CMR 9.13(2) and 9.33, these conditions have been incorporated into this Written Determination and the draft License conditions herein.

FINDINGS:

1. The Department determines that the project is proposed in sites subject to the jurisdiction of M.G.L. c.91. The pipeline is proposed in flowed Commonwealth Tidelands of Massachusetts Bay and the meter station modifications are proposed on filled private tidelands of Weymouth Fore River.
2. The Department determines that the use of flowed Commonwealth tidelands for a pipeline that is a related facility to a marine terminal, the proposed Northeast Gateway Port, is a water-dependent use pursuant 310 CMR 9.12(2)(b)(1) and that the use of filled private tidelands for a gas metering station accessory to a water-dependent structure is a water-dependent use pursuant to 310 CMR 9.12(3). The Department has, therefore, processed the application as a water-dependent use project in accordance with 310 CMR 9.12.
3. The Department determines that the required public notice was published in the Salem News on December 19, 2006. A public hearing was held on January 9, 2007 at 6 p.m. at the National Park Visitor Center, 2 New Liberty Street, Salem.
4. The Department determines that the applicant has provided proper documentation of compliance with the MGL c. 131, Wetlands Protection Act. A valid Order of Conditions is on file with the Department for each municipality in which the activities are proposed to occur.
5. The Department determines that the proposed project as conditioned complies with 310 CMR 9.35 as it preserves public rights of access to tidelands for fishing, fowling, navigation and the natural derivatives thereof. Any interference with such public rights will be temporary in nature during construction and will mitigated by the Applicant.
6. The Department determines that the project, as conditioned, complies with all applicable standards of the Waterways Regulations. Furthermore, no overriding detriment to the public interest has been identified to overcome the presumption that the project serves a proper public purpose in accordance with 310 CMR 9.31(2)(a). Therefore, the Department determines that the proposed project serves a proper public purpose which provides greater public benefit than detriment to the public's rights in said tidelands.
7. Pursuant to the Ocean Sanctuaries Act, M.G.L. c. 132A s. 13-16 and 18 and its regulations at 302 CMR 5.00, the Department of Conservation and Recreation (DCR) has regulatory jurisdiction over the Commonwealth's Ocean Sanctuaries. DCR submitted a comment letter dated January 29, 2007, that included conditions under which the project may comply with the Ocean Sanctuaries Act. These conditions have been incorporated as conditions of this Written Determination and/or the Water Quality Certificate issued by the Department. Therefore, the Department finds that the project complies with the Ocean Sanctuaries Act.
8. The Department received comments during the public comment period that were focused primarily on: possible presence of drums containing hazardous waste that were dumped on

the ocean floor in the vicinity of the project; project compliance with the Ocean Sanctuaries Act; impacts to benthic habitat; and impacts to commercial fishing. The Department has considered these and all comments received during the comment period. Most of the issues raised have been addressed directly in either this Written Determination or in the Water Quality Certificate issued by the Department. Compliance with the Ocean Sanctuaries Act is addressed in Finding # 7 above and through the incorporation of DCR's recommendations in either this Written Determination or the Water Quality Certificate. Regarding impacts to habitat and commercial fisheries, the Water Quality Certificate requires a multi-year habitat monitoring program and requires additional compensatory mitigation in the event that the project is found likely to have caused significant impacts on habitat. Furthermore, this Written Determination requires the proponent to provide funding for a variety of environmental studies and projects, including funding of the Gloucester Fishing Community Preservation Fund, and requires that the proponent implement a Communications Plan in order to advise mariners of the location of construction activity. Regarding potential drums containing hazardous materials, the proponent's response to comments indicates that the presumed location of the dumping activity is not directly within the pipeline route, and that the pre-construction surveys (using sidescan sonar, magnetometer, and subbottom profiling methodologies) of the area would have detected the presence of barrels on the ocean floor along the proposed route, but did not.

9. Pursuant to the Massachusetts Environmental Policy Act ("MEPA"), M.G.L. Chapter 30, Sections 61 to 62H inclusive, this pipeline project was reviewed as EOE # 13474 and the Northeast Gateway Port ("Port") in federal waters was reviewed as EOE # 13473. On December 1, 2006, the Secretary of Environmental Affairs issued a Certificate on the Final Environmental Impact Report ("FEIR") for both the pipeline and Port elements of the project finding that the FEIR adequately and properly complied with MEPA and its implementing regulations. MassDEP has reviewed the MEPA documents and the documents submitted in connection with the application for a Chapter 91 License. Based upon its review, MassDEP is satisfied that with implementation by the permittee of the mitigation measures and the requirements of this Written Determination, all practicable and feasible means and measures will be taken to avoid or minimize adverse wetland and related impacts to the environment associated with the construction of this project. Please see the Department's Section 61 Findings for this project attached hereto as Attachment A.

On the basis of the foregoing analysis, the Department will approve the proposed structures and uses described herein, as shown on the draft license plans and as shall be modified and delineated on the final license plans in accordance with the terms of this Determination. This Determination is subject to the attached special conditions to be carried out by the referenced Applicant (hereinafter the "Licensee"). These special conditions will be included, in substantially the same form, along with the standard conditions, with the final Chapter 91 Waterways license to be issued pursuant hereto. This Determination, including the attached Special Conditions, is subject to appeal as described in more detail in the Notice of Appeal Rights section. The Department will grant the Waterways license if no appeals are filed within 21 days of the issuance of this Written Determination. No construction or alteration in or to any portion of the sites within jurisdiction pursuant to M.G.L. Chapter 91 is authorized until a Waterways License has been issued for the project.

If you have any further questions, please contact Alex Stryisky at (617) 292-5616.

THIS DETERMINATION IS ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL  
PROTECTION ON THE 23<sup>rd</sup> DAY OF FEBRUARY, 2007.



Glenn Haas  
Director  
Division of Watershed Management

cc: Karen Adams, U.S. Army Corps of Engineers  
Truman Henson, CZM  
Vincent Malkoski, DMF  
Chris Boelke, NMFS  
Phil Colarusso, EPA  
Rich Tomczyk DEP NERO  
Marilyn McCrory, DCR  
Michael Tyrrell, TRC  
City of Beverly: Mayor, Planning Board, Conservation Commission, and Harbormaster  
Town of Marblehead: Board of Selectmen, Planning Board, Conservation Commission,  
and Harbormaster  
City of Salem: Mayor, Planning Board, Conservation Commission, and Harbormaster  
Town of Manchester-by-the-Sea: Board of Selectmen, Planning Board, Conservation  
Commission, and Harbormaster  
Town of Weymouth: Mayor, Planning Board, Conservation Commission, and  
Harbormaster  
Mayor John Bell, City of Gloucester  
Representative Anthony J. Verga  
Marc Silver, Neptune LNG, LLC  
Peg Hinrichs  
Polly Bradley  
Rosemary Maglio  
Salvatore Genovese  
Philip Joyce  
Nancy Hodgson Smith  
Renee Mary  
Kathy and Alessandro Cagiatti  
Vito Giacalone  
John and Katy Dolhun

## **Notice of Appeal Rights:**

### **Appeal Rights and Time Limits**

The following persons shall have the right to an adjudicatory hearing concerning this decision by the Department to grant or deny a license or permit: (a) an applicant who has demonstrated property rights in the lands in question, or which is a public agency; (b) any person aggrieved by the decision of the Department to grant a license or permit who has submitted written comments within the public comment period; (c) ten (10) residents of the Commonwealth, pursuant to M.G.L. c.30A, §10A, who have submitted written comments within the public comment period; (d) the municipal official in the affected municipality who has submitted written comments within the public comment period; (e) CZM, for any project in the coastal zone, if it has filed a notice of participation within the public comment period; and (f) DEM, for any project in an Ocean Sanctuary, if it has filed a notice of participation within the public comment period. To request an adjudicatory hearing, a Notice of Claim must be made in writing and sent by certified mail or hand delivery to the Department with the appropriate filing fee specified within 310 CMR 4.10 along with a DEP Fee Transmittal Form, within twenty-one (21) days of the date of issuance of this decision and addressed to:

Case Administrator  
Department of Environmental Protection  
One Winter Street, 2<sup>nd</sup> Floor  
Boston, MA 02108

A copy of the Notice of Claim must be sent at the same time by certified mail or hand delivery to the applicant, the municipal official of the city or town where the project is located, and the issuing office of the DEP at:

DEP Waterways Regulation Program  
One Winter Street, 6<sup>th</sup> Floor  
Boston, MA 02108

### **Contents of Hearing Request**

Under 310 CMR 1.01(6)(b), the Notice of Claim must state clearly and concisely the facts that are the grounds for the request and the relief sought. Additionally, the request must state why the decision is not consistent with applicable laws and regulations.

Pursuant to 310 CMR 9.17(3), any Notice of Claim for an adjudicatory hearing must include the following information:

- (a) the DEP Waterways Application File Number;
- (b) the complete name, address, fax number and telephone number of the applicant;
- (c) the address of the project;

- (d) the complete name, address, fax number, and telephone number of the party filing the request and, if represented by counsel, the name, address, fax number, and phone number of the attorney;
- (e) if claiming to be a person aggrieved, the specific facts that demonstrate that the party satisfies the definition of "person aggrieved" found in 310 CMR 9.02;
- (f) a clear statement that a formal adjudicatory hearing is being requested;
- (g) a clear statement of the facts which are the grounds for the proceedings, the specific objections to the DEP's written decision, and the relief sought through the adjudicatory hearing, including specifically the changes desired in the final written decision; and
- (h) a statement that a copy of the request has been sent to: the applicant and the municipal official of the city or town where the project is located.

#### Filing Fee and Address

A copy of the Notice of Claim along with a DEP Fee Transmittal Form and a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100) must be mailed to:

Commonwealth of Massachusetts  
Department of Environmental Protection  
Commonwealth Master Lockbox  
P.O. Box 4062  
Boston, Massachusetts 02211

The request will be dismissed if the filing fee is not paid, unless the appellant is exempt or is granted a waiver. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority. The Department may waive the adjudicatory hearing filing fee pursuant to 310 CMR 4.06(2) for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file an affidavit setting forth the facts believed to support the claim of undue financial hardship together with the hearing request as provided above.

Written Determination and Conditions

Algonquin Gas Transmission, LLC

of -- Waltham -- in the County of -- Middlesex -- has applied to the Department of Environmental Protection to -- construct and maintain approximately 12.5 miles of 24-inch diameter gas transmission pipe known as the Northeast Gateway Lateral Pipeline as well as associated hot tap structure and concrete and rock armoring in Massachusetts Bay; and to modify an existing meter station in Weymouth -----

and has submitted plans of the same; and whereas due notice of said application, and of the time and place fixed for a hearing thereon, has been given, as required by law, to the -- Cities and Towns -- of -- Manchester-by-the Sea, Salem, Beverly, Marblehead, and Weymouth -----

NOW, said Department, having heard all parties desiring to be heard, and having fully considered said application, hereby, subject to the approval of the Governor, authorizes and licenses the said -----

Algonquin Gas Transmission, LLC --, subject to the provisions of the ninety-first chapter of the General Laws, and of all laws which are or may be in force applicable thereto, to -- construct and maintain approximately 12.5 miles of 24 inch diameter gas transmission pipe known as the Northeast Gateway Lateral Pipeline as well as associated tie-in structure and concrete and rock armoring in Massachusetts Bay; and to modify an existing meter station in Weymouth -----

in and over filled and flowed tidelands of -- Massachusetts Bay and Weymouth Fore River-- in the -- Cities and Towns -- of -- Manchester-by-the Sea, Salem, Beverly, Marblehead, and Weymouth in accordance with the locations shown and details indicated on the accompanying DEP License Plans No. (to be assigned) dated February 21, 2007 (12 sheets).

The structures authorized hereby shall be limited to the following uses: transmission of natural gas from an offshore port outside of state waters and accessory uses.

This License is valid for a term of thirty (30) years from the date of issuance. By written request of the Licensee for an amendment, the Department may grant a renewal for the term of years not to exceed that authorized in this License.

This License is subject to the following Special and Standard Conditions:

1. The Licensee shall construct and maintain the pipeline in accordance with all applicable environmental regulations and as described and delineated on the License Plans. The Licensee shall employ approved methodologies during the construction and placement of the pipeline as described in the license application dated January 2006 and the Construction Contingency Plan and Reporting Procedures dated February 12, 2007, attached hereto as Attachment B.
2. To minimize impacts to living marine resources in accordance with 310 CMR 9.40(2), construction activities for the work authorized herein shall occur between May 1 and November 30, or as otherwise approved by the Department in accordance with the Water Quality Certification issued for this project.
3. Adequate natural cover and/or shrouding shall be maintained over the pipeline and associated structures, in accordance with the license application and the Construction Contingency Plan and Reporting Procedures, appended hereto as Attachment B, to ensure that they do not present a hazard to navigation, will be adequately protected from scouring, will not be uncovered by sediment transport, and will not present a hazard or obstruction to fishing gear. Bottom contours shall be restored to the extent feasible in accordance with the Construction Contingency Plan.
4. To mitigate temporary impacts to navigation and waterfront public access, the Licensee shall comply with the terms and conditions of the Marine Communications Plan dated February 15, 2007, appended hereto as Attachment C, to ensure that a well publicized system to disseminate information about the navigational and public access impacts that arise from the temporary location of barges, vessels, and other offshore construction activities. Said plan includes a website providing construction updates, and a hotline for interested parties to obtain information about construction activities, and other information of relevance to maritime users to ensure that construction related activities have limited effects on navigation, adjacent owners and all other users of the tidelands. Said plan includes adequate measures to minimize construction interference project wide. Said plan includes a protocol for the notification of all interested parties of the location of construction barges and activities on regular acceptable intervals, and a detailed process for the lodging of any public complaints involving construction activities and any other protocols determined important by agencies and organizations who utilize the shared waterways, including the U.S. Coast Guard, the U.S. Army Corps of Engineers, local Harbormasters and local shipping organizations and companies within the affected areas. The Licensee shall implement an internal protocol for resolution of complaints, and shall take measures necessary to resolve complaints in a timely manner.
5. Within the waters of the Commonwealth, the Licensee shall in no way discourage, restrict, impede or otherwise interfere with the exercise of public rights of access to tidelands for fishing, fowling, navigation and the natural derivatives thereof upon completion of construction and to the extent possible to ensure public safety during construction.



6. The Licensee shall not dump or discharge any commercial, municipal, domestic or industrial wastes into any ocean sanctuary.
7. As a mitigation program provided jointly by the Licensee and the proponent of the Northeast Gateway Port, Northeast Gateway Energy Bridge, LLC to compensate for the interference with public rights in tidelands and for other potential impacts of the combined pipeline and Port project, the Licensee shall:
  - a. provide \$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 in accordance with the Final MEPA Certificate issued for this project. The specific funding procedures shall be as set forth in the February 13, 2007 letter from Rob Bryngelson, Northeast Gateway Energy Bridge, L.L.C. and William T. Yardley, Algonquin Gas Transmission, LLC to Vito Giacalone and Jackie O'Dell, Organizers, Gloucester Fishing Community Preservation Fund, on file with the Department. An amount of at least \$35,000 shall be made available prior to issuance of this License and the remainder transferred no later than notification to the Secretary of Environmental Affairs, pursuant to 301 CMR 11.08(9), of commencement of construction of the Northeast Gateway Pipeline Lateral.
  - b. provide \$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. The specific funding procedures shall be as set forth in the February 13, 2007 letter from Rob Bryngelson, Northeast Gateway Energy Bridge, L.L.C. and William T. Yardley, Algonquin Gas Transmission, LLC to Bernie Feeney, President, Massachusetts Lobstermen's Association, Inc., on file with the Department. The funds shall be transferred no later than notification to the Secretary of Environmental Affairs, pursuant to 301 CMR 11.08(9), of commencement of construction of the Northeast Gateway Pipeline Lateral.
  - c. provide \$5,300,000 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. The specific funding procedures shall be as set forth in the February 13, 2007 letter from Rob Bryngelson, Northeast Gateway Energy Bridge, L.L.C. and William T. Yardley, Algonquin Gas Transmission, LLC to Thomas B. Powers, President, Island Alliance, on file with the Department. The funds shall be transferred no later than notification to the Secretary of Environmental Affairs, pursuant to 301 CMR 11.08(9), of commencement of construction of the Northeast Gateway Pipeline Lateral.

- d. provide \$600,000 to provide buoys and/or meteorological, hydrodynamic and/or other instrumentation to significantly enhance the Gulf of Maine Ocean Observing System (GoMOOS). The specific funding procedures shall be as set forth in the February 13, 2007 letter from Rob Bryngelson, Northeast Gateway Energy Bridge, L.L.C. and William T. Yardley, Algonquin Gas Transmission, LLC to Dr. Philip Bogden, Chief Executive Officer, Gulf of Maine Ocean Observing System, on file with the Department. The funds shall be transferred no later than notification to the Secretary of Environmental Affairs, pursuant to 301 CMR 11.08(9), of commencement of construction of the Northeast Gateway Pipeline Lateral.
- e. provide \$650,000 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. The specific funding procedures shall be as set forth in the February 13, 2007 letter from Rob Bryngelson, Northeast Gateway Energy Bridge, L.L.C. and William T. Yardley, Algonquin Gas Transmission, LLC to Jack Sheppard, Director, Office of Fishing and Boating Access, Massachusetts Department of Fish and Game, on file with the Department. The funds shall be transferred no later than notification to the Secretary of Environmental Affairs, pursuant to 301 CMR 11.08(9), of commencement of construction of the Northeast Gateway Pipeline Lateral.
- f. provide \$150,000 to the Gloucester Maritime Heritage Center to support activities related to its Stellwagen Bank National Marine Sanctuary exhibit and programs to preserve Gloucester's maritime heritage. The specific funding procedures shall be as set forth in the February 13, 2007 letter from Rob Bryngelson, Northeast Gateway Energy Bridge, L.L.C. and William T. Yardley, Algonquin Gas Transmission, LLC to Harriet Webster, Executive Director, Gloucester Maritime Heritage Center, on file with the Department. The funds shall be transferred no later than notification to the Secretary of Environmental Affairs, pursuant to 301 CMR 11.08(9), of commencement of construction of the Northeast Gateway Pipeline Lateral.
- g. provide \$150,000 to Salem Sound Coastwatch to support public access and environmental programs in Salem Sound and its tributary environments. The specific funding procedures shall be as set forth in the February 13, 2007 letter from Rob Bryngelson, Northeast Gateway Energy Bridge, L.L.C. and William T. Yardley, Algonquin Gas Transmission, LLC to Barbara Warren, Executive Director, Salem Sound Coastwatch, on file with the Department. The funds shall be transferred no later than notification to the Secretary of Environmental Affairs, pursuant to 301 CMR 11.08(9), of commencement of construction of the Northeast Gateway Pipeline Lateral.
- h. provide \$3,000,000 for seafloor mapping activities, habitat characterization with funds to be managed by the Office of Coastal Zone Management, in consultation with other resources agencies. The specific funding procedures shall be as set

forth in the February 13, 2007 letter from Rob Bryngelson, Northeast Gateway Energy Bridge, L.L.C. and William T. Yardley, Algonquin Gas Transmission, LLC to Bruce K. Carlisle, Acting Director, Massachusetts Office of Coastal Zone Management, on file with the Department. The funds shall be transferred no later than notification to the Secretary of Environmental Affairs, pursuant to 301 CMR 11.08(9), of commencement of construction of the Northeast Gateway Pipeline Lateral.

