



August 28, 2003

Mr. Charles Evans, Director
Connecticut Department of Environmental Protection
Office of Long Island Sound Programs
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

RE: Islander East Pipeline Project
Application No. 200300937

Dear Mr. Evans:

On August 5, 2003, the Connecticut Department of Environmental Protection ("CTDEP") issued, for public comment, a Notice of Tentative Determination to Deny ("Tentative Determination") the water quality certificate application submitted by Islander East Pipeline Company, L.L.C. ("Islander East"). In response to this notice, Islander East requested clarification of the CTDEP's reasons for denying the water quality certificate. The CTDEP responded to Islander East's request on August 12, 2003. The CTDEP indicated that the proposed work is inconsistent with Connecticut's Surface Water Quality Standards based on CTDEP's tentative conclusions that:

The existing and designated uses of high quality (SA) surface waters will not be maintained;

The discharge will result in a significant change in water quality considering the quality and ecological value of the receiving surface water:

- The activity will impact the aquatic biota and habitat; and
- The activity will impact existing, designated and potential uses of the receiving surface water.

The facts do not support the CTDEP's tentative conclusions. Islander East has completed, and has filed with CTDEP, numerous consultations and studies that demonstrate that the Islander East Pipeline Project will only temporarily disturb the seafloor and would not significantly impact water quality. Islander East submits that the CTDEP should review these studies, reconsider its tentative position, and issue a 401 Water Quality Certificate for the project for the reasons described more fully below.

Existing And Designated Uses Of High Quality (SA) Surface Waters

Islander East does not believe the project will have significant water quality impacts and has provided numerous reports and studies to the CTDEP in support of this position. Construction and operation of the Islander East Pipeline will not result in the point source discharge of nutrients, toxins, heavy metals, or pathogens into Connecticut waters of Long Island Sound, nor will it permanently alter temperature, pH, dissolved oxygen levels or the salinity of the water.

In the worksheet provided to Islander East as part of CTDEP's August 12, 2003 response, CTDEP relied on a 1992 study by Dr. Frank Bohlen and others¹ to support its contentions with respect to the likely sedimentation effects of the Islander East project. In fact, this study of the sedimentation effects of the near shore excavation of the Iroquois Gas Transmission ("Iroquois") project – which unlike the Islander East project involved extensive conventional dredging – shows that the sedimentation associated with pipeline installation is significantly less than that of naturally occurring events. The Bohlen report concludes that "the increase in amount of sediment suspended [by a storm] in the water column over and adjoining the pipeline corridor resulted in a much more prominent signal than that produced by dredge induced resuspension." His analysis of the storm event concludes that "The combination of these larger spatial scales and associated larger mass of suspended sediment indicates that, relative to the dredge, naturally occurring storm events have a greater potential to adversely affect organisms sensitive to above average suspended material concentrations."

Islander East's studies indicate that the pipeline will cross a portion of Long Island Sound where high turbidity levels are a normal condition. Islander East conducted a 12-month-long water quality sampling program which documented that suspended material concentrations are high in this area, ranging between 10 and 100 mg/l in offshore waters and up to 400 mg/l in the nearshore waters of Long Island Sound.² Several factors contribute to the high turbidity of the water including seabottom substrate, wave action, tidal currents, wind and shellfishing harvesting activities. Pipeline installation would have a temporary incremental effect on the existing water quality in a localized area but will not significantly or permanently alter water quality conditions within Long Island Sound.

The Connecticut Water Quality Standards allow for temporary or short-term changes in water quality as a result of a discharge, such as that which may result from construction activity, dredging activity, or the discharge of dredged or fill materials.³ Based on the comprehensive studies completed by Islander East, it is evident that construction and operation of the pipeline will maintain the existing and designated uses of the surface waters in the project area.

The CTDEP indicates that the primary reason for denying the water quality certificate is that the project would be located within class SA waters (see attached map) and that the existing and designated uses would not be maintained if the Islander East pipeline is

¹ *An Investigation Of Sedimentation Induced By Gas Pipeline Laying Operations In The Vicinity Of The Oyster Bed Lease Areas, Milford, Connecticut*, Bohlen, et al. March 17, 1992

² *An Initial Evaluation of Marine Sediment Dispersion Associated with the Installation of the Islander East Natural Gas Pipeline*. Bohlen, et al. April 8, 2002.

³ Connecticut Water Quality Standards. December 17, 2002.

constructed. The CTDEP indicated in previous correspondence⁴ that it favors an offshore alignment that would mirror a route previously proposed by Iroquois as part of its Eastern Long Island ("ELI") Project. However, a pipeline constructed along such an alignment would also require crossing SA waters.

