

APPENDIX I

May 5 2003 Letter From CT DEP

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STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION



May 5, 2003

Mr. Gene Muhlherr
Islander East Pipeline Company, LLC
454 East Main Street, Route 1
Branford, CT 06405

RE: WATER QUALITY CERTIFICATE APP. #200300937
Towns: Cheshire, Wallingford, North Haven, East Haven, North Branford and Branford

Dear Mr. Muhlherr:

The Department of Environmental Protection (the "Department") acknowledges receipt of new application materials regarding your proposal to upgrade existing interstate natural gas pipeline facilities and construct a new gas pipeline within the coastal boundary, inland wetlands, tidal wetlands and coastal waters of the state. This material received on March 17, 2003, includes a new Water Quality Certificate (WQC) application submitted pursuant to section 401 of the Federal Clean Water Act, as amended, and assigned #200300937 by the Department. Also received on March 17, 2003 were revisions to the pending Tidal Wetlands and Structures & Dredging (TWSD) permit application #200200761-SJ.

The purpose of this letter is to comment on the completeness of the above-referenced federal WQC application and to request additional information that the Department deems necessary to process the application. As you know, with respect to your TWSD permit application, Connecticut Public Act 02-95 prohibits the Department from considering and rendering a final decision on any state application related to utility crossings of Long Island Sound until after June 3, 2003. However, please note that information requested below to complete the federal WQC application is also necessary to complete the TWSD permit application as the application requirements and standards for authorization are essentially the same.

In addition, this information, particularly the alternatives analysis requested, has a bearing upon resolution of the Federal Coastal Zone Management Consistency (FCC) appeal now pending before the U.S. Department of Commerce. As you know, our October 15, 2002 FCC denial of the proposed project focused on adverse impacts to Connecticut's coastal resources and water-dependent uses and potential alternatives to the proposed project that could eliminate or reduce these impacts.

Please mail the required additional materials to the following address and include the application identification number on all correspondence.

Department of Environmental Protection
Office of Long Island Sound Programs
Attn: Susan Jacobson
79 Elm Street
Hartford, CT 06106-5127

Please be aware that any work in tidal wetlands, or waterward of the high tide line, in the tidal, coastal or navigable waters of the state undertaken without appropriate authorizations is a violation of state law and is subject to enforcement actions by this Department and the Office of the Attorney General.

If you have any questions, please contact Susan Jacobson of my staff at (860) 424-3034. Thank you.

Sincerely,



Charles H. Evans
Director
Office of Long Island Sound Programs

CE/PF/SJ
Enclosures

cc: Joseph Reinemann, Islander East Pipeline Company, LLC
Cori Rose, U.S. Army Corps of Engineers
Mike Ludwig, NMFS
File TWSD #200200761-SJ/Branford
File WQC #200300937
David Wrinn, Office of the Attorney General
David Carey, Department of Agriculture/Bureau of Aquaculture
Charles Duffy, Robinson and Cole
Joanne Wachholder, FERC
Michael Marsh, US EPA

**MATERIALS REQUIRED TO REVIEW APPLICATION
WATER QUALITY CERTIFICATE APP. #200300937**

Cheshire, Wallingford, North Haven, East Haven, North Branford and Branford

Alternative Routing/Alignment Analysis

Generally, to receive approval for a proposal, an applicant must fully demonstrate that: (1) adverse impacts, including specific impacts on coastal resources, navigation and water-dependent uses have been minimized to the greatest extent practicable; (2) the scope and extent of encroachments into tidal, coastal or navigable waters have been minimized to the greatest extent practicable; (3) any remaining adverse impacts are acceptable and consistent with applicable statutory standards; (4) alternatives with the least adverse impact and minimal encroachment into the public trust area waterward of the mean high water have been utilized.

While the Department recognizes that the proposed route is the one for which the Federal Energy Regulatory Commission (FERC) has provided its Certificate, it still remains the responsibility of the applicant, as part of the Department processes, to fully evaluate alternatives and provide a compelling demonstration that there are no feasible alternate alignments that could further minimize adverse impacts on Connecticut's coastal resources and water-dependent uses while still meeting the stated project goals. As we have discussed with you, the Department can only authorize that alternative with the least impact. In order for the Department to determine that the alternative with the least adverse environmental impact has been proposed, the following additional information is necessary.