- i. provide \$900,000 to create and administer a female lobster v-notch/catch-and-release program, with the program and funds to be managed by the Division of Marine Fisheries. The specific funding procedures shall be as set forth in the February 13, 2007 letter from Rob Bryngelson, Northeast Gateway Energy Bridge, L.L.C. and William T. Yardley, Algonquin Gas Transmission, LLC to Paul J. Diodati, Director, Division of Marine Fisheries, on file with the Department. The funds shall be transferred no later than notification to the Secretary of Environmental Affairs, pursuant to 301 CMR 11.08(9), of commencement of construction of the Northeast Gateway Pipeline Lateral.
  - j. provide \$750,000 for right whale management and research and development of acoustic technology in Cape Cod Bay, with the program and funds to be managed by the Division of Marine Fisheries' Right Whale Conservation Program. The specific funding procedures shall be as set forth in the February 13, 2007 letter from Rob Bryngelson, Northeast Gateway Energy Bridge, L.L.C. and William T. Yardley, Algonquin Gas Transmission, LLC to Paul J. Diodati, Director, Division of Marine Fisheries, on file with the Department. The funds shall be transferred no later than notification to the Secretary of Environmental Affairs, pursuant to 301 CMR 11.08(9), of commencement of construction of the Northeast Gateway Pipeline Lateral.
  - k. provide \$150,000 to support research and educational programs related to marine habitat and the marine environment of Massachusetts Bay, with the program and funds to be managed by the New England Aquarium. The specific funding procedures shall be as set forth in the February 13, 2007 letter from Rob Bryngelson, Northeast Gateway Energy Bridge, L.L.C. and William T. Yardley, Algonquin Gas Transmission, LLC to Walter Flaherty, Executive Vice President, New England Aquarium, on file with the Department. The funds shall be transferred no later than notification to the Secretary of Environmental Affairs, pursuant to 301 CMR 11.08(9), of commencement of construction of the Northeast Gateway Pipeline Lateral.
8. Any imported material used as cover over the pipeline shall be placed in accordance with the Construction Contingency Plan and Reporting Procedures attached hereto as Attachment B, be clean and free of contaminants, and in the case of imported rock, contain no more than 10% fine material. Any sand bags that are used must be made of burlap or other biodegradable material.

9. Issuance of this license does not relieve the Licensee of the obligation to comply with other applicable state or federal statutes or regulations, or any other applicable governmental permits, licenses, approvals or agreements. Any changes made to the project as described in the Chapter 91 License Application, License Plans or supplemental documents will require further notification and approval by the Department in accordance with 310 CMR 9.22(3) or 9.24.
10. Except for any monitoring, mitigation, or other activities specifically authorized for a different timeframe, all work authorized herein shall be completed within five (5) years of the date of issuance of this Certification. In the event the Licensee does not commence or complete construction in 2007 within the work windows established or modified in accordance with the conditions herein, it shall submit a written notification to the Department that provides the following information:
  - a) An explanation of the reasons for non-commencement/non-completion of the work.
  - b) A description of the construction status of the pipeline.
  - c) A complete description of how the matters that caused non-commencement/non-completion will be addressed to provide for commencement and completion of the pipeline during 2008 within the work windows established or modified in accordance with the conditions herein.
  - d) A description and schedule of the construction work to be performed within the waters of the Commonwealth during 2008 within the work windows established or modified in accordance with the conditions herein.

The Licensee shall submit the notification to the Department as soon as practicable, but in any event no later than December 30, 2007.

If at any time subsequent to the submission of the above notification, the Licensee receives information that is likely to result in a revision of the information provided in notification subsections (c) or (d), or if otherwise requested by the Department, the Licensee shall within seven (7) days of receipt of the information or request submit to the Department a revised notification that describes the new information, the effect it may have on the commencement/completion of the pipeline within approved 2008 work windows, a description and timetable for the actions the Licensee intends to undertake to address the matter, and a revised work schedule.

If on the basis of a notification or other written report it receives, the Department has reason to believe that the pipeline will not be commenced or completed within the approved 2008 work window, the Department may take appropriate action to ensure that any project construction-related activities occurring within the waters of Commonwealth in 2009 or thereafter are conducted in conformance with applicable state and federal approvals.

11. The Licensee shall request, in writing, that the Department issue a Certificate of Compliance in accordance with 310 CMR 9.19 within sixty (60) days of completion of the licensed project. The request shall include a set of plans depicting the actual as-built

location of the pipeline, including armored areas and all crossings. The request shall be accompanied by a certification by a registered professional engineer or registered land surveyor licensed in the Commonwealth that the project was completed in accordance with the License.

12. The Licensee shall submit to the Department prior to License issuance a final set of mylar plans, drawn in accordance with the Department's plan specifications at 310 CMR 9.11(3), which meets the terms of this Written Determination.
13. The Written Determination issued hereto shall remain valid for up to one (1) year after issuance. Said term may be extended for one or more one year periods, provided that the Licensee submits to the Department, thirty (30) days prior to the expiration of said term, a written request to extend the term and provides an adequate justification for said extension. This condition shall expire upon issuance of a License pursuant hereto.

Please see following Standard Waterways Dredging Conditions, page 14 and following Standard Waterways License Conditions, page 15. -----

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A duplicate of said plans, DEP License Plans No. (to be assigned) (12 sheets), is on file in the office of said Department, and the original of said plans (12 sheets) accompanies this License and is to be referred to as a part hereof.

STANDARD WATERWAYS DREDGING CONDITIONS

1. Acceptance of this Waterways License shall constitute an agreement by the licensee to conform to all terms and conditions stated herein.
2. This license is issued upon the express condition that any and all other applicable authorizations necessitated due to the provisions hereof shall be secured by the licensee prior to the commencement of any activity hereby authorized.
3. This license shall be revocable by the Department for noncompliance with the terms and conditions set forth herein. This license may be revoked after the Department has given written notice of the alleged noncompliance to the licensee, or his agent, and those persons who have filed a written request, with the Department, for such notice and has afforded the licensee a reasonable opportunity to correct said noncompliance. Failure to correct said noncompliance after the issuance of a written notice by the Department shall render this license void.
4. This license is issued subject to all applicable federal, state, county, and municipal laws, ordinances, by-laws, and regulations, including but not limited to, a valid Order of Conditions issued pursuant to the Wetlands Protection Act, M.G.L. Chapter 131, s.40. In particular, this issuance is subject to the provisions of Sections 52 to 56, inclusive of Chapter 91 of the General Law and its Regulations 310 CMR 9.40(5), which provides, in part, that the transportation and dumping of the dredge material shall be done under the supervision of the Department, and, when required, the licensee shall provide at his/her expense a dredge inspector approved by the Department. When said inspector is required, a report certified by the dredge inspector shall be submitted to the Department within 30 days after the completion of the dredging. The report shall include daily logs of the dredging operation indicating volume of dredge material, point of origin, point of destination and other appropriate information.
5. This Waterways License is issued upon the express condition that dredging and transportation and disposal of dredge material shall be in strict conformance with all applicable requirements and authorizations of the DEP, Wetlands and Waterways Regulation Program.
6. All subsequent maintenance dredging and transportation and disposal of this dredge material, during the term of this license, shall conform to all standards and conditions applied to the original dredging operation performed under this license.
7. After completion of the work authorized, the licensee shall furnish, to the Department a suitable plan showing the depths at mean low water over the area dredged. The dredging under this license shall be conducted as to cause no unnecessary obstruction of the free passage of vessels. In doing the dredging authorized, care shall be taken to cause no shoaling. If, however, any shoaling is caused, the licensee shall, at his expense remove the shoal areas. The licensee shall pay all costs of supervision, and if at any time the Department deems necessary a survey or surveys of the area dredged, the licensee shall pay all costs associated with such work. Nothing in this license shall be construed as to impair the legal rights of any persons, or authorize dredging on land not owned by the licensee without consent of the owner(s) of such property.
8. The licensee shall assume and pay all claims and demands against the Commonwealth of Massachusetts, its officers, employees, and agents arising in any manner from the work authorized herein, and shall save harmless and indemnify the Commonwealth of Massachusetts, its officers, employees, and agents from all claims, audits, damages, costs and expenses incurred by reason thereof.
9. The licensee shall, at least three days before commencing any dredging in the tide water, give written notice to the Department of the time, location and amount of the proposed work.
10. Whoever violates any provisions of this license shall be subject to a fine of \$25,000 per day for each day such violation occurs or continues, or by imprisonment for not more than one year, or both such fine and imprisonment; or shall be subject to civil penalty not to exceed \$25,000 per day for each day such violation occurs or continues.

STANDARD WATERWAYS LICENSE CONDITIONS

1. Acceptance of this Waterways License shall constitute an agreement by the Licensee to conform with all terms and conditions stated herein.

2. This License is granted upon the express condition that any and all other applicable authorizations necessitated due to the provisions hereof shall be secured by the Licensee prior to the commencement of any activity or use authorized pursuant to this License.

3. Any change in use or any substantial structural alteration of any structure or fill authorized herein shall require the issuance by the Department of a new Waterways License in accordance with the provisions and procedures established in Chapter 91 of the Massachusetts General Laws. Any unauthorized substantial change in use or unauthorized substantial structural alteration of any structure or fill authorized herein shall render this Waterways License void.

4. This Waterways License shall be revocable by the Department for noncompliance with the terms and conditions set forth herein. This License may be revoked after the Department has given written notice of the alleged noncompliance to the Licensee and those persons who have filed a written request for such notice with the Department and afforded them a reasonable opportunity to correct said noncompliance. Failure to correct said noncompliance after the issuance of a written notice by the Department shall render this Waterways License void and the Commonwealth may proceed to remove or cause removal of any structure or fill authorized herein at the expense of the Licensee, its successors and assigns as an unauthorized and unlawful structure and/or fill.

5. The structures and/or fill authorized herein shall be maintained in good repair and in accordance with the terms and conditions stated herein and the details indicated on the accompanying license plans.

6. Nothing in this Waterways License shall be construed as authorizing encroachment in, on or over property not owned or controlled by the Licensee, except with the written consent of the owner or owners thereof.

7. This Waterways License is granted subject to all applicable Federal, State, County, and Municipal laws, ordinances and regulations including but not limited to a valid final Order of Conditions issued pursuant to the Wetlands Protection Act, M.G.L. Chapter 131, s.40.

8. This Waterways License is granted upon the express condition that the use of the structures and/or fill authorized hereby shall be in strict conformance with all applicable requirements and authorizations of the DEP.

9. This License authorizes structure(s) and/or fill on:

Private Tidelands. In accordance with the public easement that exists by law on private tidelands, the Licensee shall allow the public to use and to pass freely upon the area of the subject property lying between the high and low water marks, for the purposes of fishing, fowling, navigation, and the natural derivatives thereof.

Commonwealth Tidelands. The Licensee shall not restrict the public's right to use and to pass freely, for any lawful purpose, upon lands lying seaward of the low water mark. Said lands are held in trust by the Commonwealth for the benefit of the public.

a Great Pond of the Commonwealth. The Licensee shall not restrict the public's right to use and to pass freely upon lands lying seaward of the high water mark for any lawful purpose

No restriction on the exercise of these public rights shall be imposed unless otherwise expressly provided in this License, unless otherwise expressly provided by this License, the Licensee shall not limit the hours of availability of any areas of the subject property designated for public passage, nor place any gates, fences, or other structures on such areas in a manner that would impede or discourage the free flow of pedestrian movement thereon.

The amount of tidewater displaced by the work hereby authorized has been ascertained by said Department, and compensation thereof has been made by the said – Algonquin Gas Transmission, LLC -- by paying into the treasury of the Commonwealth -- two dollars and zero cents (\$2.00) -- for each cubic yard so displaced, being the amount hereby assessed by said Department. (0.00 cubic yards = \$0.00).

Nothing in this License shall be so construed as to impair the legal rights of any person.

This License shall be void unless the same and the accompanying plan are recorded within sixty (60) days from the date hereof, in the Registry of Deeds for the respective Counties.

IN WITNESS WHEREAS, said Department of Environmental Protection have hereunto set their hands this \_\_\_\_\_ day of \_\_\_\_\_ in the year two thousand seven.

Program Chief	_____	Department of Environmental Protection
Program Director	_____	
Commissioner	_____	

THE COMMONWEALTH OF MASSACHUSETTS

This license is approved in consideration of the payment into the treasury of the Commonwealth by the said – Algonquin Gas Transmission, LLC -----

of the further sum of – four hundred and forty-eight thousand and two hundred dollars (\$448,200.00) --

the amount determined by the Governor as a just and equitable charge for rights and privileges hereby granted in the land of the Commonwealth.

BOSTON

Approved by the Governor.

\_\_\_\_\_  
Governor



## ATTACHMENT A

### Section 61 Findings

#### General Finding

These Findings for the Algonquin Gas Transmission, LLC ("AGT") Northeast Gateway Lateral Project, including modifications to an existing gas meter station in Weymouth, Massachusetts, and construction and maintenance of a natural gas pipeline within the Commonwealth and municipalities of Manchester-by-the-Sea, Beverly, Salem and Marblehead in, over and under Filled Tidelands and Submerged Lands of Massachusetts Bay (the "Northeast Gateway Lateral" or the "Project"), have been prepared in accordance with the provisions of M.G.L. c.30, § 61 and 301 CMR 11.00. On December 1, 2006 the Secretary of Environmental Affairs issued a certificate, EOE No. 13473/13474, stating that the Final Environmental Impact Report ("FEIR") prepared for the Northeast Gateway Lateral and its associated project, the Northeast Gateway Deepwater Port proposed by Northeast Gateway Energy Bridge, LLC, complied with the MEPA statute and regulations.

A description of the potential impacts and the associated mitigation measures associated with the Northeast Gateway Lateral as currently proposed is provided in Table A. These Findings and the mitigation measures described in Table A are based principally on the Proposed Section 61 Findings provided by AGT and Northeast Gateway Energy Bridge, LLC and included as Attachment 1-3 within Appendix I to the FEIR. MassDEP acknowledges that some of the compensatory mitigation projects described on Table A and required as mitigation conditions under MassDEP's permits represent joint commitments by AGT and Northeast Gateway Energy Bridge, LLC.

As the Project is currently described, it will require the following MassDEP permits: a waterways license (the subject of this Written Determination) and a water quality certification pursuant to 314 C.M.R. 9.00.

Based on its review of the MEPA documents, the permit application, public comments and MassDEP's regulations, MassDEP finds the terms and conditions to be incorporated into the permits required for the Project and the mitigation commitments set forth in the attached Table A will constitute all feasible measures to avoid damage to the environment and will minimize and mitigate such damage to the maximum extent practicable for those impacts subject to MassDEP's authority. Implementation of the mitigation measures will occur in accordance with the terms and conditions set forth in the permits.

MassDEP acknowledges that several of the mitigation measures concern impacts that are beyond the scope of MassDEP's jurisdiction. MassDEP confirms the significance of those commitments in avoiding or minimizing adverse impacts from the Project, even though those commitments are not included as requirements under MassDEP's permits.

**ATTACHMENT A**  
**Table A - Summary of Proposed Mitigation**

EIR Category	DEP Permit	Impact	Mitigation Measures
Geology and sediments	Waterways License	Potential alteration of the sea floor habitat due to construction	Selection of route through soft substrate.
			Choice of post-lay plow ("PLP") as the primary construction method to ensure that the duration of the construction will be as short as feasible.
			Use of a single pass of the PLP to lower the pipeline over the majority of the route to minimize impacts to sediments and geologic resources.
			Use of a single pass of the backfill plow for a majority of the pipeline route.
			For the limited areas where jetting is required to excavate the pipeline trench (pipeline transitions for the utility crossing and tie-ins), backfilling will utilize diver-placed sandbags (and/or concrete mats) or, depending on the operational requirements of the site, importation of sand or rock placed by tremie tube. No imported backfill material will be dumped from vessels on the surface.
			Use of mid-line buoys on all anchor cables to minimize sea floor impacts and the release of sediments from cable sweep.
			Funding of \$3 million to support sea floor mapping activities and habitat characterization to be managed by the Office of Coastal Zone Management, in consultation with other resource agencies.
			Implementation of the construction contingency plan and reporting procedures required by all applicable state and federal permits, licenses and memoranda of understanding.

