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December 1, 2006

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

PROJECT NAME : Tennessee Gas Pipeline Company's Essex-Middlesex Project
PROJECT MUNICIPALITIES : Saugus, Lynnfield, Wakefield
PROJECT WATERSHEDS : Saugus River Watershed
EOEA NUMBER : 13798
PROJECT PROPONENT : Tennessee Gas Pipeline Company
DATE NOTICED IN MONITOR : October 25, 2006

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

Project Overview

According to the Draft Environmental Impact Report (DEIR), the project involves construction of 7.81 miles of 24-inch pipeline, which will parallel and pass within the existing New England Power Company electric transmission right-of-way in Saugus, Lynnfield, and Wakefield. The right-of-way (ROW) traverses Priority Habitat and Estimated Habitat, Reedy Meadow, a federally designated national natural landmark, and a small area of the Golden Hills ACEC in Saugus and Wakefield. Two permanent facilities also are proposed: a new pig receiver at the northern terminus in Lynnfield and a tie-in assembly with the DOMAC Line in Saugus will replace the pig receiver at the southern end. According to the ENF, the pipeline will alter 61 wetland areas including 1,104,183 square feet of bordering vegetated wetlands, 227,300 square feet of riverfront, 65,103 square feet of bordering land subject to flooding, 7,805 square feet of land under water, and 2,932 linear feet of bank.

State Permits and Jurisdiction

The project will require a 401 Water Quality Certificate and a Wetlands Permit under the Limited Project provisions from the Department of Environmental Protection (DEP); a Conservation and Management Permit from the Natural Heritage & Endangered Species Program (NHESP) of the Division of Fisheries & Wildlife; an 8(m) Permit from the Massachusetts Water Resources Authority (MWRA); an Orders of Conditions from the communities along the pipeline routes (and hence Superseding Order(s) from DEP if any local Orders were appealed); and Construction Permits from the Massachusetts Highway Department (MHD). The project will undergo review by the Massachusetts Energy Facilities Siting Board (EFSB). The project will also require the preparation of an Environmental Assessment (EA) pursuant to the requirements of the National Environmental Policy Act (NEPA) and review by the Federal Energy Regulatory Commission (FERC). MEPA jurisdiction extends to the broad subject matter of the state permits that the proponents are seeking. The project meets or exceeds mandatory EIR thresholds related to land alteration, wetlands alteration, and energy infrastructure. The project also meets review threshold related to rare species and Areas of Critical Environmental Concern (ACEC) resources.

Standard and Purpose of MEPA Review

Section 11.08(8)(b) of the MEPA Regulations requires me to find a Draft EIR adequate even if certain aspects of the project or issues require additional technical or descriptive analysis, so long as I find that “the draft EIR is generally responsive to the requirements of 301 CMR 11.07 and the Scope.” I have fully examined the record before me, including but not limited to the Scope issued; the Draft EIR filed in response; and the numerous comments entered into the record. While many of the comments have raised valid concerns, I find that the Draft EIR has addressed the issues within MEPA jurisdiction to a sufficient extent that the project may advance to the stage of a Final EIR. However, there are still outstanding issues within MEPA jurisdiction, as described below and in the comments received. The Final EIR should address these issues, and respond to the comments received that are within MEPA jurisdiction. The Final EIR should present additional narrative and technical analysis where necessary to respond to the substantive comments received.

Review of the DEIR

Alternatives

The unavoidable impacts to very large areas of vegetated wetlands, which are recognized as significant resource areas including the Golden Hills Area of Critical Environmental Concern (ACEC) in Saugus; areas of Reedy Meadow, a National Natural Landmark in Lynnfield; and ten vernal pools, rare and endangered species habitat, and several crossings of the Saugus River. This is an indication that the proponent did not give enough consideration to potential adverse impacts to these critical and significant resource areas selecting a preferred alternative.

