STATE OF CONNECTICUT

DEPARTMENT OF ENVIRONMENTAL PROTECTION

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May 17, 2002

Magalie R. Salas, Secretary
Federal Energy Regulatory Commission
888 First Street, NE., Room 1A
Washington, DC. 20426

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FEDERAL ENERGY
REGULATORY COMMISSION

RE: Draft Environmental Impact Statement
Islander East Pipeline Project
March 2002
Docket Nos. CP01-384-000 and CP01-387-000

Dear Secretary Salas:

Thank you for the opportunity to review the above-referenced Draft Environmental Impact Statement and to submit these comments. The proposed Islander East project involves the uprating of 27.4 miles of existing Algonquin gas pipeline from Cheshire to North Haven, the construction of 50 miles of new 24" diameter pipeline, of which 10.2 miles will be in North Haven, East Haven, North Branford and Branford, Connecticut, and 22.6 miles in Long Island Sound, and a new 12,000 hp compressor station in Cheshire, Connecticut adjacent to Interstate 691.

Procedural Issues

Governor's Executive Order No. 26 and Recent Legislation

On April 12, 2002, Governor John G. Rowland issued Executive Order No. 26 directing the establishment of a task force "to undertake a review and analysis of all pending proposals for permanent large-scale gas or electric transmission projects, including all projects crossing Long Island Sound," and enjoining State executive branch agencies from issuing any final determinations on agency approvals for such projects until January 15, 2003. Subsequently, the Connecticut General Assembly passed "An Act Concerning the Protection of Long Island Sound." This legislation established a 12-month moratorium for State agencies during which they shall not consider or render final decisions on applications for utility crossings of Long Island Sound. The Act also expands the membership of the Executive Order No. 26 Task Force which will undertake the comprehensive study of the need for and impacts of utility crossings of Long Island Sound and Fairfield County. Both the Executive Order and the legislation anticipate FERC representation and participation in the study.

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As recognized and discussed by FERC in Section 4 of the DEIS, there is a need to take a comprehensive and comparative look at the various pipeline proposals in and across Long Island Sound, some of which may be in competition to serve the same markets. FERC attempts to do this in Section 4.2 of the DEIS in evaluating system alternatives to deliver the proposed volume of Islander East gas, but acknowledges that the information on market demand on Long Island and the analysis of the Iroquois Eastern Long Island Extension Project are not far enough progressed to be able to address these questions in more than a conceptual way. We submit that this evaluation is a necessary prerequisite to finding that other alternatives with less significant environmental impacts to Long Island Sound and other natural resources do not exist. We respectfully request that no final action be taken by FERC on the subject proposal until a comprehensive look at market demand, environmental constraints and the various proposals to supply gas to Long Island can be performed. We request that all potentially competing pipeline proposals be considered in a coordinated fashion so that the optimal solution can be selected from among them, based on minimizing environmental and socio-economic impacts and on serving a demonstrated market for the approved amount of pipeline capacity. We note that a mechanism to accomplish this will be the Task Force's investigation and report, due in spring 2003. Ideally, we would request FERC to defer final action on Islander East or any other pipeline in Long Island Sound until that date.

Relative to this discussion, what is the status of the AES Calverton and Brookhaven Energy projects which constitute two of the major customers of this pipeline? Is the economic justification for this project dependent on both, or either one, of them being constructed? Would local distribution company markets justify the pipeline if neither plant is built?

System Alternatives

The One-Pipe System Alternative and the Eastern Long Island (ELI) Project System Alternative discussed in Sections 4.2.1 and 4.2.2, respectively, appear, in a preliminary and strictly numerical sense, to offer potential advantages over the Islander East proposal. DEP is not in a position to say this on a definitive basis at this time because the on-site impacts of the 16 miles or 7 miles of new looping pipeline required under these proposals, respectively, has not been evaluated, nor has the more fundamental issue of actual market demand for gas on Long Island been determined. We do believe FERC has begun a worthwhile effort in doing this preliminary comparative analysis but, as acknowledged in the DEIS, sufficient information is not yet available to follow it to a definitive conclusion, which is why the request in the previous section of these comments is made.