EIR Category	DEP Permit	Impact	Mitigation Measures
Marine Water Quality	Waterways License and Water Quality Certification	Potential impacts from increases in turbidity, depletion of water column dissolved oxygen, increases in water column nutrient levels from disturbed sediments, changes in water column temperature, resuspension of contaminated sediments, construction vessel intakes and discharge, sea water uptake and discharge of hydrostatic test water, or accidental spills and releases	Mitigation measures described above
			Hydrostatic test water intake velocity will be less than 0.5 feet per second (ft/s), the applicable criterion under USEPA's rules under § 316(b) of the Clean Water Act.
			Implementation of Spill Prevention Control and Countermeasure Plans to minimize the potential impacts of any unintentional fuel spills or similar releases.
			Although not anticipated, if blasting is determined to be required, AGT will prepare a Blasting Mitigation Plan in consultation with MassDEP and state and federal resource agencies.
Implementation of the Environmental Monitoring Plan required under MassDEP's permits.			
Plankton, Benthic Organisms, Shellfish and Finfish	Waterways License and Water Quality Certification	Potential impacts from impacts on marine water quality, substrate alteration, habitat alteration or loss or accidental spills and releases	Mitigation measures described above
			Selection of and limitation from May to November time of the year for construction.
			Funding of \$.15 million to support research and educational programs of the New England Aquarium.
			Funding of \$.6 million to the New England Aquarium to direct and manage a study of the biological impacts of the exclusion zone to be created by the Northeast Gateway Deepwater Port.

EIR Category	DEP Permit	Impact	Mitigation Measures
<p>Marine Mammals and Threatened and Endangered Species</p>	<p>Waterways and Water Quality Certification</p>	<p>Potential impacts from physical harassment, vessel strikes, habitat alteration, acoustic harassment, alteration of prey species and abundance, entanglement, ingestion of marine debris, fuel spills, impingement and entrainment or bioaccumulation</p>	<p>Mitigation measures described above</p>
			<p>Implementation of the Marine Mammal/Sea Turtle visual monitoring plan described in Appendix I to the FEIR.</p>
			<p>Implementation of and funding of \$3.25 million for the Northeast Gateway Marine Mammal Detection, Monitoring, and Mitigation Plan, a system of passive acoustic buoys and contingency plans required under federal permits.</p>
			<p>Funding of \$.75 million for a right whale management and research.                       Prior to initiation of construction work, all crew members on vessels will undergo environmental training, a component of which will include the procedures regarding sighting of marine mammals and sea turtles.</p>
<p>Cultural</p>	<p>Waterways License and Water Quality Certification</p>	<p>Potential impacts to possible post-contact cultural resources</p>	<p>Implementation of the unanticipated discoveries plan consistent with the requirements of the Massachusetts Historical Commission and the Massachusetts Board of Underwater Archaeological Resources.</p>
			<p>Location of the route to avoid impacts to identified potential cultural targets by establishing and maintaining a minimum buffer in all directions around the detectable the limits of each target.</p>
			<p>Funding of \$.15 million to support activities of the Gloucester Maritime Heritage Center related to the Stellwagen Bank National Marine Sanctuary exhibit and programs to preserve Gloucester's maritime heritage.</p>

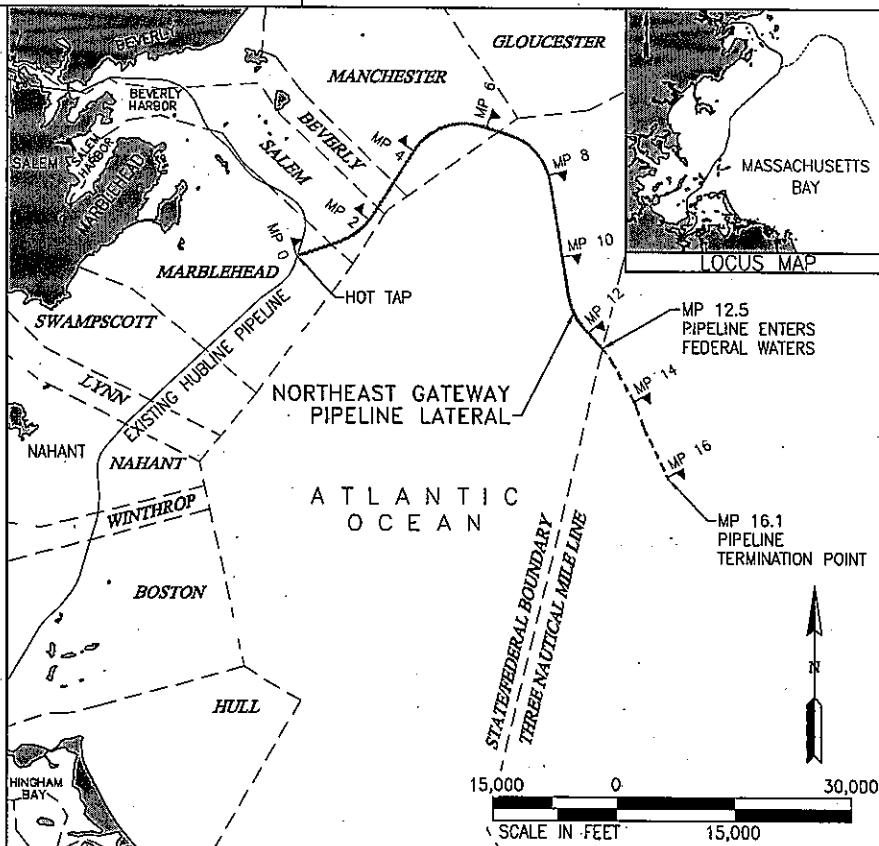
EIR Category	DEP Permit	Impact	Mitigation Measures
Socio-Economics	Waterways and Water Quality Certification	Potential impacts to commercial fisheries, recreational fisheries, local populations, economies and property values	Mitigation measures described above.
			Establishment of the communications plan required under the Waterways license.
			Demarcation of the anchor corridor to minimize the possibilities of lost year.
			Funding of \$6.3 million to capitalize a non-profit organization to buy/lease fisheries permits and Days at Sea for the inshore groundfish fleet, and to compensate for loss of gear.
			Funding of \$1.7 million for potential impacts to commercial lobstermen, including loss of gear.
			Funding of \$.9 million for a female lobster v-notch catch and release program.
Ocean Use, Recreation and Visual Resources.	Waterways License and Water Quality Certification	Potential impacts to the Massachusetts Bay disposal site, recreational activities, visual resources, and the general public interest represented by the public trust doctrine and the Massachusetts Ocean Sanctuaries Act	Mitigation measures described above.
			Funding of \$5.3 million to support infrastructure improvements and transportation to the Boston Harbor Islands.
			Funding of \$.65 million to maintain and/or construct public access boat ramps.
			Funding of \$.15 million to support public access and environmental programs of the Salem Sound Coastwatch.

EIR Category	DEP Permit	Impact	Mitigation Measures
			Funding of \$.6 million to support research buoys and other equipment of the Gulf of Maine Ocean Observing System.
Other General Impacts	Waterways license and Water Quality Certification	Generalized Impacts not Covered by Above	AGT will retain third party environmental inspectors who will have "stop task" authority through the chief inspector or vessel superintendent.

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED  
 IN CONFORMITY WITH THE RULES AND REGULATIONS OF  
 THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF  
 MASSACHUSETTS.

REGISTERED PROFESSIONAL ENGINEER

DATE



FOR BURIAL DETAILS  
 SEE SHEET 2 OF 12

FOR UTILITY LINE CROSSING DETAILS  
 SEE SHEET 3 OF 12

FOR HOT TAP DETAILS  
 SEE SHEET 5 OF 12

PLANS ACCOMPANYING PETITION OF ALGONQUIN GAS  
 TRANSMISSION, LLC TO INSTALL THE NORTHEAST  
 GATEWAY PIPELINE LATERAL BENEATH THE  
 SEAFLOOR OF THE ATLANTIC OCEAN, WITHIN  
 MASSACHUSETTS JURISDICTIONAL WATERS.

DATE: FEBRUARY 21, 2007

PROJECT AREA MAP  
 SHEET 1 OF 12

02-21-07 7:58 04125\CHAPTER-91 10 K.M.A.

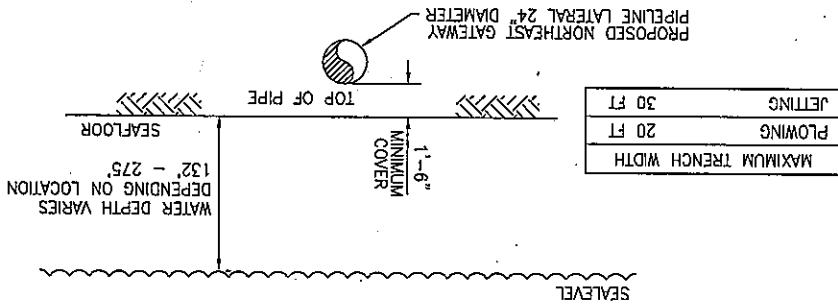
02-21-07 8:00 04125\CHAPTER-91 7 K/M/A

TYPICAL BURIAL CROSS SECTIONS  
SHEET 2 OF 12

PLANS ACCOMPANYING PETITION OF ALGONQUIN GAS TRANSMISSION, LLC TO INSTALL THE NORTHEAST GATEWAY PIPELINE LATERAL BENEATH THE SEAFLOOR OF THE ATLANTIC OCEAN, WITHIN MASSACHUSETTS JURISDICTIONAL WATERS.

DATE: FEBRUARY 21, 2007

TYPICAL BURIAL CROSS SECTION  
NOT TO SCALE



REGISTERED PROFESSIONAL ENGINEER  
DATE

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMITY WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

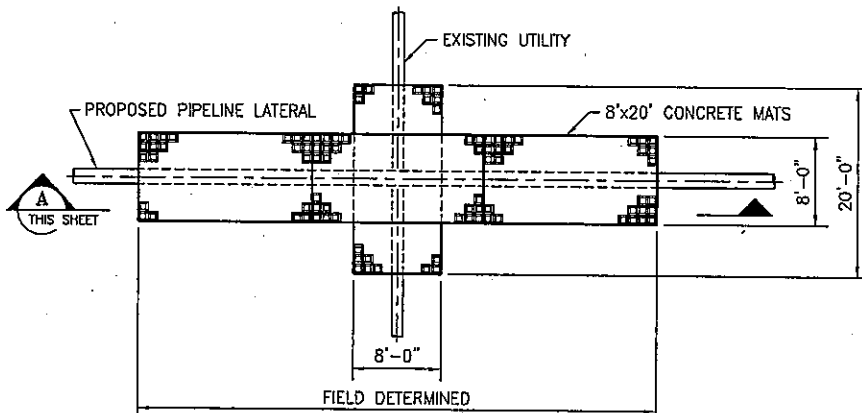


I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMITY WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

REGISTERED PROFESSIONAL ENGINEER

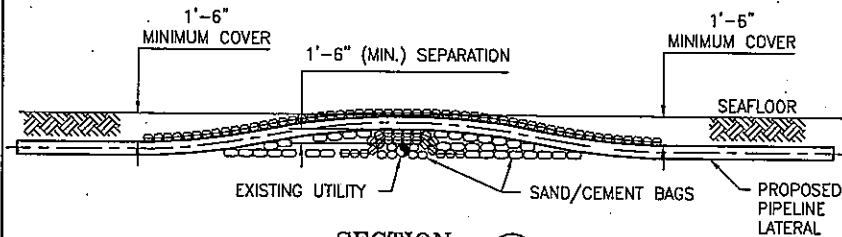
DATE

APPROXIMATE MILEPOST	UTILITY TYPE	OWNER/OPERATOR
NORTHEAST GATEWAY PIPELINE LATERAL		
5.69	FIBER OPTIC CABLE	HIBERNIA



**PLAN**

NOT TO SCALE



**SECTION**

SCALE: N.T.S.

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THIS DWG.

PLANS ACCOMPANYING PETITION OF ALGONQUIN GAS TRANSMISSION, LLC TO INSTALL THE NORTHEAST GATEWAY PIPELINE LATERAL BENEATH THE SEAFLOOR OF THE ATLANTIC OCEAN, WITHIN MASSACHUSETTS JURISDICTIONAL WATERS.

DATE: FEBRUARY 21, 2007

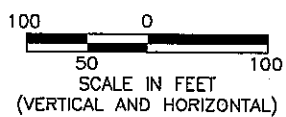
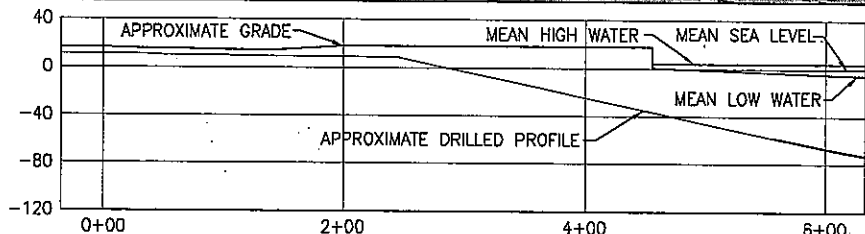
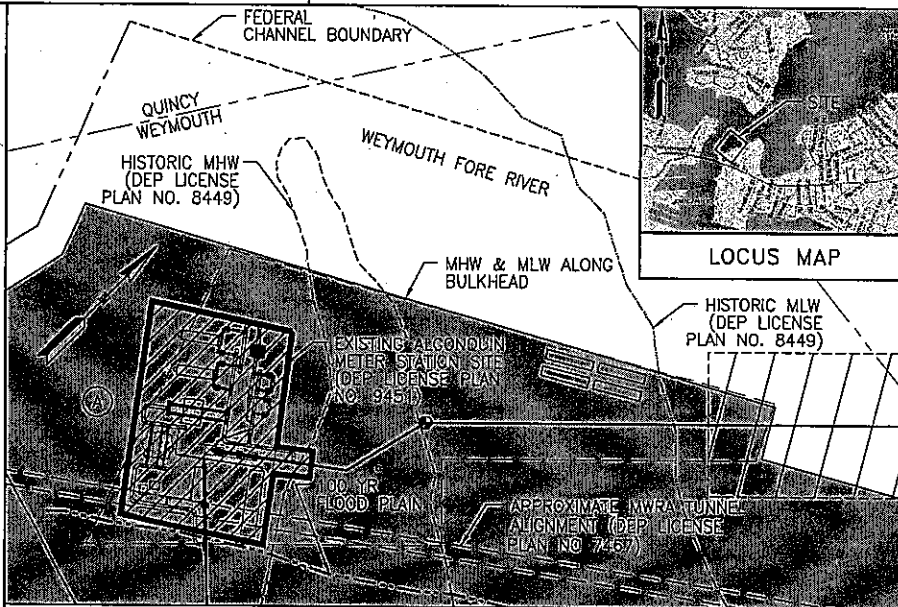
TYPICAL UTILITY CROSSING DETAILS  
SHEET 3 OF 12

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I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMITY WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

REGISTERED PROFESSIONAL ENGINEER

DATE



REF. DATUM = MEAN LOW WATER (MLW = 0.00)

HISTORIC MEAN HIGH/LOW WATER BASED ON DEP LICENSE PLAN NO. 8449  
CURRENT MHW/MLW BASED ON DEP LICENSE PLAN NO. 8449

(A) EXELON FORE RIVER DEVELOPMENT, LLC  
F/K/A SITHE FORE RIVER DEVELOPMENT, LLC  
C/O EXELON GENERATION  
SCHRAFFT CENTER  
529 MAIN STREET STE 605  
CHARLESTOWN, MA 02120

ALL MODIFICATIONS OCCUR WITHIN THE EXISTING METER STATION FACILITY.

AUTHORIZED UNDER DEP LICENSE NO. 9451.

DATE: FEBRUARY 21, 2007

PLANS ACCOMPANYING PETITION OF ALGONQUIN GAS TRANSMISSION, LLC TO INSTALL THE NORTHEAST GATEWAY PIPELINE LATERAL BENEATH THE SEAFLOOR OF THE ATLANTIC OCEAN, WITHIN MASSACHUSETTS JURISDICTIONAL WATERS.

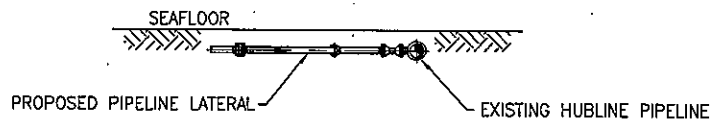
WEYMOUTH METER STATION MODIFICATIONS  
SHEET 4 OF 12

02-21-07 8:04 04125\CHAPTER-91 11 K.M.A

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMITY WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

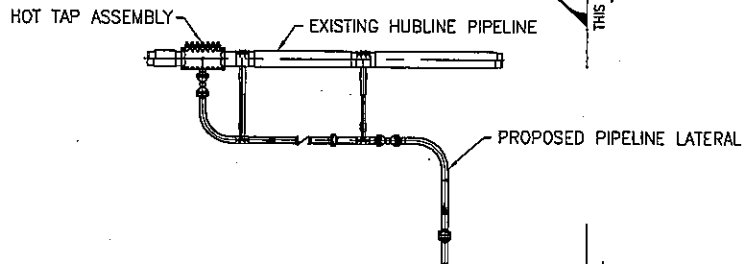
REGISTERED PROFESSIONAL ENGINEER

DATE



SECTION

SCALE: N.T.S.



PLAN

SCALE: N.T.S.

### TYPICAL HOT TAP AND TIE-IN ASSEMBLY AT MP 0.0

PLANS ACCOMPANYING PETITION OF ALGONQUIN GAS TRANSMISSION, LLC TO INSTALL THE NORTHEAST GATEWAY PIPELINE LATERAL BENEATH THE SEAFLOOR OF THE ATLANTIC OCEAN, WITHIN MASSACHUSETTS JURISDICTIONAL WATERS.