According to the DEIR, the gas pipeline alignment will result in 11 stream crossings, including five perennial streams (Saugus River with two crossings, Crystal Pond Brook, and two unnamed streams); two pond crossings within Reedy Meadow. Additionally, the right-of-way passes through, or very close to, ten vernal pools. As a result of the project, 3.34 acres of forested bordering vegetated wetlands (BVWs) will be converted to scrub-shrub or emergent wetlands, and 0.73 acres will be converted from scrub wetlands to emergent wetlands.

The preferred alternative is adjacent to an existing NSTAR electrical transmission line easement, where the presence of forested wetlands is directly affected by that utility's maintenance practices including trimming of vegetation cutting. To cause additional impacts to forested wetlands species that are subject to cutting already would further deteriorate the mature forested habitat. The DEIR does not consider potential secondary impacts from conversion to emergent or scrub-shrub wetlands. The DEIR did not provide an estimate of the effect of fragmentation on forest habitat or wildlife habitat. The FEIR should evaluate and propose measures to avoid and minimize further impacts to forested resource areas and habitat that may be fragmented by changes in wetlands type. The proponent must apply for a Wetlands Permit under the limited project provisions for the construction of utilities under 310 CMR 10.53(3)(d) of the wetlands regulations. While some discretionary amount of change in wetlands type may be permissible, MassDEP will decide on allowable changes only after an evaluation of detailed alternatives, and a demonstration that in-kind mitigation is not achievable.

The proposed Tennessee Gas Pipeline would affect approximately 3.5 acres within the Breakheart Reservation, which is owned and managed by the Department of Conservation and Recreation (DCR). The proponent's request for a permanent easement through the Reservation along a nearly one-mile long proposed utility corridor would entail a disposition of state land protected by Article 97 of the Amendments to the Massachusetts Constitution. A disposition of land acquired for purposes described in Article 97 requires approval by a two-thirds vote of the Legislature, in addition to (and typically in advance of) the Division of Capital Asset Management (DCAM) disposition process described in G.L. ch.7, sec. 40, et seq. Under Article 97, it is presumed that the proponent must adopt an alternative that avoids impacts to constitutionally protected parkland, if available. I strongly advise the proponent to work closely with MassDEP, DCR (on Article 97 and ACEC issues), local Conservation Commissions, and the Saugus River Watershed Council, to develop alternatives that avoid significant resources to Article 97 land.

The FEIR must demonstrate compliance with the Commonwealth's Article 97 Land Disposition Policy, which has the stated goal of ensuring no net loss of Article 97 lands. In order to provide the information necessary for legislative and DCAM approval, the FEIR must include details of how the current proposal addresses the exceptional circumstance criteria, particularly discussing whether and how "no feasible alternative" exists to using public parkland. Although the DEIR justifies the proposed route as the least disruptive, it dismisses installation of additional compression on the existing 10/12-inch 270C-300 Maiden-Melrose Line as an alternative

because the size of the 10/12-inch line is too small. The FEIR must address why replacement of the existing line with one having larger capacity was not considered, and how that alternative would be more or less disruptive than the proposed route.

Transfer of the proposed easement, and the subsequent clearing, construction and maintenance activities within the proposed utility corridor, would have a permanent impact on Breakheart Reservation. The proposed gas pipeline easement will require construction activities in undisturbed portions of the Reservation adjacent to the National Grid/NEPCO corridor and in other locations. The FEIR must include additional information regarding the temporary and permanent impacts on Breakheart Reservation and its resources. The FEIR must also confirm and describe the terms under which National Grid/NEPCO will allow use of its easement.

To account for the permanent impacts of the pipeline, and if DCR agrees to transfer an easement, the proponent must provide compensation to DCR in the form of land within an appropriate geographic area that has a value equal to or greater than the current fair market value of the state reservation land that would be acquired or encumbered by the proponent, as valued in its current use or in its proposed use, whichever is greater. The FEIR should provide detail on this mitigation requirement.

The FEIR should include a clear presentation of current conditions and proposed post-construction conditions in all areas within Breakheart Reservation where trees would be cut during pipeline construction, along with an estimation of replacement value for the trees that will be cut. The proposed pipeline corridor may create an avenue of access for off-road vehicle (ORV) use, which is prohibited in Breakheart Reservation. The FEIR should present a detailed explanation of mitigation measures that would be taken to prevent ORV use.