Permits

Page 2-45 of the DEIS contains a comprehensive list of the permits and approvals required from DEP for this project. As previously noted, the department is prohibited by

act of the legislature from considering or issuing permits related to gas pipeline crossings of Long Island Sound for one year from passage of the moratorium act or until spring 2003. Application has been made for all of the necessary permits except the Permit for Hydrostatic Test Water Discharge. This Department does have a General Permit available for the Discharge of Hydrostatic Pressure Testing Wastewaters. However, one condition of the General Permit (Part VI, condition A.2) is that the discharge flow not exceed 10% of a watercourse's ambient flow rate or 1% of the total volume of a non-flowing receiving water body. As one of the sources of hydrostatic test water is a private farm pond on Thompson Road in East Haven, it is unlikely that the 1.2 million gallon discharge would be less than 1% of the pond's volume. If this is the case, an individual discharge permit under Section 22a-430 of the Connecticut General Statutes would be required.

With regard to Islander East's Structures and Dredging and Water Quality Certificate applications and FERC's required Coastal Consistency Certification, obvious insufficiencies of such applications can be inferred from comments on pages 3-9, infra, regarding environmental impacts associated with work in Long Island Sound.

Project Impacts

The proposed Islander East pipeline proposal involves several components, each of which have their attached impacts, be they environmental or social, and of either long-term duration or occurring only during or shortly after construction. The following comments will address these impact areas individually.

Horizontal Directional Drilling

Islander East proposes to cross the Connecticut coastline and enter into Long Island Sound via a 4,000' horizontal directionally drilled segment beginning 700' inland on Tilcon property, and extending 3,300' into Long Island Sound. Use of horizontal directional drilling (HDD) allows Islander East to minimize coastal impacts, such as avoiding four shellfish lease beds which would otherwise be traversed by the pipeline.

From an environmental protection standpoint, HDD is conceptually a decidedly preferable method of installing the pipe across the shoreline and in shallow water. Therefore, the probability of success of HDD is critical because the alternative methods of installing the pipe, should HDD fail, would result in significantly more adverse impact to coastal resources. Therefore, please address how the scope, i.e., 4,000 feet, of this project compares with the experience of other projects to allow for a fuller evaluation of its efficacy.

We agree with FERC's recommendation on page 3-31 of the DEIS that an alternative plan for installing this section of the pipeline be submitted by Islander East. Such plan must also be submitted to DEP's Office of Long Island Sound Programs for review as a part of its Coastal Consistency Determination. This is critical because, given

the greater environmental impacts of alternative construction techniques, it is conceptually very possible that HDD might be found to be consistent with Connecticut's Coastal Management Program while the alternative plan might not be. Islander East does propose to undertake the horizontal directional drilling component as the first phase of pipeline construction. This would allow for time to determine the success of the HDD segment before any other work is allowed to begin.

The dimensions of the HDD exit pit and the method used to dig the pit are not provided in the DEIS. Information provided by Islander East to DEP-OLISP on February 13, 2002 indicates that this hole would be dredged by clamshell bucket and would be 20' deep and 250' x 300' in area. Removed sediment would be mounded around the pit, extending for 65' on three sides, and possibly mounded to the water's surface.

The environmental impacts of this activity for aquatic resources in the shallow waters around the Thimble Islands and along the Branford shoreline are not thoroughly discussed. In the short-term, the benthic community in the three acre area will be destroyed. Over the work period of three or four months, much of the mounded sediment will likely disperse as a result of currents and wave action, especially during storms. If this happens, many of the benefits of HDD (e.g., bypassing the shellfish beds) may be negated. The characteristics of the excavated material and its effects on benthic and rocky habitats of the Thimble Islands area are not adequately discussed. It is our sense that these areas probably will not recover as quickly as described in the DEIS.

Also relative to the HDD component, the methodology for containing a bentonite release at the exit hole or elsewhere along the drill has not yet been developed. Islander East estimates that 3,000 cubic yards of bentonite will be used as drilling fluid. Preliminary estimates by Islander East indicate that 1,230 cubic yards may be released. According to the DEIS, a site-specific computer model is being developed by Islander East to, among other things, describe the fate of the bentonite. In any case, DEP will require an operations and maintenance plan to address, among other things, the immediate clean-up and removal of all bentonite should blow-outs occur.