1. While you have provided bottom characterization surveys, marine geophysical surveys and video analysis of the proposed work corridor, and some level of detail for Option 2 and Option 3, we do not have this level of information from other alternative routes which you considered and dismissed. Please provide the Department with an identification of all of the other alternate routes and alignments considered and a summary of the environmental advantages and disadvantages associated with each and the reasons why the alternatives were rejected.
2. Please provide a detailed analysis of alternative alignments across the Sound that would take maximum advantage of corridors that were previously disturbed by infrastructure or other past or present uses. For example, it does not appear that you have considered installing a new pipeline adjacent to the existing Iroquois Gas Transmission System pipe off of the Milford shoreline. Because of this previous disturbance, another pipeline routed through the same area may result in less additional habitat disruption and overall environmental impacts to Long Island Sound than the currently proposed pipeline route/alignment.
3. Please provide a full evaluation and analysis of the environmental impacts of the ELI System Alternative which was found to be the environmentally preferable alternative in FERC's *Islander East Pipeline Project – Final Environmental Impact Statement*.
4. Please provide a thorough evaluation and analysis of the environmental impacts of an option that employs the Long Island Sound portion of the recently withdrawn Iroquois

ELI Extension Project which would now appear to be an option available to Islander East and which also appears to have less environmental impact on Long Island Sound, overall, than your current proposal

5. Department staff have reviewed the proposed route research cited by your consultants and have compiled a list of those references and documents that may aid the Department in evaluating alternative routing or alignments. Please provide the enclosed "References to be Submitted", along with any more recent related applicable documents, including maps or surveys.
6. Please provide the Department with a color copy of the *Marine Geophysical Survey Program - Islander East Pipeline Branford, CT to Wading River, NY* prepared by Ocean Surveys and dated May 18, 2001. In this report, it appears that the Option 2 route alternative which is slightly shorter than the proposed route would be feasible and would impact less area of shellfish beds. In sum, this option would have less overall in-water disturbance. The study indicates that there are no magnetic anomalies in Option 2 while there are 31 anomalies in Option 1. Further, it states that the chances of encountering bedrock along either route are similar. Please explain why this option was dropped from consideration.
7. Staff have reviewed the *Analysis of Video Records of Sea Floor Features Collected by Remotely Operated Vehicle Along the Proposed Islander East Gas Pipeline Corridor in Long Island Sound* by Roman Zajac and dated August 2002. Please indicate if this type of analysis has been done elsewhere along the Connecticut coastline. If so, please provide such information.

Marine Habitat

8. The Thimble Islands region is generally considered to be an area of exceptional marine habitat diversity. Please provide the Department with a thorough evaluation of the short and long-term impacts, both direct and indirect, of constructing and operating a pipeline in this unique area of the Sound.
9. The currently proposed backfill plan includes a backfill tolerance of +2'/-1' from the ambient seafloor. Please include a discussion of environmental impacts on marine resources and water dependent uses associated with the proposed grade variations. Also discuss the impact of anticipated levels of suspended sediments on marine organisms and habitats in the zone of influence of the project, particularly in light of the exceptional diversity and sensitivity of the marine resources in the Thimble Islands region referenced above.
10. Typically, naturally occurring eastern oysters (*Crassostrea virginica*) are found in areas which are comprised of hard benthic substrate from the intertidal area to depths of approximately -35', while commercial oysters are grown to depths to -50'. It appears that the proposed construction methodology would cause irreversible adverse impacts to approximately 38 acres of hard benthic substrate- habitat which is critical for oysters. This area of direct impact was determined by calculating the trench width and spoil

mound corridor between the horizontal directional drilling (HDD) exit pit and the -50' depth contour. This number does not include the area impacted by anchor strikes and cable sweep. Please indicate if you concur with the total acreage of irreversible habitat loss. If you disagree with this calculation, please explain the reasons and provide your calculated area of impact.

1. As you know, staff of CT's Department of Agriculture, Bureau of Aquaculture have indicated during recent meetings that in-kind restoration or mitigation of the damaged oyster habitat is not likely feasible due to the nature of the sediment proposed to be disturbed. Please provide a compensation plan for the loss of the hard benthic substrate habitat. This plan should include possible off-site restoration projects.