Wetlands

The proponent must apply for a Wetlands Permit under the limited project provisions of the Wetlands Protection regulations for the construction of utilities, under 310 CMR 10.53(3)(d) of the wetlands regulations. While the limited project provisions allows the issuing authority to permit projects that do not otherwise meet all the Performance Standards for work in BVWs, subparagraph 3 of the Performance Standard for this type of limited project states, "(t)he surface vegetation and contours of the area shall be substantially restored." Similarly, mitigation at a ratio of 1 to 1 is required under the 401 Water Quality Certification Program. While some discretionary amount of change in wetlands type may be permissible, a decision allowing any change would only be made after an evaluation of detailed alternatives, and a demonstration that in-kind mitigation is not achievable. Because the proposed project does not appear to meet the limitations imposed by the limited project provisions for the construction of utilities, the proponent should consult with MassDEP regarding the potential requirement for a Variance.

The DEIR indicates that work within the wetlands would be accomplished within a 75-foot wide corridor, and that the affected areas would total 26.82 acres. The report also indicates that additional temporary work space (ATWS) would be required on both sides of the corridor, with dimensions of 25 feet by 100 feet. The areas of impact beyond the right-of-way may include extra work space areas, pipe storage yards, borrow and disposal areas, access roads, and other areas needed to comply with the plan and procedures, such as slope breakers, energy-dissipation devices, dewatering structures, and drain tile system repairs. The FEIR should explain whether the ATWS areas include all the work space necessary for the equipment, borrow, storage, and all plan and procedure activities to construct the pipeline. Additionally, the FEIR should provide a plan that depicts a section of the pipeline with the minimum and maximum corridor width for all activities within a wetland area. If the wetland impact totals do not include all areas in wetlands outside the 75-foot corridor that potentially would be used during pipeline construction, this should be addressed in the FEIR. And if equipment bridges will be used, the FEIR should provide details and locations of these temporary structures.

The DEIR also indicates that drain tiles may be installed within three years of construction. If drain tiles are proposed, the FEIR should explain their function and demonstrate the appropriateness of their use. The FEIR should include information on the width of the corridor that will be needed for maintenance activities; other future activities that will result in further impacts to wetlands; what activities require approval from the municipality's conservation commission; and how impacts will be mitigated.

This project requires an individual National Pollutant Discharge Elimination System (NPDES) construction permit from the U.S. EPA and a site specific Stormwater Prevention Pollution Plan (SWPPP). No discharges of dewatering effluent or other construction-period stormwater to vernal pools will be allowed. The FEIR should explain how excavated materials will be handled near vernal pools. Equipment storage and parking procedures should not occur near vernal pools and rare and endangered species habitat. The FEIR should report on these details, including the reporting methodology for sampling results from dewatering stations.

The FEIR should include a monitoring plan of wetlands restoration which should be implemented for three to five years with adjustments made to ensure long-term success of the restoration area. Best management practices (BMPs) should be used throughout the project, particularly for sedimentation control. I strongly encourage on-site monitoring by a wetlands specialist during construction of the pipeline.

The DEIR includes a plan to prevent the spread of invasive or exotic plant species in wetland areas. This effort should extend to upland areas as well, and the Vegetative Management Plan should be expanded in the FEIR to address this matter generally, rather than just in wetland resource areas. The FEIR should include a detailed plan for sustainable management of vegetation in altered areas, explaining measures to promote native plant growth, any proposed use of herbicides, and alternatives to any herbicide use.

ACEC

The proposed project is adjacent to the Golden Hills Area of Critical Environmental Concern (ACEC). The DEIR states that proposed work falls outside the Golden Hills ACEC. However, temporary work is proposed beyond the New England Power Company (NEPCO) easement and within the ACEC. The FEIR must confirm and quantify these temporary impacts as previously requested by DCR's ACEC Program.

Due to the proximity of the proposed work and the ACEC boundary as shown on the plans, ensuring that construction activities remain within the NEPCO easement may be difficult. In these areas, care should be taken to not extend work (permanent or temporary) beyond the easement and into the ACEC. Any proposed work within the ACEC should be quantified and described in the FEIR.