Lastly relative to HDD, the DEIS describes an upland area of over one acre (120' x 400') that is needed to support the HDD rig and its associated equipment. It is not clear how much grading and clearing would be necessary to prepare the rig site. The proposed upland drilling area on the Tilcon property should be more clearly defined in the FEIS and should include a description of the modifications required to prepare the site. Additionally, the FEIS should require Islander East to develop a plan to restore the site to pre-existing contours after HDD is completed unless otherwise agreed upon by the landowner. If there is a potential that the drilling rig would need to be relocated for additional drilling attempts should the initial effort fail, the FEIS should evaluate the likely alternate location and what modifications would be necessary at that site.

Long Island Sound Impacts

The DEIS appears to minimize the environmental effects of the pipeline as temporary and, therefore, of little importance. In fact, on page ES-4, under Major Conclusions, the DEIS states that "with the use of Islander East's proposed mitigation and adoption of our recommended mitigation measures, construction and operation of the proposed facilities would have limited adverse environmental impact." Although many of the impacts of the pipeline will be temporary, the off-shore activities take place in important fisheries habitat and the seriousness and duration of these effects are not currently well addressed. Further, DEP believes that a finding of limited environmental impact may be premature for a number of additional reasons: (1) many important aspects of the project have not yet been finalized, (2) in some cases, important details are missing, and (3) the LIS Sampling, Analysis and Study Plan being prepared by Islander East was not available during DEIS preparation. This latter element is being conducted to characterize site-specific suspended sediment and bentonite release behavior, sediment grain size distribution and benthic organisms and habitat along the pipeline route.

To minimize permanent impacts to habitat in the Sound, **DEP favors complete burial of the pipeline at shallow depth** to ensure that the movements and migrations of benthic fishes and crustaceans are not hampered. The proposed option in the DEIS is for half burial. The DEIS states that benthic animals would be able to cross a half buried pipeline. However, because the pipeline crosses the Sound in a north-south direction and an enormous number of benthic animals migrate in the east-west axis of the Sound, complete burial would ensure that their movements are not affected by the pipeline.

Contrary to the half burial option proposed in the DEIS, application materials submitted by Islander East to DEP-OLISP indicated that the pipeline would be buried 3' below the surface. While this is acceptable, a shallower burial would be preferred in that it would reduce sediment disturbance during installation. With the goal of minimizing sediment disruption and with full burial to minimize restrictions on movements, DEP favors complete, but minimal to shallow, burial of the pipeline, i.e., the top of the pipe level with the sea floor or just below it.

(It should be noted that lobster behavior as described in the DEIS is incorrect: lobsters would not use their abdomen, or tail, to "swim" over the pipeline. Lobsters move principally by walking in a forward motion. The tail is often used to propel the animal backwards, usually to escape a predator or avoid confrontation with more dominant lobsters.)

Islander East has studied the seafloor along the pipeline route. Most of the route crosses fine-grained cohesive sediments. The bottom is relatively featureless for most of the route. These observations agree with a number of surveys done to characterize the seafloor. The pipeline crosses approximately 221.4 acres of bottom habitat.

The length of pipeline exposed at utility crossings (MCI, Flag Atlantic, etc.) should be provided and possible effects on the movements of benthic animals assessed. Should the pipeline be exposed for any substantial distance, migration and movements through the area could be impaired.

- Trench Excavation: Shallow water dredging

From the HDD exit pit, a clamshell bucket will be used to dig a 50'W by 5,808' L by 5'D trench out to 20' water depths. Sediment will be side-cast in an area up to 60' wide on one side of the trench. The DEIS predicts that the sediment plume from this activity will be up to 7,800'L by 1,300'W, with total suspended solids (TSS) levels greater than 30 mg/l. In addition to dredging, blasting may be necessary within a 200' length. Precautions taken to reduce the shock wave from the blasting include sequencing detonation in each hole fractions of a second apart and placing rock in the top of the borehole.

Based on the dimensions provided, 54,000 c.y. of material will be dredged from a stable bottom habitat that is close to nearshore and rocky habitats of the Thimble Islands. As with the HDD exit hole, benthic organisms in the roughly 15 acre area will be destroyed and populations will take some time to recover. Also, restoring the bottom contours will be difficult. No assurance is offered that it can be done, and there is no consideration in the DEIS of the loss of material due to wind and waves, which would not, therefore, later be available to refill the trench. Further, this lost material will contribute additional sediment load to surrounding shallow and rocky habitats.

Total suspended solids levels generated by the dredging appear to be high and widespread, but a more thorough sediment characterization and description of TSS concentrations is needed to assess affects. The TSS gradient within the plume, from the point of generation down to ambient levels, should be determined.