Alternative Techniques

While Islander East Pipeline Company, LLC has recently discussed modifications in installation methodology which could reduce water quality impacts, there are additional technologies which must also be evaluated and employed, if practicable, to further reduce direct benthic impacts associated with the proposed anchor system and exit hole footprint.

12. Please provide this Department with a detailed alternatives analysis which includes a discussion of employing live-boating, spuds, and/or semi-permanent helical anchors instead of utilizing the proposed 10-point lay barge anchor system for all or a portion of the work. In this analysis, please include any industry experiences where these alternate technologies have failed or succeeded.
13. As you are aware, Iroquois Gas Transmission System's Eastchester Extension project in New York successfully used sheetpile bulkheading at the exit pit to reduce the size of the footprint. Please discuss and address the feasibility of this alternative.

Horizontal Directional Drilling

14. The Department's experience with HDD applications in Connecticut and elsewhere is that there are often complications during construction such as drill hole failure. As you are most likely aware, once this Office authorizes construction techniques for a particular location, the authorization is not applicable to other locations or variations in technique. Therefore, in the event of complete HDD failure, please identify and provide necessary information regarding alternate locations and installation techniques for possible conditional authorization from this Office. If conditional locations and techniques are not approved up-front, significant delays or total project termination could result.
15. As currently proposed, the HDD activity puts some town shellfish beds at risk in the event that a frac-out (release of drilling fluid) reaches the benthic surface. Please explain why HDD was not sited within the footprint of the Tilcon Channel to minimize adverse impacts to existing shellfish beds associated with the potential for frac-outs.

Backfill Plan

16. As discussed at the April 15, 2003 technical meeting, please provide a bottom velocity study to determine if the currently proposed backfill sediment will be subject to erosion. Also, please explain why the dredge spoil cannot be temporarily stored during construction and reused as backfill for the dredged trench subsequent to installation of the pipeline.
17. Also discussed at the April 15 technical meeting was a discrepancy regarding the depth of backfill on the engineered backfill plan sheet SK-19. Please correct the depth discrepancy.
18. At this time, DEP staff do not anticipate additional sediment testing associated with the proposed dredging. However, please be aware that further modifications to the backfill plan may warrant additional testing.

Tidal Wetlands

The proposed work will impact two areas formerly connected to tidal wetlands. You have identified these areas as wetland CT-A37 and a pond CT-A21. This Department will continue to review the pending application pursuant to C.G.S. 22a-32 as these areas appear to meet the definition of "areas formerly connected to tidal waters" as defined by C.G.S. Section 22a-30-2(g): *"those areas which have retained tidal wetland soil characteristics, which can support some but not necessarily all of the vegetation specified in section 22a-29 of the General Statutes upon re-establishment of a tidal connection, and to which a tidal connection can be re-established."* In reference to these wetlands, please address the following items:

19. In "Site-Specific Wetland and Waterbody Crossings" (Attachment C), dated July 2002, a note on page CT-WL-9.69 indicates that the existing pond will be drained. Other application materials indicate that no wetlands will be drained or permanently filled as a result of the Islander East Pipeline Project. In addition to clarifying this discrepancy, please provide this Office with a step-by-step construction methodology of both the wetland and pond crossing. Include cubic yards of material to be excavated, stockpile locations, and elevation details. Please provide detailed plans showing both the existing and proposed conditions of wetland CT-A37 and pond CT-A21.
20. Please update the "Impacts Analysis Report" by TRC Environmental Corp dated February 12, 2002. The document should discuss the currently proposed project. Specifically, the tidal wetlands information on page 13 needs to be updated.
21. The desired manner of wetland mitigation is on-site restoration. Please explore the possibility of returning tidal flow to wetland CT-A37. Additional information on the current health of pond CT-A21 is necessary prior to determining preferred mitigation options. Susan Jacobson will make arrangements to visit the pond with a staff ecologist to determine feasible mitigation.