DATE: FEBRUARY 21, 2007

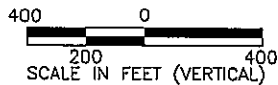
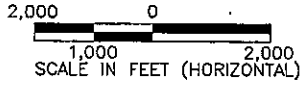
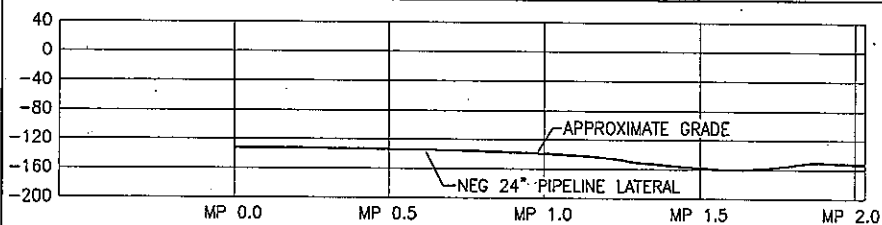
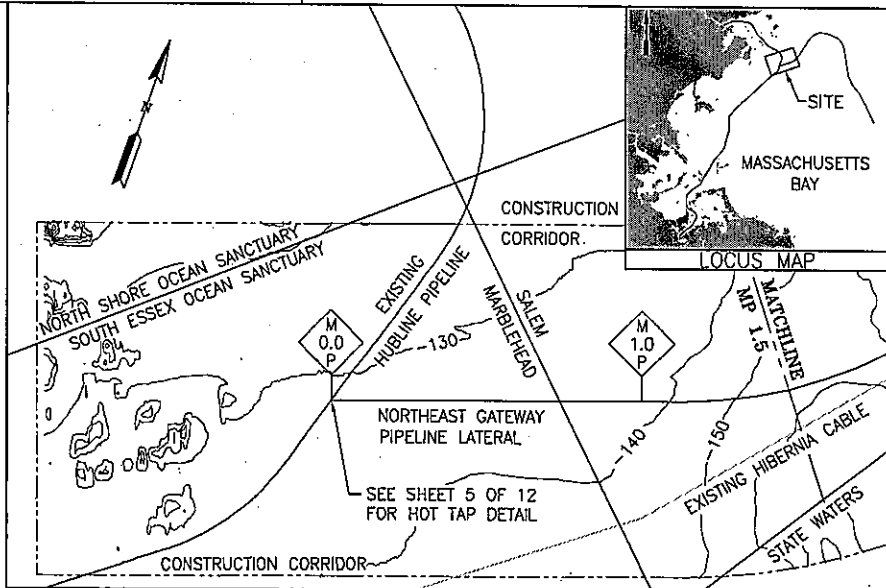
TYPICAL HOT TAP AND TIE-IN ASSEMBLY SHEET 5 OF 12

02-21-07 8:07 04125\CHAPTER-91 6 K.M.A.

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMITY WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

REGISTERED PROFESSIONAL ENGINEER \_\_\_\_\_

DATE \_\_\_\_\_



REF. DATUM = NAVD 88  
MEAN LOWER LOW WATER = 0.0 FT

MP	X	Y	LAT	LONG
0	850,594.97'	3,000,545.40'	42° 28.76'	70° 46.76'
.5	853,089.56'	3,001,409.47'	42° 28.90'	70° 46.20'
1.0	855,584.15'	3,002,273.55'	42° 29.04'	70° 45.64'

PLANS ACCOMPANYING PETITION OF ALGONQUIN GAS TRANSMISSION, LLC TO INSTALL THE NORTHEAST GATEWAY PIPELINE LATERAL BENEATH THE SEAFLOOR OF THE ATLANTIC OCEAN, WITHIN MASSACHUSETTS JURISDICTIONAL WATERS.

DATE: FEBRUARY 21, 2007

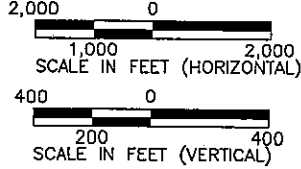
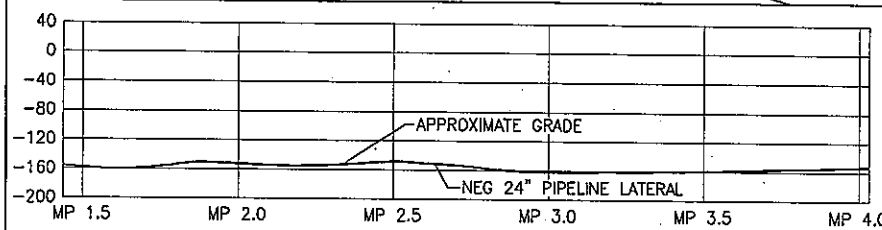
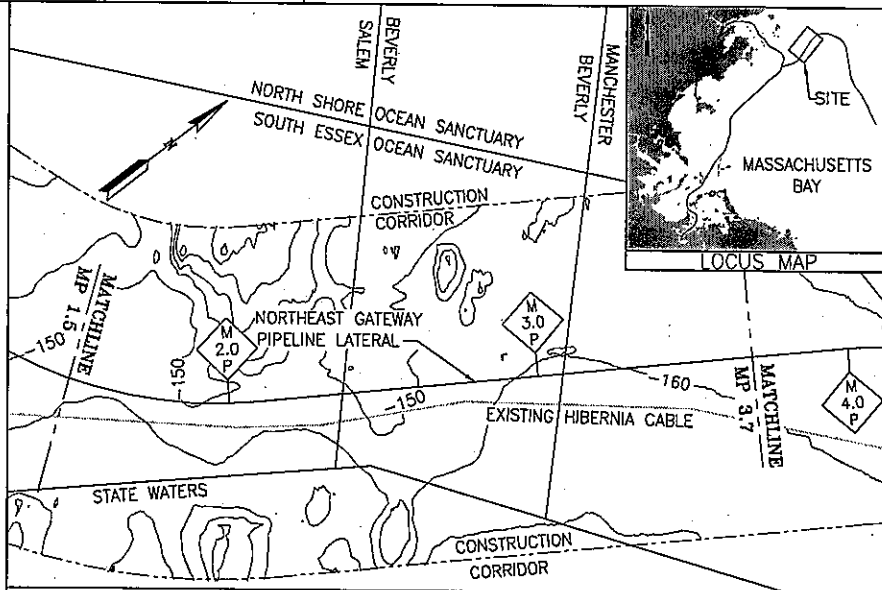
PIPELINE ALIGNMENT AND PROFILE  
SHEET 6 OF 12

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I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMITY WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

REGISTERED PROFESSIONAL ENGINEER

DATE



REF. DATUM = NAVD 88  
MEAN LOWER LOW WATER = 0.0 FT

MP	X	Y	LAT	LONG
1.5	857,978.38'	3,003,362.96'	42° 29.22'	70° 45.11'
2.0	859,870.92'	3,005,184.02'	42° 29.51'	70° 44.68'
2.5	861,296.27'	3,007,405.84'	42° 29.88'	70° 44.36'
3.0	862,708.80'	3,009,636.16'	42° 30.24'	70° 44.04'
3.5	864,121.32'	3,011,866.49'	42° 30.61'	70° 43.72'

PLANS ACCOMPANYING PETITION OF ALGONQUIN GAS TRANSMISSION, LLC TO INSTALL THE NORTHEAST GATEWAY PIPELINE LATERAL BENEATH THE SEAFLOOR OF THE ATLANTIC OCEAN, WITHIN MASSACHUSETTS JURISDICTIONAL WATERS.

DATE: FEBRUARY 21, 2007

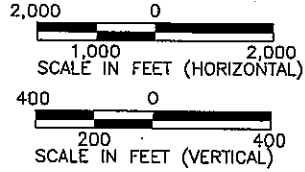
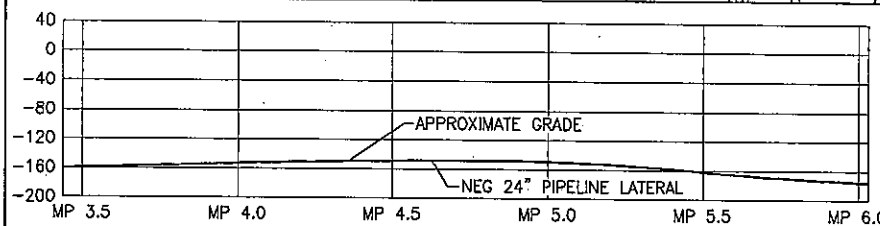
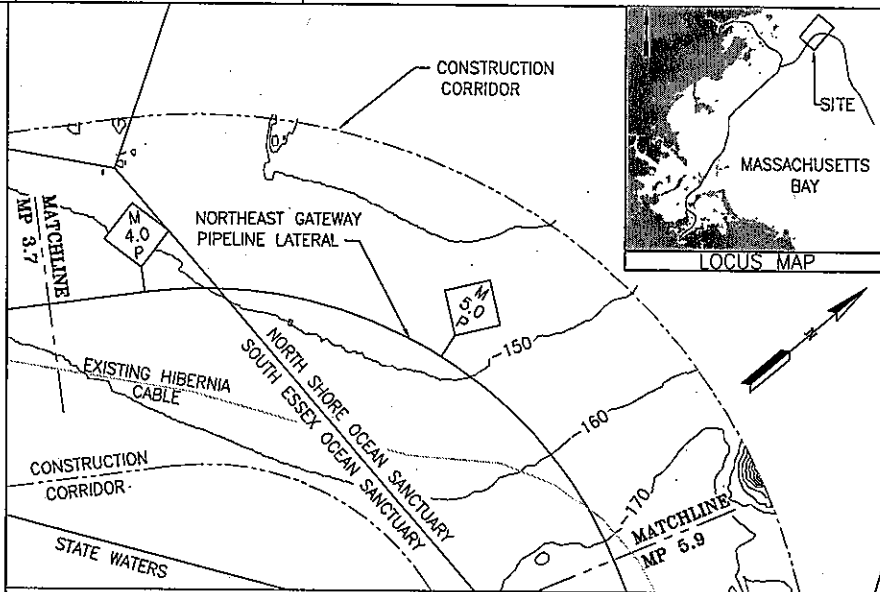
PIPELINE ALIGNMENT AND PROFILE  
SHEET 7 OF 12

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I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMITY WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

REGISTERED PROFESSIONAL ENGINEER

DATE



REF. DATUM = NAVD 88  
MEAN LOWER LOW WATER = 0.0 FT

MP	X	Y	LAT	LONG
4.0	865,533.85'	3,014,096.82'	42° 30.97'	70° 43.41'
4.5	867,282.84'	3,016,056.27'	42° 31.29'	70° 43.01'
5.0	869,599.83'	3,017,293.00'	42° 31.49'	70° 42.49'
5.5	872,201.14'	3,017,655.06'	42° 31.55'	70° 41.91'

PLANS ACCOMPANYING PETITION OF ALGONQUIN GAS TRANSMISSION, LLC TO INSTALL THE NORTHEAST GATEWAY PIPELINE LATERAL BENEATH THE SEAFLOOR OF THE ATLANTIC OCEAN, WITHIN MASSACHUSETTS JURISDICTIONAL WATERS.

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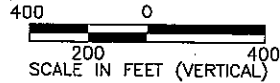
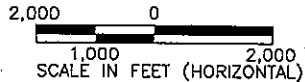
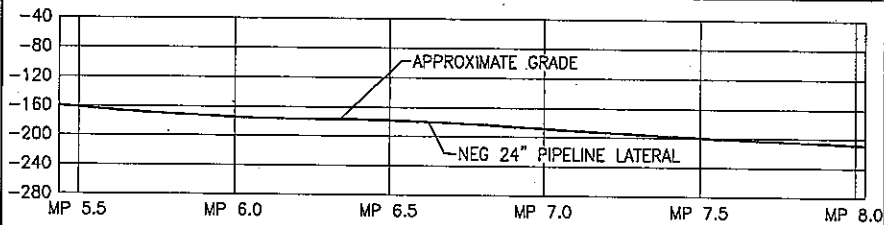
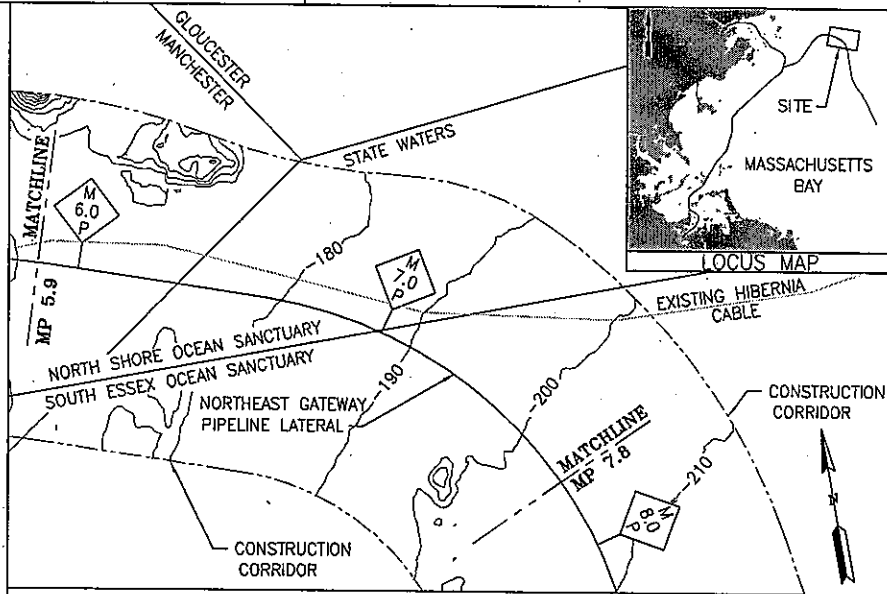
PIPELINE ALIGNMENT AND PROFILE  
SHEET 8 OF 12

02-21-07 8:12 04125\CHAPTER-91 6 K.M.A.

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMITY WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

REGISTERED PROFESSIONAL ENGINEER

DATE



REF. DATUM = NAVD 88  
MEAN LOWER LOW WATER = 0.0 FT

MP	X	Y	LAT	LONG
6	874,773.66'	3,017,114.42'	42° 31.46'	70° 41.34'
6.5	877,278.31'	3,016,279.96'	42° 31.31'	70° 40.79'
7.0	879,910.17'	3,015,543.57'	42° 31.13'	70° 40.26'
7.5	881,555.72'	3,013,360.78'	42° 30.83'	70° 39.84'

PLANS ACCOMPANYING PETITION OF ALGONQUIN GAS TRANSMISSION, LLC TO INSTALL THE NORTHEAST GATEWAY PIPELINE LATERAL BENEATH THE SEAFLOOR OF THE ATLANTIC OCEAN, WITHIN MASSACHUSETTS JURISDICTIONAL WATERS.

DATE: FEBRUARY 21, 2007

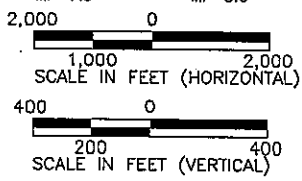
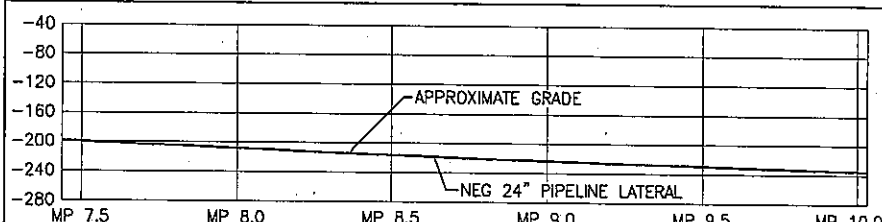
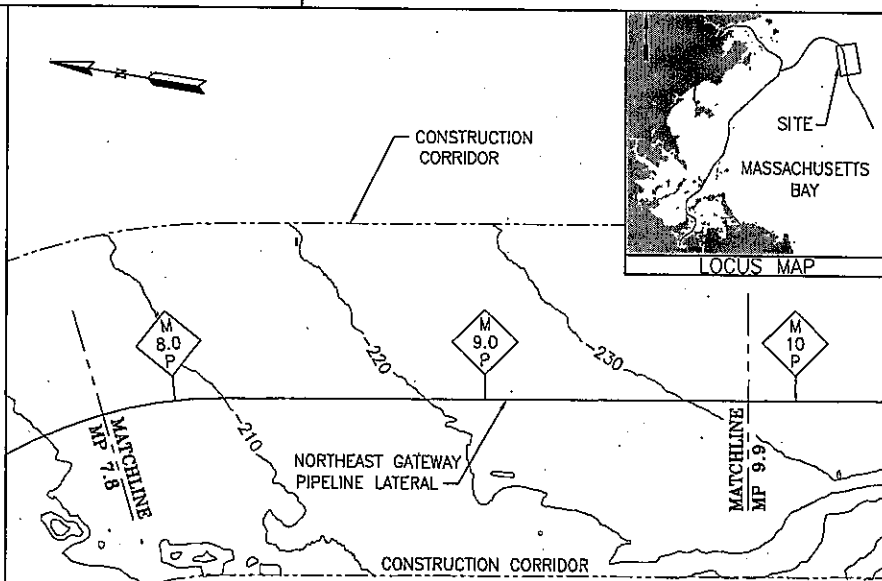
PIPELINE ALIGNMENT AND PROFILE  
SHEET 9 OF 12

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I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMITY WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

REGISTERED PROFESSIONAL ENGINEER

DATE



REF. DATUM = NAVD 88  
MEAN LOWER LOW WATER = 0.0 FT

MP	X	Y	LAT	LONG
8	882,694.00'	3,010,993.87'	42° 30.44'	70° 39.59'
8.5	883,163.31'	3,008,397.24'	42° 30.01'	70° 39.49'
9.0	883,587.40'	3,005,791.53'	42° 29.58'	70° 39.41'
9.5	884,011.49'	3,003,185.81'	42° 29.15'	70° 39.32'

PLANS ACCOMPANYING PETITION OF ALGONQUIN GAS TRANSMISSION, LLC TO INSTALL THE NORTHEAST GATEWAY PIPELINE LATERAL BENEATH THE SEAFLOOR OF THE ATLANTIC OCEAN, WITHIN MASSACHUSETTS JURISDICTIONAL WATERS.