Rare Species

The proposed pipeline route crosses through several areas of known rare species habitat. Based on the review of the survey results and habitat assessments provided by the proponent, the Natural Heritage & Endangered Species Program (NHESP) has determined that this project, as currently proposed, will result in a prohibited "take" of the Four-toed Salamander, the Blue-spotted Salamander, the King Rail, and the American Bittern.

Projects resulting in a "take" of a state-listed species may only be permitted if they meet the performance standards for a Conservation and Management Permit under MESA (321 CMR 10.04(3)(b)). The proponent should continue its consultations with NHESP and the FEIR should discuss the development of a conservation and management plan that provides a long-term net benefit to the conservation of these state-listed species. In addition, the proponent must provide NHESP with the results of a Blue-spotted Salamander surveys which will be conducted in the spring. These survey results will allow NHESP to determine the significance of the project's impacts on the Blue-spotted Salamander and its habitats, and if a Conservation and Management Permit can be issued.

The entire proposed easement within Breakheart Reservation is identified by NHESP as Biomap Core Habitat. The rare species survey described in the DEIR was conducted in the spring of 2006 (prior to the proponent's field visit with DCR staff and subsequent decision to relocate the gas pipeline corridor). The currently proposed gas pipeline corridor through the state reservation, and any areas proposed for staging equipment and materials, must also be surveyed following the NHESP criteria. The FEIR must include this additional survey and an ecological assessment of the proposed gas pipeline corridor's impacts on more common but important habitats that will be affected by construction activities, such as wetlands, areas with ledge habitat, steep slopes that may be subject to erosion.

Fisheries

The Saugus River Watershed Council has been working in partnership with the Massachusetts Division of Marine Fisheries (DMF) for the past two years to conduct a fish monitoring project aimed at identifying the presence and size of rainbow smelt populations in the Saugus River. This monitoring indicates that there is a larger and more consistent smelt population utilizing the Saugus River for spawning.

The FEIR should evaluate riverbed conditions at the proposed Saugus River crossings for potential smelt spawning habitat. The crossings for the proposed project are located within the migratory path for both American eel and river herring, and smelt spawning habitat is located downstream of the proposed work area. As a result, DMF has established a time-of-year (TOY) restriction by which no work on the river crossings should take place between March 1 and June 15 of any year. DMF, in collaboration with the Saugus River Watershed Council and the Lynn Water and Sewer Commission, plans to install an eel ramp at the Lynn Water and Sewer Commission dam during spring 2007. This new ramp will expand fish passage opportunities for American eel to migrate upstream into Reedy Meadow and the upper reaches of the watershed; therefore, the TOY restriction should apply to work conducted at all river crossings.

After back-filling the trench, the installed pipeline will be hydrostatically tested with approximately 950,000 gallons of water. The FEIR should confirm that this proposed one-time water withdrawal will be carefully timed so that it doesn't adversely impact Saugus River flows during key fish spawning and migration periods.

Water Supply

The Massachusetts Water Resources Authority (MWRA) has determined that its Section 70 facility at the Lynn Fells Parkway is located along the proposed pipeline alignment. To avoid potential impacts to this facility, I advise the proponent to consult with MWRA. I also note that the MWRA prohibits the discharge of groundwater to the sanitary sewer. The FEIR should report on this consultancy.

Archaeological Resources

The proponent has consulted with the Massachusetts Historical Commission (MHC) and this consultation resulted in the development of a scope for a cultural resources survey, which is currently being conducted. I advise the proponent that the project should avoid, minimize, or mitigate any adverse effects to historic and archaeological resources that meet the Criteria of Eligibility for listing in the National Register of Historic Places. The FEIR should include a plan to mitigate any adverse effects that cannot be feasibly avoided.