In addition, a pipeline that taps into Iroquois' existing pipeline system offshore would require sea floor disturbance within and adjacent to actively cultivated oyster beds every 7 to 10 years for the life of the pipeline as part of maintenance activities required under Federal Department of Transportation regulations (49 CFR, Part 192). The tie in to the Iroquois pipeline is located in an area dominated by hard bottom habitat that supports primarily oysters, and is described by Iroquois as the "best shellfish area in Connecticut."⁵ It is not clear how the CTDEP could conclude that a project with such chronic impacts on shellfish resources within SA waters could maintain existing and designated uses, while the Islander East Pipeline Project, with a detailed and complete record corroborating the temporary nature of the impacts, would not maintain existing and designated uses. Based on the facts contained in the record, it is clear the Islander East Pipeline Project would comply with Connecticut's Water Quality Standards.

Change In Water Quality

Islander East has proposed several mitigation measures to minimize water quality impacts, including: directionally drilling the Connecticut landfall; implementing procedures to recover drilling fluids at the drill exit hole within Long Island Sound; placing spoil excavated along the dredge trench onto barges for offshore disposal; using subsea plowing and midline anchor buoys; and reducing the burial depth of the pipeline.⁶

Islander East has conducted extensive sediment modeling to determine the effect of these construction techniques. This modeling has determined that no area within Connecticut waters will experience sediment deposition greater than 3 mm, which is less than the critical burial depth of juvenile oysters and clams.⁷ The modeling also indicates that this effect will be localized and will not affect areas of concern such as the Thimble Islands. The project, therefore, will not result in significant impacts on benthic organisms, their habitat, or the overall water quality of Long Island Sound.

The Impact Of The Activity On The Aquatic Biota And Habitat

The CTDEP's response letter states that the Islander East Pipeline Project will have permanent impact on the aquatic biota and habitat in the Connecticut waters of Long Island Sound. Islander East believes this conclusion is erroneous and baseless. Islander East's studies and research, which do not appear to have been considered by the CTDEP in reaching its tentative conclusions, support the conclusion that the project

⁴ Letter dated July 29, 2003 from the CTDEP to Gene Muhlherr.

⁵ *Iroquois Gas Transmission System Report Submitted With The Application For Site-Specific Regulation Of The Connecticut Portion Of The Iroquois Natural Gas Transmission Pipeline*. Volume 1 at page IV-82.

⁶ In a letter to the FERC dated May 17, 2002, the CTDEP indicated that burying the pipeline 3 feet below the seafloor would be acceptable, but recommended a shallower burial depth to minimize sediment disturbance during installation. Based on this recommendation, Islander East reduced the burial depth of the pipeline from 3 feet to 18 inches along the dredged trench section.

⁷ Connecticut Siting Council Opinion in Docket No. 224. September 5, 2002.

will have a short term, limited impact on aquatic biota and habitat. Islander East selected the pipeline route, and adopted construction and mitigation measures to ensure that the impact on aquatic biota and habitat is minimal.

Islander East's application to the CTDEP and supplemental filings have included a significant number of studies and reports to document the existing aquatic biota and habitat and potential impacts. These studies include:

- Results of SSFATE Model Simulations Nearshore Connecticut, Long Island Sound, February 2003.* A summary of sediment modeling completed to support placing spoil excavated from the HDD exit area and dredged trench section on barges for offshore disposal.
- *Evaluation of Benthic Impacts Associated with Islander East's Modified Offshore Construction Techniques, February 2003.* An evaluation of the benthic impacts associated with the modified construction methods.
- *On the Erosion and Transport of Sediments Displaced by the Construction of the Islander East Natural Gas Pipeline Across Long Island Sound, July 2002.* An analysis of the offshore winds and wave action and sediment movement.
- *Analysis of Video Records of Seafloor Features Collected by Remotely Operated Vehicle Along the Projected Islander East Pipeline Route in Long Island Sound, July 2002.* An analysis of the tapes of the seafloor features.
- An Initial Evaluation of Marine Sediment Dispersion Associated with the Installation of the Islander East Natural Gas Pipeline, April 2002.* An analysis of the offshore winds and wave action and sediment movement.
- Vibratory Core Sampling Report, February 2002.* This chemical analysis results report provided an analysis of the sediments traversed by the pipeline route.
- Bottom Characterization Surveys of Selected Subtidal and Nearshore Environments off Juniper Point (Branford, CT), January 2002.* This analysis of the existing benthic environment in the vicinity of Juniper Point, Connecticut was conducted to gain an understanding of the location and nature of sensitive habitats in the vicinity of the pipeline route.
- Macrobenthic Community Structure along the Proposed Islander East Gas Pipeline Route in Long Island Sound, January 2002.* This assessment of macro benthic community structure documented existing benthic community structure and found the pipeline route was typical of most soft sediment habitats located in central and western Long Island Sound.
- *Report on Laboratory Soil Test Results, Natural Gas Pipeline Crossing Long Island Sound, January 2002.* This geotechnical report provides information for engineering limitations as well as assisting in developing the sedimentation modeling.
- *Marine Geophysical Program, Islander East Pipeline, May 2001.* This program was completed to identify water depths, seafloor topography, subbottom stratigraphy, natural and manmade obstructions present on the seafloor, and current profiling.