DATE: FEBRUARY 21, 2007

PIPELINE ALIGNMENT AND PROFILE  
SHEET 10 OF 12

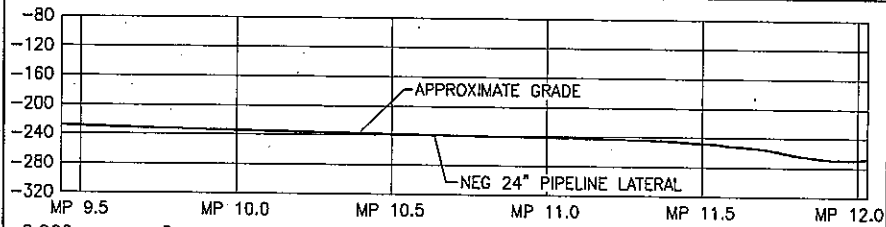
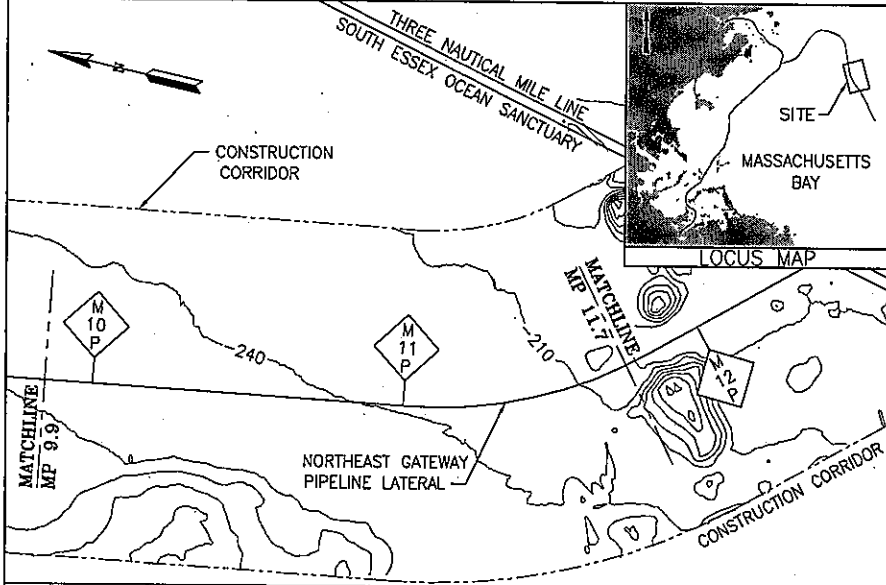
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REGISTERED PROFESSIONAL ENGINEER \_\_\_\_\_

DATE \_\_\_\_\_



REF. DATUM = NAVD 88  
MEAN LOWER LOW WATER = 0.0 FT

MP	X	Y	LAT	LONG
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11	885,283.76'	2,995,368.67'	42° 27.86'	70° 39.05'
11.5	886,134.23'	2,992,883.75'	42° 27.45'	70° 38.87'

PLANS ACCOMPANYING PETITION OF ALGONQUIN GAS TRANSMISSION, LLC TO INSTALL THE NORTHEAST GATEWAY PIPELINE LATERAL BENEATH THE SEAFLOOR OF THE ATLANTIC OCEAN, WITHIN MASSACHUSETTS JURISDICTIONAL WATERS.

DATE: FEBRUARY 21, 2007

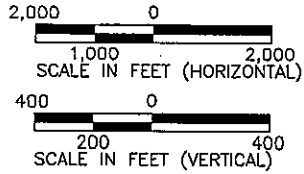
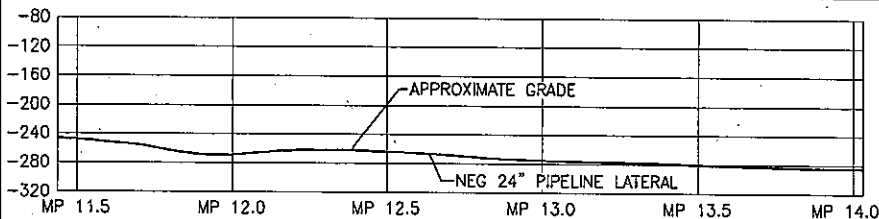
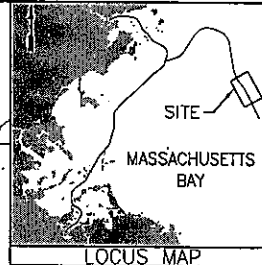
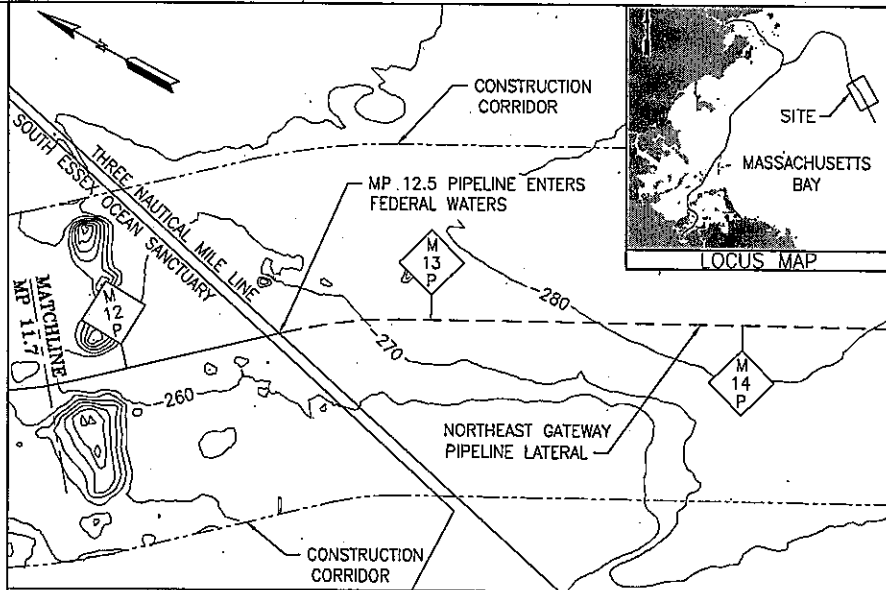
PIPELINE ALIGNMENT AND PROFILE  
SHEET 11 OF 12

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REGISTERED PROFESSIONAL ENGINEER

DATE



REF. DATUM = NAVD 88  
MEAN LOWER LOW WATER = 0.0 FT

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13.0	891,022.84'	2,986,692.21'	42° 26.42'	70° 37.80'
13.5	892,274.76'	2,984,367.93'	42° 26.04'	70° 37.52'
14	893,526.69'	2,982,043.64'	42° 25.65'	70° 37.25'

PLANS ACCOMPANYING PETITION OF ALGONQUIN GAS TRANSMISSION, LLC TO INSTALL THE NORTHEAST GATEWAY PIPELINE LATERAL BENEATH THE SEAFLOOR OF THE ATLANTIC OCEAN, WITHIN MASSACHUSETTS JURISDICTIONAL WATERS.

DATE: FEBRUARY 21, 2007

PIPELINE ALIGNMENT AND PROFILE  
SHEET 12 OF 12

02-15-07 11:47 04125\CHAPTER-91 6 K.M.A.

Written Determination  
Northeast Gateway Pipeline Lateral

ATTACHMENT B

# FINAL NORTHEAST GATEWAY PIPELINE LATERAL

## CONSTRUCTION CONTINGENCY PLAN AND REPORTING PROCEDURES

*Prepared for:*



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And



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**February 2007**

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## 1.0 INTRODUCTION

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Algonquin Gas Transmission, LLC ("Algonquin") has applied to the Federal Energy Regulatory Commission ("FERC") for a Certificate of Public Convenience and Necessity under Section 7 of the Natural Gas Act (15 U.S.C. 717, et seq.). Algonquin is requesting authorization to construct, own and operate an approximately 16.1-mile long, 24-inch diameter natural gas steel pipeline that will interconnect the proposed Northeast Gateway Energy Bridge™ Deepwater Port ("Northeast Port" or the "Port") with Algonquin's existing offshore natural gas pipeline system in Massachusetts Bay ("HubLine"). Algonquin's proposed Northeast Gateway Pipeline Lateral (the "Pipeline Lateral") will facilitate the delivery of regasified liquefied natural gas ("LNG") from the Northeast Port to onshore markets in New England.

Northeast Gateway Energy Bridge, L.L.C. ("Northeast Gateway") has applied to the U.S. Maritime Administration for a Deepwater Port License to construct and operate the Northeast Port. The Port will consist of two subsea Submerged Turret Loading™ (STL™) buoys, each with a flexible riser assembly and a manifold connecting, via a steel flowline, to the subsea Pipeline Lateral. Northeast Gateway will utilize a fleet of specially designed Energy Bridge™ Regasification Vessels ("EBRVs"), each capable of transporting approximately 2.9 billion cubic feet ("Bcf") of natural gas. The mooring system is designed to handle larger vessels which may come into service in the future. The EBRVs will dock to the STL™ buoys, which in turn will serve as both the single-point mooring system for the vessels and the delivery conduit for natural gas.

During the permitting process, Algonquin participated in several discussions with federal and state regulatory and resource agencies regarding the development of a detailed contingency plan in order to reach advance agreement on appropriate responses to issues that may arise during construction. References to the development of such a contingency plan appear in the Draft and Final Environmental Impact Statements/Reports ("DEIS/EIR", "FEIS/EIR", respectively) prepared by the United States Coast Guard ("USCG"), in the Certificate on the FEIR issued by the Secretary of the Executive Office of Environmental Affairs, and in several agency comment letters.

Algonquin has prepared this Construction Contingency Plan and Reporting Procedures (the "Plan") to identify the specific decision making procedures and actions that Algonquin will implement during construction in the event certain situations arise. The Plan addresses the construction of the Pipeline Lateral with emphasis on the approximately 12-mile segment that is located within State waters.

## **2.0 PROJECT PLANNING TO MINIMIZE CONSTRUCTION ISSUES**

Algonquin has approached the design, development and permitting of the Pipeline Lateral with due consideration for the potential for change during the course of construction as well as incorporating lessons learned from the development and construction of the HubLine Project. As a result, Algonquin has developed the plans and procedures for construction of the Pipeline Lateral so as to minimize the opportunity for unknowns to occur during the course of the work.

This Section describes that planning. The following sections address the planning for contingencies that may nevertheless arise.

The engineering of the Pipeline Lateral has proceeded with the goal of establishing routing, construction methodologies, and timing that would maximize the ability to execute the work with predictable results. An assessment of project risks was performed and resulted in specific decisions taken to minimize construction issues, such as:

### **2.1 Burial**

- ◆ Selection of a route with soil conditions that allow predictable burial and installation durations.
- ◆ Avoidance of locations such as the Precautionary Area where the need for extensive depth of burial is required.
- ◆ Performance of extensive geophysical and geotechnical surveys to confirm that the route locations were optimally selected.

### **2.2 Weather Downtime**

- ◆ Selection of a time-of-year period for construction that minimizes potential impacts from weather delays and impacts to the marine environment.
- ◆ Development of a construction schedule with reasonable allowances for mobilization of the contractor prior to commencement of in-field work and for traditional weather downtime delays.

### **2.3 Construction Methodology**

- ◆ Selection of construction equipment and techniques that are proven, such as plowing, backfill plowing, and pipeline flooding prior to backfilling.
- ◆ Plan for optimized construction vessel and location usage so as to minimize the overall construction duration.
- ◆ Proceed with the construction contracting process earlier than normal in order to secure the appropriate resources, equipment and personnel necessary to execute the work.

### **2.4 Regional Considerations**

- ◆ Avoidance of shipping lanes and lightering areas so as to minimize any issues related to the location of the pipeline and the shipping industry that would necessitate a requirement of increased depth of burial of the pipeline.
- ◆ Address the general lack of experienced marine pipeline construction contractors in the local area by retaining experienced marine pipeline contractors.

### 3.0 CONSTRUCTION SCHEDULE

Algonquin has consulted with federal and state marine resource agencies regarding time-of-year constraints on construction activities. A comprehensive discussion on this subject is presented in the FEIS/EIR for the Port and Pipeline Lateral. Based on this consultation, Algonquin is planning to construct the Pipeline Lateral beginning in May, 2007 and finishing at the end of November, 2007, assuming all permits are received in the first quarter of 2007. With this schedule, activities will occur during a period when impacts to water quality and to the majority of marine resources present along the Pipeline Lateral will be minimized.

As part of the consultation process, the construction activities planned on a month-by-month basis were the subject of lengthy discussions at inter-agency meetings. A summary of the construction activities is included in Appendix A, which presents a detailed list of the planned activities and the proposed sequence of each activity. The schedule includes an approximately 25 percent contingency factor for weather-related downtime, which is based on Algonquin's experience with HubLine.

Factoring in other lessons from HubLine, Algonquin took a conservative approach with regards to a number of construction operations. For example, there is a time allowance for the removal of seafloor obstructions that could inhibit plowing operations even though the seafloor surveys did not reveal any obstructions large enough to impede plowing. There also is a time allowance for the possibility of remedial cover placement, even though the plow is expected to lower the pipeline to the target depth without encountering any unidentified obstacles that would require remedial cover over the pipe. These various schedule components, coupled with the fact that the proposed pipeline burial operation is more predictable, provides a high degree of confidence in the construction schedule.

Nevertheless, Algonquin has identified several scenarios that may cause delays to the planned construction activity and the overall schedule. Table 3-1 outlines several "global" scenarios and their proposed contingency measures.

Table 3-1. Global Issues that Could Impact the Overall Schedule

Issue/Scenario	Notification by Algonquin if Schedule Delay is Imminent or Likely	Evaluate Impact	Contingency Measures/Actions
Delay in construction vessels mobilization/arrival	Notify DEP contact within 48 hours of notice from Contractor.	Assess the length of the delay and evaluate impact to project schedule.	If the construction start date is delayed consult with the contractor to supply additional diving systems for the plow barge to assist with the "critical path" activities.
Significant mechanical failure(s)	Notify DEP contact within 48 hours if mechanical failure may impact schedule.	Discuss options with contractor and evaluate schedule impact.	Require the contractor to provide redundant systems where possible and/or replacement parts for components that are most likely to experience failure.
Pipeline damage resulting during pipelay operations	Notify DEP contact within 48 hours.	Identify condition. Assess length of pipe affected.	Remove and Recover damaged pipe. Reinitiate pipe lay once damaged pipe has been removed. Additional pipe has been manufactured and concrete coated in order to be available to address this situation.
Pipeline damage discovered post-pipelay	Notify DEP contact within 48 hours.	Identify location of damage. Plan pipeline repair utilizing contingency repair materials.	Ship contingency materials to project site – fittings, pipe, etc.
Pipelay – pipeline segment does not	Notify DEP contact within 48 hours.	Review plan for start up and lay down	If pipeline does not land in target box, correct cable length or pipeline length on lay barge.

Table 3-1: Global Issues that Could Impact the Overall Schedule

Issue/Scenario	Notification by Algonquin if Schedule Delay is Imminent or Likely	Evaluate Impact	Contingency Measures/Actions
land in required target box		procedures.	
Slower than expected progress of pipelay.	Notify DEP contact within 48 hours.	Review options with contractor and overall schedule impacts.	Isolate issue causing delay and work with contractor to increase progress if the issue is not mechanical.
Delay during Port construction activities that impacts Pipeline Lateral schedule	Notify DEP contact within 48 hours.	Review options with contractor and overall schedule impacts.	Prioritize contractor to minimize impacts.
Marine Mammal Presence within Construction Zone	Notify DEP contact within 48 hours	Review options with contractor and overall schedule impacts.	Implement procedures and notifications outlined in the Marine Mammal Detection Plan.
Port and Pipeline Lateral Vessel Coordination During Construction	Notify DEP contact within 48 hours	Review critical path activities.	The Scope and Construction Contract combines as many like activities as possible into one contract, utilizing non-conflicting vessels when possible such as tugs to install buoys, and thorough planning of the work activities.



## 4.0 CONSTRUCTION-RELATED ACTIVITIES AND ASSOCIATED CONTINGENCY MEASURES

In this Section of the Plan, Algonquin has evaluated several scenarios whereby deviations in the proposed construction techniques may occur during the course of construction. For these scenarios, a probable contingency action has been developed to mitigate the impact.

### 4.1 Project Survey Plan

Algonquin is working with the contractor to finalize the survey program and ensure that the appropriate equipment and methods are deployed to provide real time evaluation of progress throughout construction on a daily basis, including assessment of the top of pipe ("TOP") elevation following plowing activities.

Three primary survey events as outlined below are planned:

- ◆ Post Plow Survey – This survey will be performed on a daily basis during plowing to determine the TOP elevation and confirm information obtained from the aft facing sonar. Evaluation of this data will identify any segments of pipe which do not meet the project lowering specifications and require contingency measures to be implemented.
- ◆ Post Flood Survey – Once the Post Plow survey of the Pipeline Lateral's entire length has been evaluated and determined to meet or exceed the lowering requirements, the pipeline will be flooded. Following the flooding process, the ROV survey will be performed again to re-establish and confirm the TOP elevation prior to commencement of backfill plowing operations.
- ◆ Post backfill survey – This survey will be performed daily during backfill plowing. The results of the survey will be used to provide the final project as-built drawings which identify the post construction contours throughout the impact area as well as the centerline of the as-built pipeline.

The following list of survey equipment that may be deployed throughout the construction process (where applicable) primarily focuses on plowing and backfill plowing since the TOP elevation is the most critical aspect of the installation process.

- ◆ **Plow equipped sonar**

The plow is equipped with forward facing and aft facing sonar that is primarily used by the plow operators to control, monitor, assess and correct (or operate) the plow. The forward facing sonar is used by the plow operators to ensure route obstructions are not encountered. The aft facing sonar provides real time, scalable images of the trench. The plow operator uses the trench information to ensure the depth of cut meets or exceeds project requirements. Although the aft facing sonar provides the first indication of the trench geometry, definitive measurements of the TOP elevation cannot be obtained because the pipe does not come to rest at the bottom of the trench for several hundred feet behind the plow.

The backfill plow is also equipped with the same sonar devices. In the case of the backfill plow, the forward facing sonar is primarily used for guidance and the aft facing sonar provides details of the seafloor shape immediately behind the plow.

- a. **Plow performance monitoring**

In addition to the forward and aft facing sonar, the plow is equipped with a number of sensors which provide information regarding the plow's attitude (pitch and roll), tow forces, as well

as forces exerted on the pipeline. The operators use this information in conjunction with the sonar images to operate the plow at or near maximum capacity.

**b. ROV mounted multibeam sonar**

Multibeam sonar surveys will be used to determine the elevation of the TOP. The ROV mounted multibeam survey will provide high resolution data of the TOP position (horizontal and vertical components) elevation as well as the trench geometry, spoil pile width, and information concerning the seafloor outside of the impact zone.

The following table illustrates the anticipated process between data collection, processing, evaluation and reporting. This is a reasonable best case scenario for completing the process with confidence that the information is accurately presented.