Construction

The DEIR has not explained why horizontal directional drill techniques will be used in some areas, but not for river and stream crossings, and in sensitive habitats, such as mature forested wetlands along the alignment. Although the DEIR describes drill mud release and frac-outs (unpredictable fractures in subsurface geology), as potential sources of environmental impacts associated with directional drill techniques, the extent of the problem has not been explained and must be included in the FEIR. The FEIR should also address what percentage of projects that use directional drilling experience frac-outs; what soil types are more prone to frac-outs; and the potential that this problem would occur during the proposed project. The FEIR should also quantify the area of reduction in impact that would be achieved by using directional drilling.

It is also unclear from the DEIR whether the push-pull method of construction can maintain a 30-foot wide corridor for trench construction and temporary stockpiling of the trench spoils. The FEIR should indicate locations where these two techniques are proposed, and the reasoning behind the selection of a specific technique for a given area, to help demonstrate that wetland alteration would be minimized. The FEIR should quantify the area of reduction in impact that would be achieved by using the method with the narrowest corridor width in saturated wetland resource areas.

Response to Comments

The FEIR should contain substantive responses to the comments received for all comments within MEPA jurisdiction. The FEIR should present additional narrative and/or analysis where necessary to respond to the concerns raised.

Circulation

The FEIR should be circulated in compliance with Section 11.16 of the MEPA regulations and copies should also be sent to the list of "comments received" below and to local officials. A copy of the FEIR should be made available for public review at public libraries in each of the communities.

Summary of Mitigation Measures

The DEIR included a separate chapter on mitigation measures and a table summarizing mitigation measures that the proponent has committed to implementing.

Article 97 Land Disposition

The proponent is working closely with all entities from whom Article 97 Land Disposition is required to avoid and minimize temporary alterations to the greatest extent possible.

- The proponent is also working with municipalities to ensure conveyance of Article 97 easement rights in accordance with procedural requirements in EOEA's Article 97 Land Disposition Policy.
- The proponent will ensure no net loss of Article 97 lands in accordance with requirements of EOEA's Article 97 Land Disposition Policy.

Wetlands

- The proponent will clearly mark, with signs and/or highly visible flagging, wetland boundaries and buffers zones prior to ground disturbing activities so all construction personnel know where protected resources are located. Maintain signs or flagging until construction-related ground disturbing activities are complete.
- Following installation of the pipeline, the proponent will restore wetlands to their original configurations and contours.
- Inspect the ROW periodically during and after construction, and repairing any erosion control or restoration features as needed in a timely manner until permanent revegetation is successful.
- To ensure successful restoration of wetland areas, the proponent will monitor wetland revegetation annually until wetland revegetation is successful.

Rare Species

- The proponent will continue consultations with the Natural Heritage and Endangered Species Program (NHESP) to identify impact avoidance, minimization, and mitigation measures for state-listed species. Tennessee will implement mitigation, based on their recommendations, to ensure no adverse affects on protected species or their habitats. Mitigation measures being discussed include construction timing restrictions, pre-construction surveys to document presence or absence of protected species, additional avoidance and minimization, and compensation for temporary alteration of protected habitats.
- Following construction, the proponent will restore disturbed portions of protected habitats (e.g., significant habitats, wetlands, and vernal pools) as well as upland areas, to pre-construction condition, and portions of these areas will be protected from future development through purchase and maintenance of 30-foot-wide permanent right-of-way easements.
- The proponent will train all contractor personnel prior to allowing them onto the construction ROW, in the identification of protected species and protocols to be followed if they are found on the ROW. In most cases, construction personnel will be instructed to stop work, or ensure avoidance, and contact trained environmental professionals immediately.

Land Alteration

- To minimize construction-related impacts to soils, the proponent will construct the project and restore disturbed areas in accordance with their Best Management Practices

(BMPs) for pipeline construction contained in Appendix B.