The need to dig a 50' wide trench to bury a 24" diameter pipeline (maybe 30" diameter with concrete coating) is not addressed. Particularly when the DEIS proposal is only to bury the pipe for half of its width, this seems like an overly generous sized trench. Even with the full burial of the pipe that DEP will specify, the amount of seafloor disruption and sediment moved appears excessive. Alternatives to minimize seafloor disruption should be explored.

The blasting work may result in immediate mortality of finfish and crustaceans. The species affected would depend on the time of year this work is done. A discussion of the expected kill radius of the blast should be included in the FEIS so as to be able to better determine whether additional measures are needed to reduce it.

- Trench Excavation: Depths greater than 25'

In water depths greater than 25', either a subsea plow or jet plow will be used to excavate an 8' deep trench. The method used will depend on equipment availability. The subsea plow would excavate a trench 25' wide at the top and narrower at the bottom,

with sediment side-cast in 25' wide mounds on either side. The subsea plow would require two passes: one to dig the trench and one to bury the pipe. This activity would affect 183 acres. Some 504,367 cubic yards of sediment would be displaced. The subsea jet would excavate a trench 40' wide at the top and 10' wide at the bottom. Up to two passes of the subsea jet would be required to dig the trench. About 662,000 cubic yards of sediment would be dislodged, about 50% of which would be fluidized and become suspended. The majority of the sediment would be deposited within 130' on either side of the trench, with an estimated depth of 3.9" deep at 130' away. Total area affected would be 733 acres. Based on the Eastchester model, the plume containing greater than 30 mg/l TSS could extend for 7,800' in length and 1,900' wide.

Regardless of which equipment is used to dig the trench, a two-barge system, consisting of a lay barge and a bury barge, will be used to support the equipment. Arrays of 8-12 anchors will be used to position and move the barges. Tugboats will reposition the barges at half-mile intervals. Anchor cable lengths vary depending upon depth, with a maximum length of 2,500' in front and 2,000' to the sides. Midline anchor buoys will be used to minimize contact of the cables with the seafloor. Each anchor measures 8.6' by 10'. A 20' drag is assumed. Each anchor would therefore impact 172 sq. ft. of seafloor. Also, the anchors will penetrate 8' deep. Total area affected would be 9.7 acres for the plow and 7.3 acres for the jet.

Total acreage affected is similar for both methods: 3,022 acres for the plow and 3.029 acres for the jet. Comparing the plow to the jet, the plow has more impact due to cable sweep and anchor scars, whereas the jet has higher trenching impacts due to larger amounts of material deposited on either side of the trench.

As with the shallow water trench, the amount of seafloor disturbed by the two trenching methods seems excessive relative to the pipeline diameter, particularly when the DEIS plan calls for burying the pipe only to one half of its diameter. Even with full burial of the pipe, the amount of seafloor disruption and sediment moved seems excessive. Alternatives to minimize seafloor disruption should be explored.

Long-term alterations to habitat are not addressed in the DEIS. Possible long-term changes could result from either the plow or jet methods. With the plow, the ability to backfill the trench without leaving voids is questionable. If the jet is used, it appears that plans do not call for backfilling the trench, but rather depending on sloughing off and settling of the trench walls to fill in the trench (p. 2-27). No information is provided to indicate how that would work and what conditions would exist after. We assume that Islander East considers the sediment that is not suspended (50% of the jetted sediments) will be sufficient to bury the pipeline to half its diameter. Potentially, there would be mounds of unspecified size on each side of the pipe, and a trench of unknown width. The consistency of the sediment after jetting is not discussed. In addition, a considerable number of anchor scars, an estimated 2,628 reported in the DEIS, will result in permanent habitat alteration. The discussion of these scars is limited to short-term impacts and eventual recolonization by invertebrates. While much of the scar area would be

recolonized, these kinds of depressions can become sinks for organic matter and detritus, further inhibiting recovery. A search of the literature would be useful to determine if these kinds of features have been studied.

The pipeline passes through productive lobster habitat. DEP Marine Fisheries is aware of at least four Connecticut commercial lobstermen who fish in the area and who may have a significant portion of their gear in the work corridor. Islander East has met with commercial lobstermen to discuss their concerns and attempt to minimize the impacts on their fishing activities. Several items are listed in the DEIS that focus on minimizing interference with fishing activity. One major item is to install the pipeline during winter months when fishing activity is minimal. This condition would limit the installation to approximately January through March. It is not clear if Islander East would do the construction during these months. Furthermore, as recognized in the DEIS, winter often brings storms that could exacerbate the problems with suspended sediment in the nearshore areas as described above.