Day 1	Day 2	Day 3	Day 4	Day 5
Plow 1 mile	Survey collection	Process and begin assessment	Complete assessment, team review, and prepare for presentation	Present report summary of Day 1 production and cumulative data.

## 4.2 Pipeline Lowering

Algonquin proposes to utilize post-lay plowing ("PLP") as the primary method of pipe lowering. PLP is planned for all segments of the Pipeline Lateral with the exception of some discrete sites along the route as discussed below.

Detailed pre-construction survey results show no indication of bedrock, glacial till, or other non-plowable hard substrate along the centerline of the Pipeline Lateral route. Based on this information, it is likely that one pass of the plow will lower the TOP to the design target of 3.0 feet or a minimum of 1.5 feet below the sea floor. One pass of the vessel minimizes the impacts due to anchor placement and reduces the overall duration of the burial segment of the project. In the instances where this is not possible, remedial methods will be utilized to bury or otherwise protect the pipeline.

At discrete sites along the pipeline route, it will be necessary to excavate sediment that cannot be removed by the plow. These sites include the HubLine at the location of the hot tap, the in-line sidetap assembly at the Pipeline Lateral end, the crossing of the Hibernia and unidentified cables, and any unforeseen locations where the plow is unable to lower the pipeline. A jetting tool will be utilized to perform this excavation and it will typically be deployed from the diving vessel.

### 4.2.1 Inability to Achieve the Minimum Lowering Depth after One Plow Pass

Algonquin has identified several scenarios in which the pipeline would be insufficiently lowered during the plowing process. The scenarios and the likely action taken to address each are shown in Table 4-1 and Table 4-2 below. In the event the top of the pipeline has been lowered less than 1.5 feet below the sea floor following one pass of the plow, several options are available to remediate the condition.

#### 4.2.1.1 The Use of a Second Plow Pass

The use of a second plow pass for isolated segments may be appropriate to address insufficient lowering, depending upon the length and location of the non-lowered section of pipeline. It should be noted, however, that there are technical limitations for a plow to be able to initiate and terminate plowing in the middle of a section of the pipeline route that has already been plowed. In addition, performing a second pass of the plow will extend the schedule beyond what has been stated and will increase the anchor/cable sweep impacts. From a timing perspective, the results associated with the first mile or two of plowing along each pipeline segment will be a lead indicator for assessing the effectiveness of the lowering operation. A determination as to the use of a second plow pass will be dependent upon the reasons for the deficient first pass of the plow. If non-geotechnical issues resulted in the performance issue and it is determined a second pass of the plow may be effective, then a second plow pass may be considered.

Algonquin will notify the interagency group upon its determination of the need to perform a second pass of the plow (prior to commencing the second pass). The notification will update the progress of the first pass of the plow, describe the reasons for the need for the second pass, and update the construction schedule. If requested by the permit-issuing agency, Algonquin will meet with the interagency group within two business-days after delivery of the notice to discuss the circumstances. Algonquin may initiate the second pass of the plow on the third business day after the delivery of the notice unless within those two business days it and the permit-issuing agency determine otherwise.

#### 4.2.1.2 The Use of Jetting to Lower the Pipeline Following Plowing

At discrete sites along the pipeline route, including the HubLine hot tap, the Pipeline Lateral end, the in-line sidetap assemblies, and the crossing of the Hibernia cable, Algonquin is planning to excavate sediment using a jetting tool. Other than at these planned locations, there may be instances where the first pass of the plow does not lower the pipeline to the target depth due to the presence of glacial till or other compact sediments. As indicated in Table 4-1, in such site-specific locations that measure less than 1,500 feet in length, in lieu of conducting a second pass of the plow or placing rock cover over the pipeline, Algonquin will consider the deployment of a jet sled or diver-assisted jetting tool to attempt to lower the pipeline. The specific scenarios that may trigger this determination are outlined in Table 4-1.

As discussed in Section 4.1, Algonquin will be evaluating the performance of the first pass of the plow and, shortly after the completion of plowing in each segment, will know the specific locations where the pipeline has not been lowered to the target burial depth. Depending on the survey information obtained, Algonquin may collect additional geotechnical data to assist in determining why the plow was not completely successful and to evaluate whether jetting will be effective.

After its evaluation of the condition at a particular area, Algonquin may determine to use diver hand jetting (areas less than 250' long) or the jet sled to lower the pipeline to the target depth. Algonquin may proceed with the jetting operations except where the material that requires jetting consists of marine clay. In that instance, Algonquin will notify the interagency group of the location and will provide the supporting information collected by Algonquin prior to initiating jetting. If requested by the permit-issuing agency, Algonquin will meet with the interagency group within two business days after delivery of the notice to discuss the circumstances. Algonquin may proceed with the jetting operation on the third business day after the delivery of the notice unless within those two business days it and the permit-issuing agency determine instead to use placement of rock or concrete mats to achieve the required cover.

Table 4-1. Scenario A – General Condition: Insufficient Lowering of the Pipe in Plowable Sediments and No Geotechnical Obstruction(s)

Cause	Evaluate Impact	Contingency Measures/Actions	Notification by Algonquin if Contingency Measure/Action Ineffective
An isolated segment of the pipeline, less than 250 feet in length has not been lowered adequately.	Use ROV to video the segment.  Collect grab sample of the sediment in the trench. Couple recorded plow data for segment with ROV video and grab sample to assess cause of condition.	Diver hand jets segment to lower the pipe.  If sediment assessment reveals sediment too consolidated for hand jetting, deploy the jet sled.  If the pipeline is within 6 inches of proper depth, jetting is the most effective corrective measure. Hand jetting is the first choice.  If the pipeline cannot be lowered, see Scenario B	Notify DEP contact within 48 hours of implementing the contingency measure.
An isolated segment of the pipeline, between 250 and 1,500 feet that has not been lowered adequately – between flush cover and 20" below grade.	Use ROV to video the segment.  Collect grab sample of the sediment in the trench. Couple recorded plow data for segment with ROV video and grab sample to assess cause of condition.	Coordinate diving operations to deploy jet sled  If the spoil remains following jetting, utilize typical backfill plowing to cover the pipeline. If spoil is depleted, see Scenario B.  If the pipeline cannot be lowered, see Scenario B.	Notify DEP contact within 48 hours of implementing the contingency measure.
An isolated segment of the pipeline, between 250 and 1,500 feet that has not been lowered adequately – flush cover or less cover.	Based on existing sediment information, this condition is highly unlikely unless an obstruction exists.  Evaluate plow operational data to make assessment of the problem/condition.	Perform additional assessment of sediment with divers and ROV video in attempt to identify cause of condition.  Determine if deployment of a jet sled, a second plow pass or mat/rock cover is required.  If the spoil remains following jetting, utilize typical backfill plowing to cover the pipeline. If spoil is depleted or pipe cannot be lowered, utilize divers to place sandbags, rocks or concrete mats to achieve minimum cover requirement.	Notify DEP contact within 48 hours of implementing the contingency measure.
An isolated segment of the pipeline greater than 1,500 feet in length that has not been lowered adequately – between flush cover and 20" below grade.	Use ROV to video the segment.  Collect grab sample of the sediment in the trench. Couple recorded plow data for segment with ROV video and grab sample to assess cause of condition.	Adjust construction plan and schedule to accommodate 2nd pass of the plow.  Perform 2nd plow pass Assess operational feedback during 2nd pass and post plow survey to ensure the TOP has been lowered adequately.  If the pipeline still remains not lowered, see Scenario B.	Notify DEP contact within 48 hours of implementing the contingency measure.
Multiple segments of any length that	Use ROV to video the segment.	Adjust construction plan and schedule to accommodate 2nd pass	Notify DEP contact within 48 hours of implementing the

Table 4-1. Scenario A – General Condition: Insufficient Lowering of the Pipe in Plowable Sediments and No Geotechnical Obstruction(s)

Cause	Evaluate Impact	Contingency Measures/Actions	Notification by Algonquin if Contingency Measure/Action Ineffective
total 1,500 feet or more in any mile of distance that has not been lowered adequately – between flush cover and 20" below grade.	Collect grab sample of the sediment in the trench. Consider recorded plow data for segment with ROV video and grab sample to assess cause of condition.	of the plow.  Perform 2nd plow pass Assess operational feedback during 2nd pass and post plow survey to ensure the TOP has been lowered adequately.	contingency measure.

Table 4-2. Scenario B – General Condition: Insufficient Lowering of the Pipe Due To A Geotechnical Obstruction(s)<sup>1</sup>

Cause	Evaluate Impact	Contingency Measures/Actions	Notification by Algonquin Upon Completion of Contingency Measure/Action
An isolated segment of the pipeline, less than 2,500 feet in length that cannot be lowered a minimum of 18" below the seabed.	Identify location of condition and adjust Diving Scope to include corrective measures.  Determine amount of protective cover required – single mat layer or multiple mat layers.	Diver installation of mats along location of condition and through 50% of the transition until the TOP elevation meets permit condition. Ensure 18" of cover is achieved by the combination of sediment and the placement of concrete mats.	Notify DEP contact within 48 hours of implementing the contingency measure.
An isolated segment of the pipeline, greater than 2,500 feet in length that cannot be lowered a minimum of 18" below the seabed.	Identify location of condition and adjust Diving Scope to include corrective measures.  Implement procurement of rock, additional equipment (scows, tugs, dockside support) and preparation of contractor equipment for tremie operation.	Install rock via tremie operation along the identified segment. Ensure 18" of cover is achieved by the placement of rock.	Notify DEP contact within 48 hours of implementing the contingency measure.
Multiple segments that accumulate to a length exceeding 2,500 feet and do not meet the lowering requirements.	Implement procurement of rock, additional equipment (scows, tugs, dockside support) and preparation of contractor equipment for tremie operation.	Install rock via tremie operation along the identified segment. Ensure 18" of cover is achieved by the placement of rock.	Notify DEP contact within 48 hours of implementing the contingency measure.

#### 4.2.1.3 Remedial Material Placement

In the event that a second pass of the plow would not be effective remedial material placement becomes the primary option to address the insufficient lowering. An example would be in the case where a large boulder was encountered, the methods available include the use of divers to place sand/cement bags over the area, the use of divers or an ROV to place concrete mats over the area, or the use of a vessel equipped

<sup>1</sup> This condition assumes the plowing operation stalled due to obstruction impact and that the obstruction has been confirmed by divers, ROV, or plow sonar equipment.

with a tremie tube to place rock over the area. The number and length of segments that require remedial cover would be considered before a final determination is made for the appropriate remediation method. It is possible a combination of these methods may be used. These measures and their applicability are discussed below:

- ◆ If the length of the pipeline segment requiring remedial cover is relatively short, diver-placement of sand/cement bags will be the most efficient and timely method for providing the minimum 1.5 feet of cover over the pipeline. Sand/cement bags are readily available and can be placed by one or more of the diving or ROV-equipped vessels.
- ◆ The use of concrete mats is also likely to be selected when a shorter length of pipeline has not been lowered sufficiently. The length of segment over which concrete mat placement is optimized is dependent upon the location along the route and the subsequent water depth. When compared to sand/cement bag or rock placement, habitat conversion using concrete mats is more controlled and minimized. Concrete mats are 20 feet in length and 8 feet in width. For discrete isolated segments, placement of concrete mats provide the best seafloor profile because the mats have a low, articulated profile that allows them to flex and lay flat over the pipeline. The installation of concrete mats at discrete locations limits the amount of time required to remedy the issue. Over time, the concrete mats or a portion of the mats will also silt in and thereby provide soft sediments as well as hard substrate.
- ◆ For longer segments of the pipeline where the minimum depth of lowering has not been achieved, placement of rock via tremie tube is an option. The efficiency of placing larger quantities of material is the main attribute of a tremie placement system. However, its cost, availability and weather sensitivity are all greater than placement of mats or sand/cement bags.

#### 4.3 Pipeline Cover

The backfill plow (“BFP”) operations will follow the PLP operations. Displaced spoil will be returned to the pipe trench to the extent possible considering the efficiency of the BFP such that a minimum of 1.5 feet of sediment covers the pipeline. The BFP is a guided tool designed with reversed mold boards that pull the displaced spoil back into the trench. It is pulled along the pipeline by a towing vessel in a manner similar to the PLP. The backfilling operation will involve one pass with the BFP.

The operation of the backfill plow is less complex because the apparatus does not attach to nor interface with the pipeline during the backfill operation. The BFP also utilizes forward and aft facing sonar. The forward facing sonar is used to guide the BFP along the trench. The rear facing sonar will be the first indication of the finished contours over the pipeline.

Plow transitions associated with the two utility crossings will be filled with diver-placed sandbags and covered with concrete mats. Areas outside of the mats will be backfilled with diver-placed sandbags or with sand placed with a tremie vessel. Plow transitions associated with the tie-ins at the hot tap and the side tap assembly at the ends of the Pipeline Lateral will be jetted to depth using a diver assisted jet sled and covered with sand bags and concrete mats, where required by the design drawings.

The duration between plowing and backfill plowing is relatively short (less than 30 days), assuming the single pass of the PLP is successful. The sediment transport study conducted by Algonquin indicates that measurable erosion of the spoil mounds is unlikely, even in significant storm events and especially as a result of normal tidal influences. It is reasonable to anticipate that spoil will remain in place along the entire pipeline and will be available for backfill operations.

Algonquin has evaluated several scenarios involving insufficient cover over the pipeline upon completion of the backfill plowing process. The scenarios and the likely action taken to address each are shown in the Table 4-3 below.

Table 4-3. Scenario C – Pipeline Has Been Lowered Adequately But Does Not Have Required Cover

Cause	Evaluate Impact	Contingency Measures/Actions	Notification by Algonquin Upon Completion of Contingency Measure/Action
An isolated segment of the pipeline, less than 2,500 feet has less than 18 inches of cover, excluding plow transitions.	Identify position of segment. Assess volume of material required to meet permit cover condition.	Procure sand and implement logistics for transport, creation and deployment of biodegradable sand bags.  Modify diving schedule to include sand bag placement.  Perform post placement multibeam survey to ensure adequate cover.	Notify DEP contact within 48 hours of implementing the contingency measure.
Multiple segments that accumulate to a length exceeding 2,500 feet that do not meet the cover requirements.	Identify position of segment. Assess volume of material required to meet permit cover condition.	If the combination of segments exceeds 2,500 feet in total length, implement procurement of sand, additional equipment (scows, tugs, dockside support) and preparation of contractor equipment for tremie operation to place sand. Ensure 18" of cover is achieved by the placement sand.	Notify DEP contact within 48 hours of implementing the contingency measure.
Backfill Plow deviated from the alignment for an isolated segment for less than 250 feet such that the cover requirement was not achieved and the spoil remains adjacent to the trench	Use ROV survey data to identify position of segment.	Confirm spoil available. Deploy divers to hand jet spoil back into trench. Resurvey to ensure cover achieved.	Notify DEP contact within 48 hours of implementing the contingency measure.
Backfill Plow deviated from the alignment for an isolated segment greater than 250 feet such that the cover requirement was not achieved and the spoil remains adjacent to the trench	Use ROV survey data to identify position of segment.  Confirm spoil available.	Perform second pass of the backfill plow. Resurvey to ensure cover achieved.	Notify DEP contact within 48 hours of implementing the contingency measure.

#### 4.4 Restoration

Upon completion of the single pass of the backfill plow to restore bottom contours, a bottom survey will be performed when all operations are complete to ensure that the seafloor elevations along the pipeline route have been sufficiently restored. The sea floor in the trench area may remain somewhat irregular after backfilling, with noticeable undulations above and below the original grade. Limitations in the ability of existing offshore pipeline construction equipment to exactly match contours, particularly in water over 200 feet deep, limit the ability to match precisely the pre-construction contours. However, the HubLine post-construction surveys show that in areas where only plowing and backfill plowing were

used, the contours more closely match pre-existing conditions than areas that also involved dredging, jetting, or blasting.

Algonquin has evaluated several restoration scenarios that may occur after the backfill plow pass is completed. These scenarios and the likely actions taken to address each are shown in Table 4-4 below.

Table 4-4. Scenario D – Pipeline Has Been Lowered Adequately and Has Required Cover

Cause	Evaluate Impact	Contingency Measures/Actions	Notification by Algonquin
Spoil mounds adjacent to trench <sup>1</sup>	Determine profile in relation to adjacent seafloor elevation	None	Notification to DEP after as-built survey and data processing.
No spoil mounds left but minor depression in the trench	Determine profile in relation to adjacent seafloor elevation	None	Notification to DEP after as-built survey and data processing.

<sup>1</sup>This condition would occur as a result of minor deviations between the BFP towed alignment and the pipeline alignment. The trench would have been adequately backfilled but some spoil remains on either side of the trench. Additional measures, such as a 2<sup>nd</sup> pass of the BFP could displace spoil over the trench, would require the BFP to be towed off alignment and may cause the skids to displace less consolidated backfill within the trench.

#### 4.5 Reporting Construction Progress

One key aspect of the contingency plan discussion has been the commitment by Algonquin to provide updates to the DEP on a regular basis. To facilitate this notification process, Algonquin anticipates that the DEP will designate a single point contact person. In addition to the reporting timeframes identified in the tables above for the various contingency measures, as part of the construction management process, Algonquin will be preparing a weekly progress report (see example in Appendix B) that discusses the status of construction. The weekly report will contain a summary of the construction progress on a mile by mile basis and will include the status of the overall construction schedule. Algonquin will provide a copy of that report to the DEP contact person as well as the inter-agency team that has been actively involved in the permitting process for the Pipeline Lateral including but not limited to the following individuals:

- ◆ Lealdon Langley, DEP
- ◆ Alex Strycky, DEP
- ◆ Ken Chin, DEP
- ◆ Vin Malkoski, MDMF
- ◆ Phil Colarruso, EPA
- ◆ Chris Boelke, NMFS
- ◆ Kristen Koyama, NMFS
- ◆ Truman Henson, CZM

In preliminary discussions with DEP personnel, the commitment to hold regularly scheduled bi-weekly construction progress review meetings to keep the above agencies abreast of real-time construction progress and plans was contemplated. However, meeting on a bi-weekly basis may not be practical given inherent schedule conflicts and other personnel commitments. That said, Algonquin will attend meetings as requested or deemed appropriate to keep agency personnel informed of the construction progress. Algonquin believes that the weekly reporting system will provide the necessary construction status updates to the agencies and may eliminate the need to meet on a regular basis.