Water Dependent Use

It appears that the siting of a non-water dependent gas transmission pipeline through an extensive shellfish habitat area would cause a permanent adverse impact to both an existing and potential future water-dependent use, shellfishing. As discussed above, it is anticipated that the proposed pipeline installation would cause irreparable damage to shellfish habitat. In addition, the proposed backfill options would likely create topographic irregularities that could adversely affect the efficiency and safety of the operation and handling of harvesting equipment employed by the local shellfishing industry.

22. Please explain what measures are proposed to preclude or reduce adverse impacts to this water-dependent use.
23. According to the "Engineered Backfill Plan" dated March 2003, Islander East is committed to achieving a backfill tolerance of +2'/-1' from the ambient seafloor. What measures will be employed so as to ensure this tolerance?

General Application Information

24. DEP's Inland Water Resources Division has requested a plan for long-term monitoring and control of non-native invasive plants along the upland portion of the route. Please provide such monitoring and control plan.
25. Please provide the Department with a gas pipeline infrastructure map of the northeast U.S. to assist the Department in understanding FERC's goal for supply diversity to Long Island, NY:
26. An "Impacts Analysis Report" mentioned in item #19, above, was submitted in the original February 13, 2002 Structures, Dredging & Fill and Tidal Wetlands application. There have been several modifications and refinements to the application since that time. Please provide an updated "Impacts Analysis Report".
27. Please be advised that should you receive approval of this project, you will be required to develop a detailed environmental monitoring plan.
28. The Department generally requires a performance bond prior to horizontal directional drilling to ensure funding for emergency response clean-up. At this time, the amount of the bond is based on \$1,000 per linear foot of drill path. Also, an HDD operation and monitoring plan will be required. Please refer to the enclosed sample for reference. Please provide an operation and monitoring plan.

References To Be Submitted

Høehn, T.R. Morris, J.D. 1977. Species abundance, compositions and diversity of marine benthic invertebrates of Connecticut with special consideration for the New Haven oil spill. Technical Report, Marine Region, CT Dept. Environmental Protection, Hartford, CT.

Knebel, H.J. and Poppe, L.J., 2000. Sea-floor environments within Long Island Sound: A regional overview. *Journal of Coastal Research* 16: 533-550.

National Marine Fisheries Service (NMFS). 2001b. Letter dated May 9, from S. Gorski (Field Office Supervisor, Habitat Conservation Division) to J. Thommes (Natural Resource Group, Inc.)

Neff, J.M. 1987 Biological Effects of Drilling Fluids, Drill Cuttings and Produced Waters, in Boesch, D.F. and Rabalais N.N. (eds.) 1987. Long-Term Environmental Effects of Offshore Oil and Gas Development, pp. 469-538. Elsevier Applied Science Publishers, London)

Poppe, L.G., H.J. Knebel, Z.J. Mlodzinska, M.E. Hastings, B.A. Seekins. 2000. Distribution of surficial sediment in long island sound and adjacent waters; texture and total organic carbon. *Journal of Coastal Research* 16: 567-574.

Reid, R.N., A.B. Frame & A.F. Draxler. 1979. Environmental baselines in Long Island Sound, 1972-1973. NOAA Technical Report NMFS SSRF-738.

Swanson, K. 1977. Benthic polychaete distributions in Fisher Island Sound and their relationship to the substrate. Masters Thesis, University of Connecticut, Storrs, CT

Turner, J.L. 2001 Coastal and pelagic birds of Long Island.