Although construction during the winter may lessen impact on fishing activity, it should be noted that there is probably no time of year that would be better than any other for reducing the mortality of lobsters as a result of installation. Such mortality may have a negative effect on the local lobster fishery. The DEIS concludes that impacts to lobsters will be temporary, however, the duration of the effects on lobster habitat and the effect on local fisheries is not discussed. Due to the large amount of acreage involved, significant mortality of lobsters is likely from trenching, side-casting, suspended sediment, cable sweep, and anchoring. Eventually, lobsters will move in from surrounding areas, and larval lobsters will settle in the area. But in the interim, local catches of legal size lobsters may decrease, and the amount of time needed to return to pre-installation catch rates is not known. Also, the amount of permanent habitat rendered unsuitable due to trenching and anchoring is not addressed. Some of these areas may become unsuitable as lobster habitat (e.g., anchor holes, and sediment in the trench that may not reconsolidate).

Due to the possibility of long-term habitat alterations and very difficult short-term effects described above, the choice of equipment, i.e., the plow vs. the jet, should not be determined by Islander East simply on the basis of availability. Once the issues raised here are addressed, equipment can be selected that will minimize impacts.

Lastly, from a Long Island Sound perspective, it should be noted that the Eastern Long Island Extension (ELI) System Alternative would avoid trenching in shallow water habitat. This project should also be examined to determine if a route is possible which would also minimize disruption of lobster habitat and fishing activities.

Wetland Impacts

As stated in the DEIS, there will be numerous impacts to the wetlands crossed by the pipeline including direct excavation, grading, filling, compression, and various

potential changes to wetland hydrology. While some of the impacts will be temporary, many will be permanent. The proposed project will alter over 34 acres of inland wetlands in Connecticut. By comparison, for the calendar years 1998 and 1999, the total wetland alterations permitted in the entire state were 138 and 132 acres, respectively. In addition, 123 acres of wetlands were created in 1998 and 66 acres in 1999 as mitigation for associated alterations.

The DEIS does not include any discussion of mitigation of wetland impacts. The FEIS should evaluate opportunities for restoration of wetlands and watercourses along the project corridor. Given the degraded nature of many of the wetlands along the corridor, it should not be difficult to identify opportunities for mitigation. Many of the wetlands along the Algonquin pipeline right-of-way are dominated by *Phragmites*, while those along the Branford Steam Railroad are impacted by drainage constrictions, invasive species, and occasionally debris. With the substantial wetland impacts of the Islander East proposal, mitigation of these impacts should be provided.

A detailed review of all inland wetland disturbances and stream and river crossings will be conducted by DEP's Inland Water Resources Division. Application materials describe several possible approaches to wetland and watercourse crossings that may be implemented depending on site-specific circumstances. More detailed information relevant to each specific crossing will be necessary prior to staff review.

Additionally, Islander East's application materials state that vernal pools may be present in the corridor. Vernal pools are sensitive habitats that support obligate species, some of which are listed as threatened in Connecticut. At least two vernal pools were identified during DEP field review for these comments. One lies on the west side of the railroad tracks just south of the sewer line right-of-way at Hubbard Road, while a second lies on the east side of the tracks south of Interstate 95 and appears to be right at the delineated limit of the project work area. Additional information should be provided in the FEIS that specifically identifies the boundaries of all vernal pools, the upland area habitat that supports resident species through their life cycles, and how construction activities and removal of vegetation within the right-of-way may affect the habitat and hydrology of the pools. This information will be critical to the review to be conducted by DEP's Inland Water Resources Division.

Watercourse Crossings and Issues

To protect fisheries resources in inland waters, the DEIS calls for conducting in-stream work during the low flow seasons, consistent with DEP Inland Fisheries Division guidance. Typically DEP Fisheries requests that in-stream work be limited to the period running from June 1 through September 30. In streams not supporting cold water fisheries, work beyond September may be allowed on a case-by-case basis after reviewing construction plans.

Streams supporting anadromous fisheries resources may be subject to additional restrictions to ensure that construction does not interfere with successful migration to spawning areas. This would apply to the Farm River and Stony Creek.