Islander East's studies and research show that the pipeline route does not cross unusually sensitive habitats. The pipeline route avoids rocky subtidal areas, eelgrass beds, glacial till, and other sensitive habitat types. The benthic communities and habitat in shallow waters where the HDD exit area and dredged trench section will be located

are characterized by deep dwelling polychaete and bivalve species with an abundance of smaller opportunistic-type infaunal species. In the deeper water where the plow section would be located, the benthic communities and habitat are comprised of different functional groups (tube builders, burrowers, bioturbators) or organisms which live at different levels within the upper 10 to 15 centimeters of sediments. Other studies completed indicate that these species are common in the nearshore habitats of Long Island Sound.⁸

The studies conclude that some infauna and epifauna that are unable to move out of the construction area will experience mortality within areas directly affected by construction activities. However, the area directly impacted by the Islander East Pipeline project represents only a small fraction of the coastal Connecticut seafloor and is substantially smaller than the seafloor that is continually disturbed by other human activities (e.g., boating, commercial shipping, shellfish hydraulic pump raking, trawling, etc.). In a memorandum of March 14, 2002 concerning the Cross Sound Cable, Commissioner Art Rocque, Jr. noted that those "routine activities such as maintenance and harvesting of oyster beds in New Haven harbor suspend far more sediment for longer periods at a time of the year when organisms are more vulnerable"⁹ than installation projects such as Cross Sound Cable. The installation of Islander East's pipeline is consistent with similar practices permitted by the CTDEP. Islander East has committed to constructing the offshore segment during the fall and winter when infaunal densities are lower to minimize the number of individual organisms that would be affected.

The studies also conclude that organisms located beyond the area of excavation would be largely unaffected and would recolonize the backfilled trench and other disturbed areas following construction. Research has shown that many estuarine benthic organisms are adapted to life in turbid waters and should be able to withstand the short influx of higher amounts of sediment associated with the pipeline construction through a combination of avoidance and repositioning themselves in the sediment.

Islander East, therefore, has demonstrated through extensive scientific study and modeling that the impact of its project on aquatic biota and habitat will be short-term and temporary. This conclusion is, in fact, supported by an independent study by The Garrett Group commissioned by the Town of Branford, which filed with the U.S. Department of Commerce.¹⁰ The Garrett Group study concludes: "After all project related activities and secondary conditions associated with the construction have ceased, the bottom will recover after several years and return to existing conditions. The Garrett Group assessment also strongly supports the use of engineered fill for the trench stating "the use of engineered fill will create a varied benthic habitat, shelter/relief, and should enhance nearshore bottom conditions."

⁸ *Evaluation of Benthic Impacts Associated with Islander East's Modified Offshore Construction Techniques*. TRC Environmental Corporation. February 2003.

⁹ *Memorandum Regarding Cross Sound Cable Memorandum of Decision*, Commissioner Art Rocque, March 14, 2002.

¹⁰ *Preliminary Report on the Anticipated Biological Impacts Associated with the Proposed Islander East Pipeline Project, throughout the Nearshore Area of Long Island Sound – Branford CT*, The Garrett Group, LTD. May 8, 2003.

The Impact Of The Activity On Existing, Designated And Potential Uses Of The Receiving Surface Water

Islander East has reviewed the existing, designated and potential uses of the receiving waters crossed by the pipeline and has demonstrated that the project is water dependent and will not substantially affect current and future uses of Long Island Sound.

The CTDEP's claim that the Islander East pipeline is a non-water dependent use ignores the fact that one of the purposes of the project is to deliver natural gas to the island of Long Island. Any pipeline to Long Island must cross marine waters. The pipeline therefore meets the CTDEP's definition of a water dependent use, namely the pipeline "requires direct access to, or location in, marine and tidal waters."