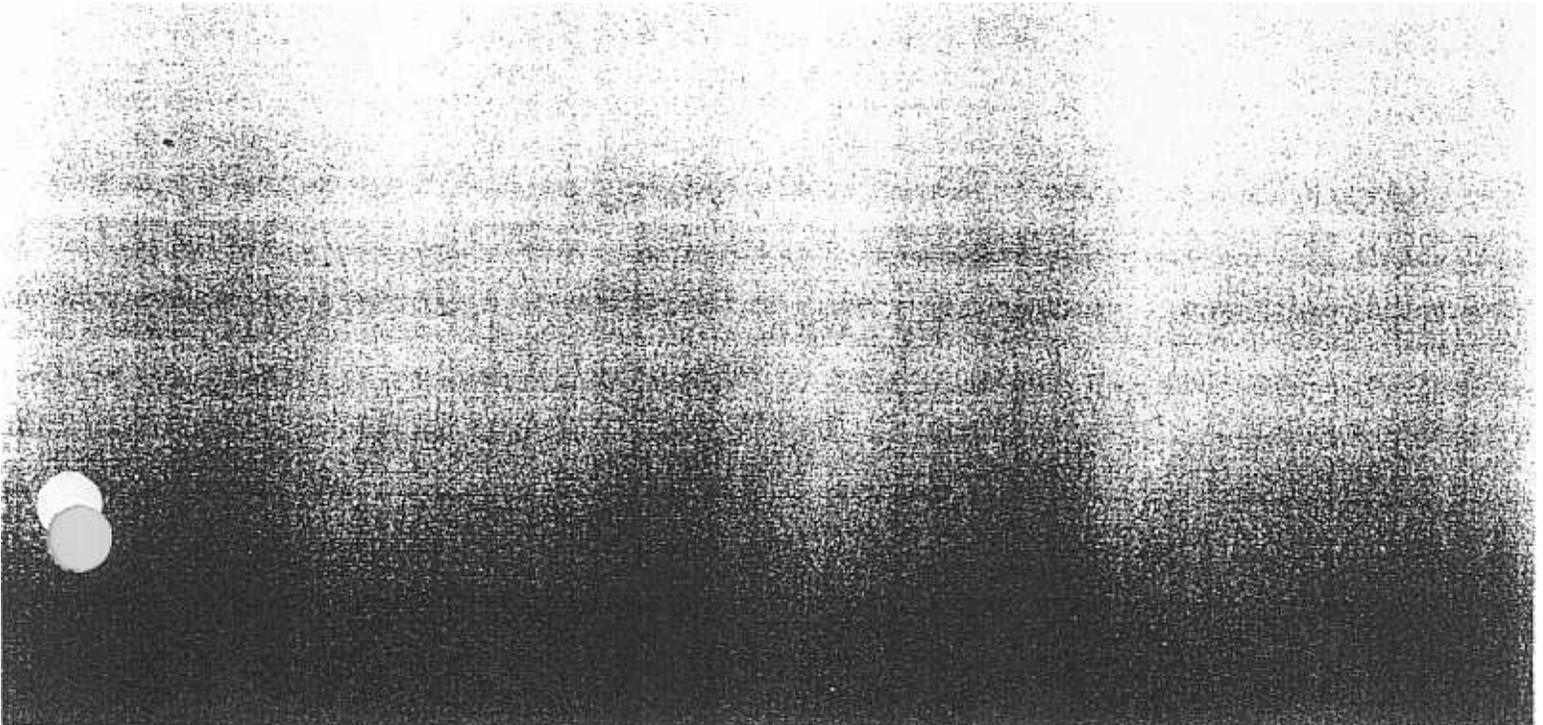
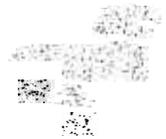
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Zajac, R. N., R. S. Lewis, L. J. Poppe, D. C. Twitchel, J. Vozarik, and M. L. Digiacomo-Cohen. 2000. Relationships along seafloor structure in benthic communities in Long Island Sound at regional and benthoscape scales. *Journal Coastal Research*, 16: 627-640.

APPENDIX J

Tilcon Barge Accident



From: "John B. Lust" <johnblust@rcn.com>
To: "Susan Jacobson" <susan.jacobson@po.state.ct.us>
Date: 1/20/03 11:36AM
Subject: Tilcon Barge overturns.

Hi Sue
I thought you'd appreciate this for the file.
John

----- Original Message -----

From: "William Horne" <william.horne@yale.edu>
To: <johnblust@rcn.com>
Sent: Friday, January 17, 2003 12:21 PM
Subject: Fwd:

> >Status:
> >
> >Attached is the overturned Tilcon barge today, January 17, 2003, being
> >recovered in the Thimble Island harbor, the proposed site of the Islander
> >East
> >pipeline. I think it is important for public officials to come today to
> >witness
> >the severity of these accidents and its potential devastation to a gas
> >pipeline
> >in this area. Dr Bohlen testified in the CSC hearings that no barges have
> >overturned. This is the second one that I have photographed in three
years.
> >
> >Becky Mars
> >
> >
> >