The proposed plan calls for completing all 12 watercourse crossings in Connecticut using the flume method. It is noted that the dam and pump method may also be used. DEP Fisheries will provide comments on these stream crossing issues within the DEP Inland Water Resources Section 401 Permit review rather than at this time.

Project engineers should attempt to construct all stream crossings to avoid damage to important fish habitats that cannot readily be restored after the crossings are completed. Examples of habitats to be avoided include undercut banks, especially where they are associated with the roots of large streambank trees. Other habitats that may be difficult to recreate include scour holes and other deep pools. Project designers are also urged to 1) minimize the work footprint both within the watercourses and within the adjacent riparian areas, 2) use bio-engineering to reestablish stream banks rather than using hard armoring, 3) avoid or minimize the in-stream use of rip-rap, 4) minimize clearing of vegetation in riparian areas, and 5) preserve and restore riparian vegetation to the greatest extent possible, as it aids in shading and cooling water, as well as providing protective cover. With respect to in-stream use of rip-rap, any rip-rap used should be installed below grade and overlaid with stockpiled streambed substrates that had been removed to construct the crossing.

Branford Steam Railroad

The latter four miles of the Connecticut on-shore portion of the pipeline follows the Branford Steam Railroad (BSRR) corridor. It crosses the tracks themselves six times during the four miles. These crossings are intended to minimize wetland impacts, avoid rock outcrops, avoid conflicts with the railroad's operations and future plans, and potentially minimize impacts to residences along the northern portion of the four miles. Due to the abundance of trackside wetlands and these other constraints, it is not always possible to be on the "right" side of the tracks.

The one area where it is pretty clear that the pipeline is on the "wrong" side of the tracks is at BSRR's marshalling yard just north of Pleasant Point Road. Here the pipeline stays on the east side of the yard, running through wetlands, rather than on the dry ground to the west. We understand that this reflects the plans of the railroad to expand this yard westward and, therefore, understandably they do not wish the pipeline to be in this area. It might, however, be possible to run the pipeline west of the limits of the yard expansion, avoiding both wetlands and conflicts with the railroad's plans.

DEP concurs with FERC that the Pond Variation along the southern portion of the BSRR corridor is preferable to the applicant's proposed route. Although the water quality in the pond appears to be very good and the pond will be severely disturbed by the short-term construction impacts, permanent impacts to the pond should not be great.

The construction activities will remove the *Phragmites* growth along the eastern edge of the pond. The Pond Variation will avoid the longer proposed route which covers uneven terrain, would require extensive forest clearing, would require blasting to traverse rock outcrops and would disturb Branford Land Trust property.

Due to the nature of the cargo carried by the Branford Steam Railroad, i.e., crushed trap rock, its cars carry very heavy loads. It would seem that the vibration caused by these trains passing along and over the pipeline could, in the long term, damage section welds or have other deleterious effects on the pipe. FERC may wish to consider incorporating shock absorbent matting under or around the pipe, either for the length of the railroad corridor or at least where the pipeline crosses directly under the tracks.

Environmental Inspector

Condition #7 of the FERC Staff Recommended Mitigation (page 5-13) requires an environmental inspector for each construction spread to monitor construction activities and ensure compliance with all environmental permits and conditions. This is a valuable measure. DEP would like to further recommend a mechanism for administering this which has worked exceedingly well, by accounts of all involved parties, first on Amtrak's Northeast Corridor electrification project, then on large scale State transportation projects. The recommended mechanism is to have the project applicant (Amtrak or ConnDOT in our cases, Islander East here) fund the environmental inspector position(s) but have the inspector(s) be either an employee of FERC or a direct reporting contractor to FERC. This not only removes any external appearance that environmental monitoring might not be strictly undertaken, but it maximizes the effectiveness of the environmental inspector. This arrangement has worked out very well for us and been praised by the project sponsors. We highly recommend this approach to FERC and Islander East should this project proceed.

Invasive Species

As note earlier, *Phragmites* has taken dominant hold in several wetlands crossed by the existing Algonquin pipeline in North Haven and North Branford. This is consistent with experience in other utility corridors as well. As this and other invasive species become established and proliferate through pipeline corridors, they gain easier access to other areas that may become disturbed. The DEIS is unclear as to when native species will be planted post-construction versus when areas will be allowed to become reestablished naturally. Mitigation of invasive species and long-term control is not directly addressed in the DEIS analysis. It calls for Islander East to inventory the status of nuisance species and report on native species diversity. The applicant should prepare an invasive species management plan that includes restoring disturbed areas with native vegetation and continuous monitoring and removal of invasive species over the life of the project. The plan should also apply to any future maintenance or repair work that may be needed to the pipeline. An evaluation of the existing vegetation within Algonquin's

right-of-way may show the potential for invasive species to propagate in this region and provide useful information on formulating an effective management plan.