For the purposes of this Plan, Algonquin does believe that there is a need to meet with the agency working group at defined times during the construction process.

- ◆ After completing the plow pass for the first mile of the Pipeline Lateral: meet upon completion of the processing of the survey data for that segment.
- ◆ Near the end of the plowing operations; and prior to commencing with the backfill operations: schedule meeting at a time certain that will not result in any vessel delays.
- ◆ Prior to initiating a second pass of the plow: schedule meeting at a time certain that will not result in any vessel delays.

In the event that a construction issue arises that falls outside of those discussed in this Plan that will require agency input and/or approval, Algonquin will notify the interagency group and will meet with the interagency group within two business days after delivery of the notice to discuss the circumstances.

February 12, 2007

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## **APPENDIX A**

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### *Pipeline Lateral Construction Procedures by Month*

NOTE: This Appendix (7 plans) is on file with DEP.

# NORTHEAST GATEWAY ENERGY BRIDGE DEEPWATER PORT PROJECT AND PIPELINE LATERAL

## Marine Communications Plan *Construction Phase*

*Prepared by:*



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And



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1330 Lake Robbins Drive, Suite 270  
The Woodlands, TX 77380

February 15, 2007

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## 1.0 PROJECT FACILITY DESCRIPTION

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Algonquin Gas Transmission, LLC (“Algonquin”) applied in June 2005 to the Federal Energy Regulatory Commission (“FERC”) for a Certificate of Public Convenience and Necessity under Section 7 of the Natural Gas Act (15 U.S.C. 717, et seq.). Algonquin requested authorization from the FERC to construct, own and operate an approximately 16.1-mile long, 24-inch diameter natural gas pipeline that will interconnect the proposed Northeast Gateway Energy Bridge, L.L.C. (“Northeast Gateway”) offshore deepwater port (“Northeast Port”) with Algonquin’s existing offshore natural gas pipeline system (“HubLine”)<sup>1</sup> in Massachusetts Bay (see Figure 1-1). Algonquin’s proposed pipeline lateral (the “Pipeline Lateral”) will facilitate the delivery of regasified liquefied natural gas (“LNG”) from the Northeast Port to onshore markets in New England.

The Pipeline Lateral route will travel offshore in a northeasterly, then southeasterly direction through the municipal corporate boundaries of Marblehead, Beverly, Salem, and Manchester-by-the-Sea. In Marblehead, the pipeline will connect to the existing HubLine. Specifically, the Pipeline Lateral originates at the existing HubLine (milepost (“MP”) 0.0) in Marblehead waters and terminates in federal waters at the proposed Northeast Port (MP 16.1). In addition, the pipeline facilities for the Pipeline Lateral will be designed, constructed, operated, and maintained in accordance with the U.S. Department of Transportation (“USDOT”) regulations in 49 CFR Part 192, “Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards” and 18 CFR Part 380.15, “Siting and Maintenance Requirements.”

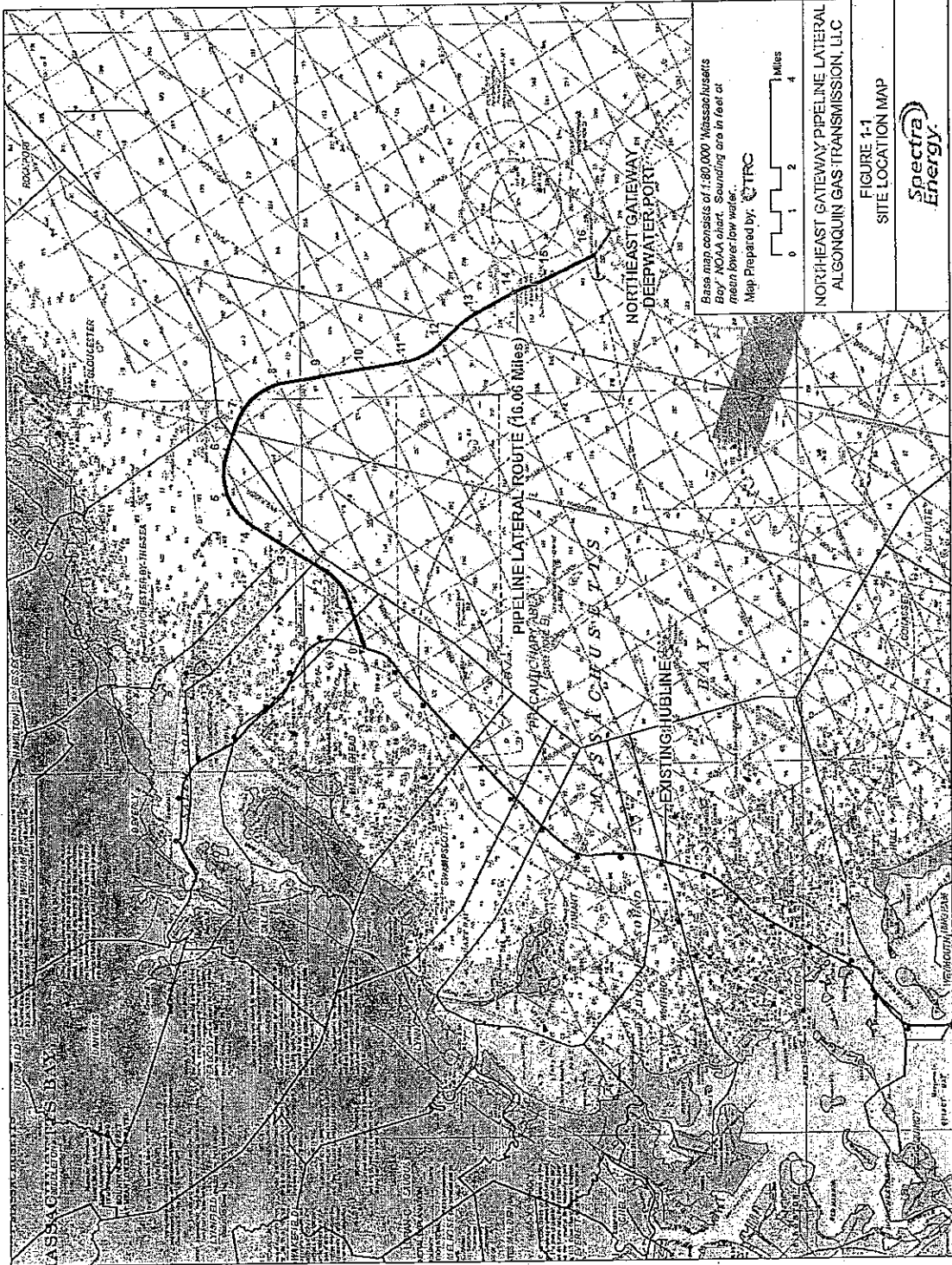
The Northeast Port proposed by Northeast Gateway is subject to review and approval by the Secretary of the USDOT, who has delegated his responsibilities to the U.S. Maritime Administration (“MARAD”), and to the United States Coast Guard (“USCG”) within the Department of Homeland Security. Northeast Gateway submitted its application to MARAD and the USCG in June 2005. The USCG is the lead federal agency for review under the National Environmental Policy Act (“NEPA”) and is responsible for matters related to the review of security, navigation safety, engineering, and facility inspections. In addition, both the Northeast Port and the Pipeline Lateral have undergone a single NEPA review conducted by the USCG. FERC participated as a cooperating agency in the NEPA review conducted by the USCG.

Northeast Gateway’s deepwater port will be located in federal waters in Massachusetts Bay, approximately 13 miles south-southeast of Gloucester. The deepwater port will consist of two subsea submerged turret loading buoys, flexible risers, manifolds, and subsea flow lines to the 24-inch pipeline. Energy Bridge Regasification Vessels (“EBRVs”), each capable of transporting approximately 4.9 million cubic feet of LNG, will deliver LNG to the port and vaporize the LNG to natural gas, using a ship-board closed loop process.

The Pipeline Lateral route and the Northeast Port location were selected to minimize the impacts to underwater resource areas, such as hard bottom substrate, cultural resource sites, and areas considered environmentally sensitive. This was accomplished as a result of extensive geophysical and bathymetric surveys being conducted along a broad general offshore corridor. By utilizing the latest technological advancements (sidescan sonar, sub-bottom profile, vibracoring and magnetometer), Algonquin and Northeast Gateway were able to select a proposed centerline corridor, approximately 200-300 feet wide, and a deepwater port location that avoid these underwater areas to the greatest extent practicable.

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<sup>1</sup> HubLine is an existing 30-inch diameter interstate natural gas pipeline that was constructed by Algonquin in 2002/2003. HubLine starts at its connection with the Maritimes & Northeast Pipeline, L.L.C. Phase III Pipeline in Salem Harbor and runs offshore to the south to the connection with the Algonquin “I” System Pipeline in Weymouth.



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FIGURE 1-1  
SITE LOCATION MAP

Northeast Gateway is the proponent and applicant for the proposed Northeast Port and Algonquin is the proponent and applicant for the proposed Pipeline Lateral. Both Northeast Gateway and Algonquin are proceeding forward to obtain the necessary permits, approvals and related authorizations in order to commence construction by April 2007.

The Pipeline Lateral will be installed on the seafloor utilizing an Offshore Lay Barge ("OLB"). This vessel is approximately 350 feet in length, 100 feet in width, and 25 feet in depth, and will draft 12 to 15 feet of water. This vessel utilizes between 8 and 12 anchors for mooring. The anchors fore and aft on these barges could be as much as 3,000-feet from the actual barge itself. This requires the use of 1 - 2 anchor-handling tugs to ensure that the installation rate of approximately one mile per 24-hour day is maintained. This vessel will also require the support of a pipe haul barge and tug to provide the materials and will operate 24-hours per day.

Potable water, food, personnel, and small supplies are transported to the OLB with a 110-foot crew boat. Once the pipeline is laid on bottom, it is lowered to the appropriate depth of cover primarily by a plowing operation or, in a limited number of areas, a plowing and jetting operation. The lowering operations utilize large anchor moored barges, similar to the OLB, to complete the operation. Once completed, the pipeline trench is backfilled with the available spoil. This is also accomplished with a large anchor moored vessel. Once the pipeline has been installed, a Diver Support Vessel ("DSV") will set-up on a specific location generally utilizing Dynamic Positioning ("DP") and will deploy divers to perform sub-sea tie-in work.

The Northeast Port will be installed in four phases that will be closely coordinated with the installation activities described above for the Pipeline Lateral. In Phase 1, sixteen (16) suction anchors with lower chain segments attached will be over boarded and installed in their planned locations using the DP Heavy Lift Transport/Installation Vessel M/V Jumbo Javelin. In Phase 2, the anchors with chain segments will be pre-tensioned to 150 tons by the UT-722 DP Anchor Handling Tug from Atlantic Towing. In Phase 3, the M/V Jumbo Javelin will sequentially overboard the two STL Buoys with upper wire segments installed. The buoys will then be finally positioned within the mooring spread and connected to the anchor chains using the UT-722. Phase 4 will consist of the installation of the flexible risers and control umbilicals utilizing a DP Dive Support Vessel to place the risers and umbilicals and deploy divers to perform final sub-sea tie-in work and implement test procedures. Upon completion of the installation work scope for the Northeast Port, Buoys A and B will be commissioned by being retrieved and tested by one of Excelebrate Energy's EBRVs.

## 2.0 COMMUNICATION PROCEDURES

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This Communications Plan has been developed to ensure that interested parties, including the USCG, Port Operators, lobstermen and other commercial fishermen, commercial maritime interests, the local harbor masters and the boating public, are aware of how Algonquin and Northeast Gateway plan to communicate the daily location of offshore activities related to the construction of the Northeast Gateway Project and to provide direction as to how interested parties can obtain additional information.

The location of each vessel during construction will be transmitted by the Contractor to the USCG Sector Boston ("Sector") Waterways Management Division on a daily basis by telephone (617-223-5750), e-mail ([Paul.G.English@uscg.mil](mailto:Paul.G.English@uscg.mil)) and VHF radio. This will be completed by the assigned person on watch designated by the master or person in charge, as required. This information will include the area of planned construction activity (by latitude and longitude) and the expected duration for each activity and for each construction spread, if there is more than one group of activities taking place simultaneously.

The information related to construction vessel locations will be made available through the means described in this Plan for public notice on a daily basis. A Project Toll-Free telephone number (1-888-XXX-XXXX) is set up to provide project information for interested parties and to log minor variations or inquiries that may arise during the day-to-day events related to construction. In addition, an Internet website ([www.negpipeline.lateral.com](http://www.negpipeline.lateral.com)), a daily USCG Broadcast Notice to Mariners ("BNTM"), and other methods will be employed to ensure proper and adequate communications.

Measures that will be included to ensure a safe boating environment include:

- ◆ All construction vessels will have lights and shapes displayed, as required by USCG regulations, at all times;
- ◆ Hi-flyers will be used to mark work areas and to mark the overall pipeline construction corridor; and
- ◆ Support vessels accompanying the major work vessels will monitor the area for other vessel traffic and advise, via radio or other devices, of ongoing construction activity.



### 3.0 NOTIFICATIONS

The installation of Algonquin's Pipeline Lateral and Northeast Gateway's deepwater port will require numerous marine construction equipment and support vessels. The first and foremost reliable source of Project construction information will be a daily Safety Marine Information Broadcast. The USCG, through a daily update on vessel location, will conduct this notification on Marine channel 16 (156.8 MHz). Additional broadcasts by the Project on other channels will advise commercial fishermen, anglers, recreational boaters and other commercial interests of ongoing construction activities.

The Sector Waterways Management Division will also do a weekly Safety Marine Information Broadcast to inform the public of working vessel locations and will publish information in the weekly Local Notice to Mariners (Mary Swanson: 617-223-8356; [Mary.F.Swanson@uscg.mil](mailto:Mary.F.Swanson@uscg.mil)). The Project will also continue to inform the public on the status of the project at the monthly Port Operators Group ("POG") meetings.

#### COAST GUARD INFORMATION

Office	Telephone Fax and Email	Radio Frequency	Address
Sector Boston Waterways Management Division – Daily Position and Ops Reports	Vox: 617-223-5456 Fax: 617-223-3032 Email: <a href="mailto:Paul.G.English@uscg.mil">Paul.G.English@uscg.mil</a>	N/A	427 Commercial Street Boston, MA 02109
Sector Boston Operations/Communications Center – Emergency Communications between Surface Units and USCG	Vox: 617-223-5750 Fax: 617-223-3219 Email: <a href="mailto:D01-smb-secbossc@uscg.mil">D01-smb-secbossc@uscg.mil</a>	Hailing: VHF-FM Ch 16 (156.8mhz)  Call sign: Coast Guard Sector Boston	427 Commercial Street Boston, MA 02109

The Project website ([www.negpipelinelateral.com](http://www.negpipelinelateral.com)) will be updated daily to advise interested parties concerning the progress of pipeline construction for the Project. There is a general Project description and overview along with other pertinent Project information included on this site.

In addition to the BNTM, notification will be made by the Project to the Boston and Eastern Points Pilots (via daily fax) and the Harbormasters in Beverly, Salem, Marblehead and Manchester-by-the-Sea. The following tables list the latest Pilots and Harbormaster information from their respective websites.

	PILOTS	
Boston Pilots Dispatcher	Office: 617-569-4502 Fax 617-569-4502 <a href="mailto:bospilot@aol.com">bospilot@aol.com</a>	256 Marginal Street Building 11 East Boston
Eastern Points Pilots	Office: 978-948-3900 Fax: N/A <a href="mailto:easternpointo@aol.com">easternpointo@aol.com</a>	P.O. Box 705 Rowley, MA 01969

### HARBORMASTER INFORMATION

Harbormaster and Assistants	Telephone Fax and	Radio Frequency	Address
<b>City of Salem</b>			
Peter Gifford Rich Bonfiglio Elaine Cook George Gikas George Jeter Mike Lafrenier Steve Levesque	Off. - 978-741-0098  Fax - 978-741-5641  <a href="mailto:paifford@salem.com">paifford@salem.com</a>	VHF Hailing Channel - 16  VHF Working Channel - 12	51 Winter Island Road Salem, MA 01970
<b>City of Beverly</b>			
Daniel G. McPherson Rich Bonfiglio Elaine Cook George Gikas George Jeter Mike Lafrenier Steve Levesque	Off -978-921-6059  Fax - 978-921-8592  <a href="mailto:dmcpherson@beverlyma.gov">dmcpherson@beverlyma.gov</a>	VHF Hailing Channel - 16  VHF Working Channel- 12	P. O. Box 211 Beverly, MA 01915
<b>Town of Marblehead</b>			
Charles Dalferro Dan Roads Webb Russell	Off. 781-631-2386  Fax - 781-631-7888  <a href="mailto:cdalferro@marblehead.org">cdalferro@marblehead.org</a>	VHF Hailing Channel - 16  VHF Working Channel- 14	9 Ferry Lane Marblehead, MA 01945
<b>Town of Manchester-by-the-Sea</b>			
Ronald Ramos Peter Mains	Off. 978-526-7832  Fax - 978-526-2001	Emergency Channel 16 VHF	Town Hall 10 Central Street Manchester-by-the-Sea, MA 01944
<b>City of Gloucester</b>			
Jim Caulkett Jim (Jamie) Crawford Art Munroe Jim Parisi Larry Libert Jim Marshall	Off. 978-282-3012 Fax - 978-281-4188	VHF Hailing Channel - 16  VHF Working Channel - 12 & 14	19 Harbor Loop Gloucester, MA 01930

A daily notification of construction vessel location and work notice will be given by radio by the Project according to the notification table below. A 48-hour look-ahead will also be given for planning purposes. This look-ahead will be updated daily.

### INFORMATION

Location / Area	Notification	Channel Broadcast Operation	Notification timetable
Beverly -Salem Area	In addition to BNTM	Channel - 19	7:00 AM & 12 Noon Daily
Marblehead	In addition to BNTM	Channel - 80	7:00 AM & 12 Noon Daily

In addition to the Project notifications during construction to agencies and marine interests, the USCG will issue a daily notice to Law Enforcement agencies and port operators via email of the locations of Daily Vessel Movement.