Regardless of its water dependency, the Islander East Project will not affect other current and future uses of Long Island Sound. The receiving waters currently are classified as SB/SA for the nearshore areas and SA south of milepost 12.0. The existing and designated uses for SA waters include providing habitat for marine fish, other aquatic life and wildlife, shellfish harvesting for direct human consumption and commercial shellfish harvesting; recreation; industrial water supply; and navigation.

Islander East consulted with Connecticut lobstermen and fishermen to address concerns regarding construction and operation of the pipeline. Based on input from these stakeholders, Islander East developed the following measures to minimize, and in some cases avoid entirely, impacts on commercial and recreational fishing:

- Install the pipeline under the Town of Branford commercial shellfish beds using the HDD construction technique;
- Install the pipeline during the winter months to avoid the peak fishing season;
- Utilize spotters during construction to identify and relocate commercial fishing gear;
- Harvest actively cultivated commercial shellfish beds located along the pipeline prior to construction followed by reseeding the lease beds with clams following construction;
- Bury the pipeline below the seafloor to avoid conflicts with post-construction fishing, shellfish harvesting, and navigation; and
Backfill the plow section of the pipeline trench with native materials.

Commercial shipping, sightseeing tours and recreational boating contribute to the vessel traffic in the project area. Islander East has met with the U.S. Coast Guard to discuss procedures to ensure good communication with mariners regarding the progress of construction. As a result of these discussions, Islander East has committed to issuing a Notice to Mariners prior to construction to detail pipe installation activities. The pipeline route will avoid designated lightering and anchorage areas and will not affect barge traffic along the Tilcon Channel since the pipeline will be installed by HDD methods far below the bottom of the channel. Additionally, tour companies in the area will not be affected. These companies operate from mid May to mid October. Islander East will construct the offshore portion of the pipeline during the winter months when the tour boats are inactive and thus there will be no impact on tour boats.

The pipeline will not affect future water dependent uses or the future designation of commercial shellfish leasebeds. The HDD and plow sections of the pipeline route will be installed 3 feet or more beneath the seafloor. The backfill over the dredged trench section will be reduced to 18 inches, which is consistent with the CTDEP's recommendations to FERC,¹¹ and will be covered with rock capped with coarse- to fine-grained sand. Because commercial clam dredges typically penetrate only 1 to 3 inches into the seafloor,¹² installation of the pipeline 18 inches below the seabed will not interfere with future commercial shellfish harvesting. In fact, the Backfill Plan will enhance clam and oyster habitat.¹³

The Islander East Pipeline Project, therefore, will have only a short term and temporary impact on designated and existing uses of Long Island Sound and will not preclude other potential water dependent uses. To the contrary, the Islander East Project will promote future recreational and commercial shell fishing by enhancing habitat and reseeding affected commercial shellfish beds following construction.

Summary

In summary, Islander East believes the project has not been the subject of an informed and unbiased evaluation, and that the review that has been conducted has blatantly ignored the only record evidence before the CTDEP.

Islander East hopes that the CTDEP will recognize Islander East's efforts to cooperate and minimize environmental impacts on Long Island Sound and respectfully requests that the CTDEP reconsider its intent to deny the project's Water Quality Certification and find, based on the evidence of record before it, that the project is consistent with the policies of the Connecticut 401 Water Quality Certification Program.

If you have questions or further comments, please contact me at (203) 488-1800 or via email at atghmuhlherr@duke-energy.com.

Sincerely,

Islander East Pipeline Company, L.L.C.



Gene H. Muhlherr
Senior Project Manager

Attachment: Water Quality Classification Map

¹¹ In a letter to the FERC dated May 17, 2003, the CTDEP indicated that burying the pipeline 3 feet below the seafloor would be acceptable, but recommended a shallower burial depth to minimize sediment disturbance during installation. Islander East reduced the burial depth of the pipeline from 3 feet to 18 inches along the dredged trench section.

¹² Connecticut Siting Council Hearing Transcripts dated April 17, 2002. Docket 221. Page 143 at lines 21 and 22.

¹³ The CTDEP indicates on page 5 of its July 29, 2003 letter to Islander East that oysters prefer a hard substrate and clams prefer a sand substrate.

cc: Joanne Wachholder, Federal Energy Regulatory Commission
Cori Rose, U.S. Army Corps of Engineers - New England District
Sue Jacobson, Connecticut Department of Environmental Protection

This document involves pipeline location information and is not available at this Internet site due to homeland security-related considerations. This portion of the Islander East consistency appeal administrative record may be reviewed at NOAA's Office of General Counsel for Ocean Services, 1305 East-West Highway, Silver Spring, Maryland.