- Soil erosion will be avoided and minimized to the greatest extent practicable through careful installation and maintenance of erosion and sedimentation controls (including temporary sediment barriers, temporary and permanent slope breakers, and trench breakers) before, during, and following construction until the ROW is successfully restored. Full-time Environmental Inspectors will be employed to ensure these erosion controls are properly installed and maintained during and after construction.
- Prior to the start of ground disturbing activities, all construction work limits will be clearly marked on site with stakes, highly visible flagging, and signs, to ensure no unnecessary alteration of soils.
- Following installation of the pipeline, the proponent will restore land contours to their pre-construction conditions to the greatest extent practicable, mulch and seed the ROW to stabilize soils after grading, and facilitate rapid revegetation.
- The proponent will maintain temporary sediment barriers across the entire construction ROW at the base of slopes greater than five percent where the base of the slope is less than 50 feet from a waterbody, wetland, or road crossing.
- Contamination of soils will be avoided and minimized by implementing Tennessee's Spill Prevention Control and Countermeasure Plan (SPCCP) contained in Appendix B. All construction personnel will be trained in the implementation of the SPCCP during mandatory environmental training prior to their entering the construction ROW.
- To preserve pre-construction soil profiles in wetlands, organic A horizons (top soils) will be segregated from B and C horizons (subsoils) while excavating the trench. Following installation of the pipe, subsoils will be placed in the trench first and rough graded. Then wetland topsoil will be replaced to maximize re-vegetation success.
- Stream flows will be maintained at all waterbody crossings (via flume or dam and pump) throughout construction.
- The proponent will prohibit parking of construction vehicles overnight and re-fueling of equipment within 100 feet of waterbodies.

Visual Resources

- The proponent has agreed to retain as many mature trees as possible between Whittier Avenue in Saugus and the proposed construction right of way. Prior to tree clearing the Project Environmental Inspector will walk the tree line with the contractor and flag trees as "save trees".
- The proponent is also committed to working with each individual landowner from whom land rights are required to restore properties following construction in accordance with the needs and requests of the landowners. State and town owned lands will be restored in accordance with requests of responsible state and municipal officials.

Traffic

- To minimize temporary traffic impacts by timing road open cuts to avoid hours of peak use, keeping at least one lane of affected roadways open at all times by placing metal

- plates across the open trench as necessary and/or providing alternate access routes.
- To minimize fugitive dust in residential areas from construction activities by watering dry soils as needed throughout the period of active construction.
 - To obtain all necessary permits for working within and adjacent to public and private roads and will apply required traffic mitigation recommendations resulting from these processes.

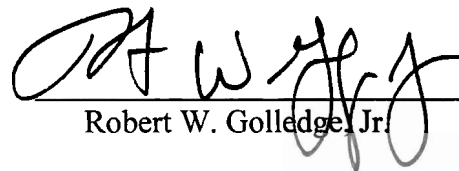
Archeological Resources

- To work closely with the Massachusetts Historical Commission (MHC) to ensure no unavoidable impacts to resources of historic or cultural significance.
- To following recommendations made by MHC to ensure compliance with Section 106 of the Historic Preservation Act and applicable Massachusetts regulations.
- To not proceed to construction without required authorizations from the MHC.

The FEIR should include an updated chapter on mitigation measures. This chapter on mitigation should include a proposed Section 61 Finding for all state permits. The proposed Section 61 Finding should contain a clear commitment to mitigation, an estimate of the individual costs of the proposed mitigation and the identification of the parties responsible for implementing the mitigation. A schedule for the implementation of mitigation should also be included.

December 1, 2006

Date


Robert W. Gollidge, Jr.

Comments received:

11/14/06 Massachusetts Historical Commission
11/21/06 Town of Wakefield Conservation Commission
11/21/06 Timothy Hawkes
11/21/06 Margery Hunter
11/21/06 F. Ann Devlin, Town Meeting Representative and SAVE President
11/22/06 Town of Lynnfield Conservation Commission
11/22/06 Department of Conservation and Recreation, ACEC Program
11/24/06 Town of Saugus Conservation Commission
11/24/06 Department of Environmental Protection, NERO
11/24/06 Saugus River Watershed Council
11/27/06 Massachusetts Water Resources Authority
11/28/06 MA Division of Fisheries & Wildlife, NHESP
11/28/06 Department of Conservation and Recreation
11/28/06 Massachusetts Division of Marine Fisheries
11/29/06 Town of Saugus Town Manager
11/29/06 Town of Wakefield, Board of Selectmen's Town Administrator
11/30/06 Town of Lynnfield, Board of Selectmen

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