Interested parties will receive copies of the Project's Marine Communications Plan. These agencies or organizations include but are not limited to the following stakeholders:

- ◆ State and federal agencies;
- ◆ Boston and Eastern Points Pilots - location of work;
- ◆ Massport - Progress Reports and coordination through Capt. Brad Wellock, Manager, Contracts & Regulatory Affairs 617-946-4435;
- ◆ Hibernia - utility crossing;
- ◆ Massachusetts Lobstermen's Association – location of work; and
- ◆ Northeast Seafood Coalition – location of work.

## 4.0 SCHEDULE

The general construction schedule developed for the Northeast Gateway Project is as follows:

Construction Activity	Approximate Schedule / Date
<b>Deepwater Port</b>	
Install Mooring System – Anchors and Chains	July – August 2007
Install Buoys	August – September 2007
Install Risers and Umbilicals	September-October 2007
Test and Commission	October-November 2007
<b>Pipeline Lateral</b>	
Pre Lay Survey	May 2007
Pipe Lay	June 2007
Pipe Lowering (Plowing and Plow/Jet)	July 2007
Backfill Operations (Backfill Plowing)	August 2007
Dive Support Work	May – November 2007
Port Installation	July – November 2007

Once the mobilization of equipment and resources commences, specific information regarding the vessel location, activity, movement, and duration will be provided as described in this Communications Plan.

# NORTHEAST GATEWAY ENERGY BRIDGE DEEPWATER PORT PROJECT AND PIPELINE LATERAL

## Marine Communications Plan *Construction Phase*

*Prepared by:*



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February 15, 2007

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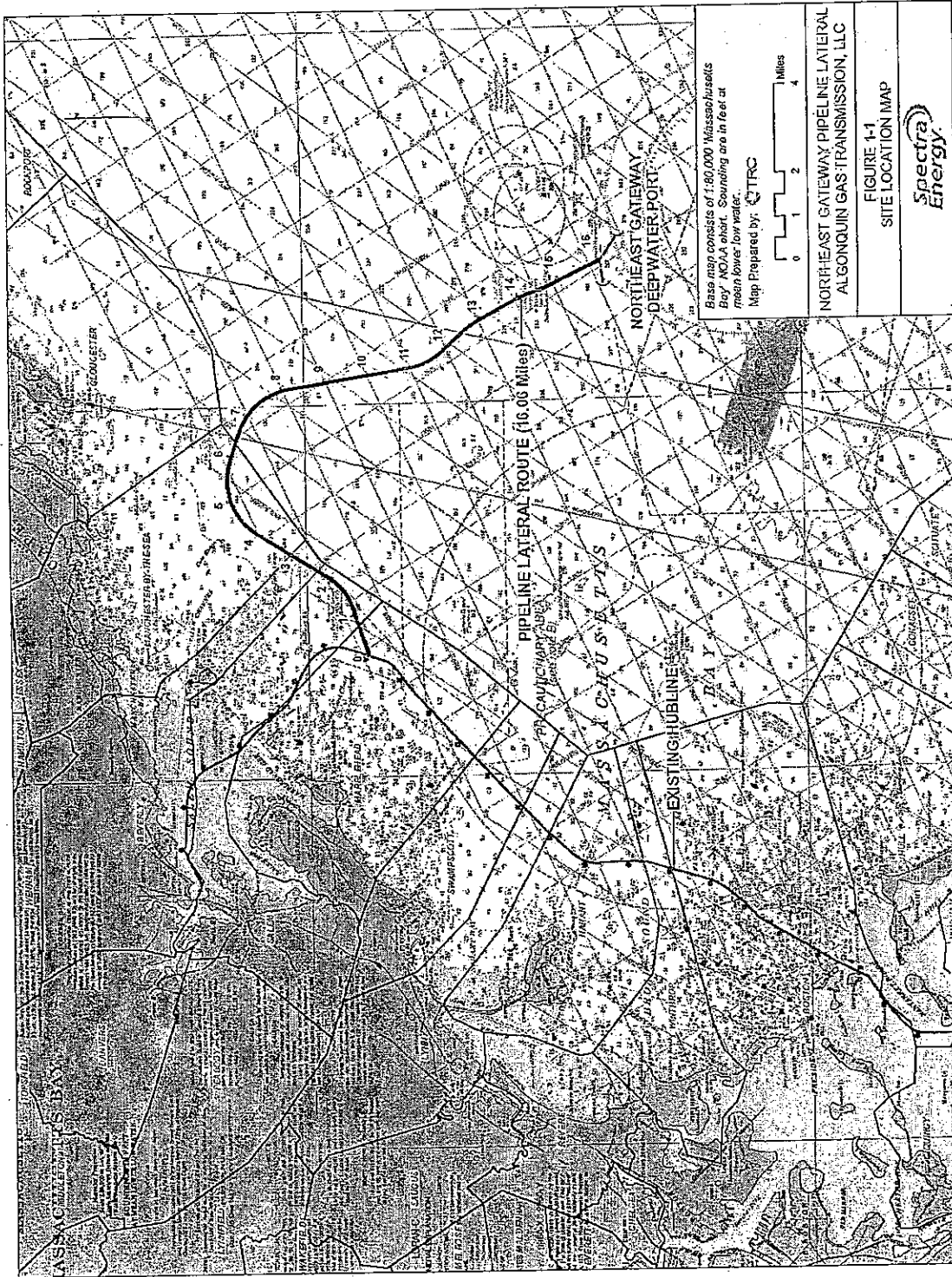
The Northeast Port proposed by Northeast Gateway is subject to review and approval by the Secretary of the USDOT, who has delegated his responsibilities to the U.S. Maritime Administration (“MARAD”), and to the United States Coast Guard (“USCG”) within the Department of Homeland Security. Northeast Gateway submitted its application to MARAD and the USCG in June 2005. The USCG is the lead federal agency for review under the National Environmental Policy Act (“NEPA”) and is responsible for matters related to the review of security, navigation safety, engineering, and facility inspections. In addition, both the Northeast Port and the Pipeline Lateral have undergone a single NEPA review conducted by the USCG. FERC participated as a cooperating agency in the NEPA review conducted by the USCG.

Northeast Gateway’s deepwater port will be located in federal waters in Massachusetts Bay, approximately 13 miles south-southeast of Gloucester. The deepwater port will consist of two subsea submerged turret loading buoys, flexible risers, manifolds, and subsea flow lines to the 24-inch pipeline. Energy Bridge Regasification Vessels (“EBRVs”), each capable of transporting approximately 4.9 million cubic feet of LNG, will deliver LNG to the port and vaporize the LNG to natural gas, using a ship-board closed loop process.

The Pipeline Lateral route and the Northeast Port location were selected to minimize the impacts to underwater resource areas, such as hard bottom substrate, cultural resource sites, and areas considered environmentally sensitive. This was accomplished as a result of extensive geophysical and bathymetric surveys being conducted along a broad general offshore corridor. By utilizing the latest technological advancements (sidescan sonar, sub-bottom profile, vibracoring and magnetometer), Algonquin and Northeast Gateway were able to select a proposed centerline corridor, approximately 200-300 feet wide, and a deepwater port location that avoid these underwater areas to the greatest extent practicable.

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<sup>1</sup> HubLine is an existing 30-inch diameter interstate natural gas pipeline that was constructed by Algonquin in 2002/2003. HubLine starts at its connection with the Maritimes & Northeast Pipeline, L.L.C. Phase III Pipeline in Salem Harbor and runs offshore to the south to the connection with the Algonquin “I” System Pipeline in Weymouth.





Northeast Gateway is the proponent and applicant for the proposed Northeast Port and Algonquin is the proponent and applicant for the proposed Pipeline Lateral. Both Northeast Gateway and Algonquin are proceeding forward to obtain the necessary permits, approvals and related authorizations in order to commence construction by April 2007.

The Pipeline Lateral will be installed on the seafloor utilizing an Offshore Lay Barge ("OLB"). This vessel is approximately 350 feet in length, 100 feet in width, and 25 feet in depth, and will draft 12 to 15 feet of water. This vessel utilizes between 8 and 12 anchors for mooring. The anchors fore and aft on these barges could be as much as 3,000-feet from the actual barge itself. This requires the use of 1 - 2 anchor-handling tugs to ensure that the installation rate of approximately one mile per 24-hour day is maintained. This vessel will also require the support of a pipe haul barge and tug to provide the materials and will operate 24-hours per day.

Potable water, food, personnel, and small supplies are transported to the OLB with a 110-foot crew boat. Once the pipeline is laid on bottom, it is lowered to the appropriate depth of cover primarily by a plowing operation or, in a limited number of areas, a plowing and jetting operation. The lowering operations utilize large anchor moored barges, similar to the OLB, to complete the operation. Once completed, the pipeline trench is backfilled with the available spoil. This is also accomplished with a large anchor moored vessel. Once the pipeline has been installed, a Diver Support Vessel ("DSV") will set-up on a specific location generally utilizing Dynamic Positioning ("DP") and will deploy divers to perform sub-sea tie-in work.

The Northeast Port will be installed in four phases that will be closely coordinated with the installation activities described above for the Pipeline Lateral. In Phase 1, sixteen (16) suction anchors with lower chain segments attached will be over boarded and installed in their planned locations using the DP Heavy Lift Transport/Installation Vessel M/V Jumbo Javelin. In Phase 2, the anchors with chain segments will be pre-tensioned to 150 tons by the UT-722 DP Anchor Handling Tug from Atlantic Towing. In Phase 3, the M/V Jumbo Javelin will sequentially overboard the two STL Buoys with upper wire segments installed. The buoys will then be finally positioned within the mooring spread and connected to the anchor chains using the UT-722. Phase 4 will consist of the installation of the flexible risers and control umbilicals utilizing a DP Dive Support Vessel to place the risers and umbilicals and deploy divers to perform final sub-sea tie-in work and implement test procedures. Upon completion of the installation work scope for the Northeast Port, Buoys A and B will be commissioned by being retrieved and tested by one of Excelerate Energy's EBRVs.

## 2.0 COMMUNICATION PROCEDURES

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This Communications Plan has been developed to ensure that interested parties, including the USCG, Port Operators, lobstermen and other commercial fishermen, commercial maritime interests, the local harbor masters and the boating public, are aware of how Algonquin and Northeast Gateway plan to communicate the daily location of offshore activities related to the construction of the Northeast Gateway Project and to provide direction as to how interested parties can obtain additional information.

The location of each vessel during construction will be transmitted by the Contractor to the USCG Sector Boston ("Sector") Waterways Management Division on a daily basis by telephone (617-223-5750), e-mail ([Paul.G.English@uscg.mil](mailto:Paul.G.English@uscg.mil)) and VHF radio. This will be completed by the assigned person on watch designated by the master or person in charge, as required. This information will include the area of planned construction activity (by latitude and longitude) and the expected duration for each activity and for each construction spread, if there is more than one group of activities taking place simultaneously.

The information related to construction vessel locations will be made available through the means described in this Plan for public notice on a daily basis. A Project Toll-Free telephone number (1-888-XXX-XXXX) is set up to provide project information for interested parties and to log minor variations or inquiries that may arise during the day-to-day events related to construction. In addition, an Internet website ([www.negpipelinelateral.com](http://www.negpipelinelateral.com)), a daily USCG Broadcast Notice to Mariners ("BNTM"), and other methods will be employed to ensure proper and adequate communications.

Measures that will be included to ensure a safe boating environment include:

- ◆ All construction vessels will have lights and shapes displayed, as required by USCG regulations, at all times;
- ◆ Hi-flyers will be used to mark work areas and to mark the overall pipeline construction corridor; and
- ◆ Support vessels accompanying the major work vessels will monitor the area for other vessel traffic and advise, via radio or other devices, of ongoing construction activity.

### 3.0 NOTIFICATIONS

The installation of Algonquin's Pipeline Lateral and Northeast Gateway's deepwater port will require numerous marine construction equipment and support vessels. The first and foremost reliable source of Project construction information will be a daily Safety Marine Information Broadcast. The USCG, through a daily update on vessel location, will conduct this notification on Marine channel 16 (156.8 MHz). Additional broadcasts by the Project on other channels will advise commercial fishermen, anglers, recreational boaters and other commercial interests of ongoing construction activities.

The Sector Waterways Management Division will also do a weekly Safety Marine Information Broadcast to inform the public of working vessel locations and will publish information in the weekly Local Notice to Mariners (Mary Swanson: 617-223-8356; [Mary.F.Swanson@uscg.mil](mailto:Mary.F.Swanson@uscg.mil)). The Project will also continue to inform the public on the status of the project at the monthly Port Operators Group ("POG") meetings.

#### COAST GUARD INFORMATION

Office	Telephone Fax and Email	Radio Frequency	Address
Sector Boston Waterways Management Division – Daily Position and Ops Reports	Vox: 617-223-5456 Fax: 617-223-3032 Email: <a href="mailto:Paul.G.English@uscg.mil">Paul.G.English@uscg.mil</a>	N/A	427 Commercial Street Boston, MA 02109
Sector Boston Operations/Communications Center – Emergency Communications between Surface Units and USCG	Vox: 617-223-5750 Fax: 617-223-3219 Email: <a href="mailto:D01-smb-secbossc@uscg.mil">D01-smb-secbossc@uscg.mil</a>	Hailing: VHF-FM Ch 16 (156.8mhz)  Call sign: Coast Guard Sector Boston	427 Commercial Street Boston, MA 02109

The Project website ([www.negpipelinelateral.com](http://www.negpipelinelateral.com)) will be updated daily to advise interested parties concerning the progress of pipeline construction for the Project. There is a general Project description and overview along with other pertinent Project information included on this site.

In addition to the BNTM, notification will be made by the Project to the Boston and Eastern Points Pilots (via daily fax) and the Harbormasters in Beverly, Salem, Marblehead and Manchester-by-the-Sea. The following tables list the latest Pilots and Harbormaster information from their respective websites.

PILOTS		
Boston Pilots Dispatcher	Office: 617-569-4502 Fax 617-569-4502 <a href="mailto:bospilot@aol.com">bospilot@aol.com</a>	256 Marginal Street Building 11 East Boston
Eastern Points Pilots	Office: 978-948-3900 Fax: N/A <a href="mailto:easternpointp@aol.com">easternpointp@aol.com</a>	P.O. Box 705 Rowley, MA 01969

### HARBORMASTER INFORMATION

Harbormaster and Assistants	Telephone Fax and	Radio Frequency	Address
<b>City of Salem</b>			
Peter Gifford Rich Bonfiglio Elaine Cook George Gikas George Jeter Mike Laffenier Steve Levesque	Off. - 978-741-0098  Fax - 978-741-5641  <a href="mailto:pcgifford@salem.com">pcgifford@salem.com</a>	VHF Hailing Channel - 16  VHF Working Channel - 12	51 Winter Island Road Salem, MA 01970
<b>City of Beverly</b>			
Daniel G. McPherson Rich Bonfiglio Elaine Cook George Gikas George Jeter Mike Lafrenier Steve Levesque	Off -978-921-6059  Fax - 978-921-8592  <a href="mailto:dmcpherson@beverlyma.gov">dmcpherson@beverlyma.gov</a>	VHF Hailing Channel - 16  VHF Working Channel- 12	P. O. Box 211 Beverly, MA 01915
<b>Town of Marblehead</b>			
Charles Dalferro Dan Roads Webb Russell	Off. 781-631-2386  Fax - 781-631-7888  <a href="mailto:cdalferro@marblehead.org">cdalferro@marblehead.org</a>	VHF Hailing Channel - 16  VHF Working Channel- 14	9 Ferry Lane Marblehead, MA 01945
<b>Town of Manchester-by-the-Sea</b>			
Ronald Ramos Peter Mains	Off. 978-526-7832  Fax - 978-526-2001	Emergency Channel 16 VHF	Town Hall 10 Central Street Manchester-by-the-Sea, MA 01944
<b>City of Gloucester</b>			
Jim Caulkett Jim (Jamie) Crawford Art Munroe Jim Parisi Larry Libert Jim Marshall	Off. 978-282-3012 Fax - 978-281-4188	VHF Hailing Channel - 16  VHF Working Channel - 12 & 14	19 Harbor Loop Gloucester, MA 01930

A daily notification of construction vessel location and work notice will be given by radio by the Project according to the notification table below. A 48-hour look-ahead will also be given for planning purposes. This look-ahead will be updated daily.

### INFORMATION

Location / Area	Notification	Channel Broadcast Operation	Notification timetable
Beverly - Salem Area	In addition to BNTM	Channel - 19	7:00 AM & 12 Noon Daily
Marblehead	In addition to BNTM	Channel - 80	7:00 AM & 12 Noon Daily

In addition to the Project notifications during construction to agencies and marine interests, the USCG will issue a daily notice to Law Enforcement agencies and port operators via email of the locations of Daily Vessel Movement.

Interested parties will receive copies of the Project's Marine Communications Plan. These agencies or organizations include but are not limited to the following stakeholders:

- ◆ State and federal agencies;
- ◆ Boston and Eastern Points Pilots - location of work;
- ◆ Massport - Progress Reports and coordination through Capt. Brad Wellock, Manager, Contracts & Regulatory Affairs 617-946-4435;
- ◆ Hibernia - utility crossing;
- ◆ Massachusetts Lobstermen's Association – location of work; and
- ◆ Northeast Seafood Coalition – location of work.

## 4.0 SCHEDULE

The general construction schedule developed for the Northeast Gateway Project is as follows:

Construction Activity	Approximate Schedule / Date
<b>Deepwater Port</b>	
Install Mooring System – Anchors and Chains	July – August 2007
Install Buoys	August – September 2007
Install Risers and Umbilicals	September-October 2007
Test and Commission	October-November 2007
<b>Pipeline Lateral</b>	
Pre Lay Survey	May 2007
Pipe Lay	June 2007
Pipe Lowering (Plowing and Plow/Jet)	July 2007
Backfill Operations (Backfill Plowing)	August 2007
Dive Support Work	May – November 2007
Port Installation	July – November 2007

Once the mobilization of equipment and resources commences, specific information regarding the vessel location, activity, movement, and duration will be provided as described in this Communications Plan.