Open Burning

Options for disposal of trees and brush cleared from the right-of-way are discussed on page 2-10 and in the Erosion and Sediment Control Plan on page 3-4. These are listed as stockpiling on-site, hauling off-site for disposal, chipping and spreading, or open burning. (Merchantable timber would be sold.) Open burning is no longer allowed in Connecticut for disposal of land clearing debris. The previous exemption allowing open burning was repealed in 2000. DEP would prefer chipping and spreading as the optimal disposal method for unmerchantable materials.

Rock Backfill

On page 3-9 of the Erosion and Sediment Control Plan, under Backfilling (Sect. 3.5.8), condition 2 states "Excess rock, including blast rock, may be used to backfill the trench to the top of the existing bedrock profile in accordance with Company specifications." It is our understanding that rocks should not be in contact with the pipe after backfilling, and that the builders of the Iroquois pipeline were assessed significant penalties for failing to adhere to restrictions against direct rock-pipeline contact on sections of their facility in New York State. This condition of the Plan does not appear to be consistent with that concern.

Site-Specific Sediment Surveys

On page 3-36 of the DEIS, FERC recommends that Islander East perform site-specific sediment surveys to confirm that affected corridor sediments are below Effects Range-Low (ERL) criteria. DEP assessments to date of pipeline corridor sediments have not indicated that any contamination problems are present. However, if additional surveys are performed, DEP requests that results of such surveys be provided to George Wisker of the DEP Office of Long Island Sound Programs for review.

Site-Specific Sedimentation and Erosion Plans

While this is not, strictly speaking, a DEIS comment, Islander East should be aware that they will need to provide DEP with site-specific plans for each wetland and watercourse crossing, including the S&E controls proposed at each site, for review for the Section 401 Water Quality Certificate. Application materials submitted to date outline, in a generic fashion, S&E methods that would be used depending on site conditions. However, without site-specific information on topography, soil type, access and staging areas, orientation and location of on-site and adjacent resources, and other factors, we cannot adequately evaluate the effectiveness of the proposed S&E control methods. With respect to access road improvements, Section 3.2 of the Erosion and Sedimentation Control Plan states that access roads may require replacing or installing culverts. Such

improvements should be identified in the application along with the necessary information to allow a complete review of the potential adverse impacts from these activities.

Cheshire Compressor Station

The Cheshire Compressor Station will have a direct impact on actively used agricultural land. According to the DEIS, 6 acres of agricultural land will be impacted permanently. Application materials submitted to the Connecticut Siting Council show an access road alignment to the station that perfectly bisects the existing actively used fields. It appears that the access route could be run closer to Interstate 691 along the northern edge of the fields, very substantially minimizing the loss of active cropland while still avoiding conflicts with the tie-in gas line from the compressor station to the Algonquin pipeline. There do not appear to be any other impacts that would result from this alignment.

It is noted that the compressor station site lies within the North Cheshire Wellhead Aquifer Protection Area (APA). It appears that the project had made a good attempt at avoiding most important groundwater resources, and important existing and potential water supply sources. However, additional information on two points needs to be supplied. Site selection justification and alternatives must be discussed to explain why the facility is located within to APA or whether it can be located elsewhere. Details of the activities proposed in the Control Auxiliary building need to be provided and assessed relative to potential impacts to the aquifer. Included should be a description of potential groundwater quality impacts and mitigation measures. Protection and mitigation measures should address underground storage tanks, emergency generator fuel, hazardous material and equipment storage, workshop chemicals, wastewater disposal and stormwater management to the extent that any of these issues are relevant to the design and function of the auxiliary building or compressor station.

Design and operation measures for this facility should include: 1) no underground storage tanks or piping for oil or petroleum fuel or hazardous materials. Any aboveground emergency fuel storage should be minimized and be double walled or incorporate 110% secondary storage. 2) Above ground hazardous material storage should be minimized to small containers such as 2.5 gallon size, with a 55 gallon maximum on total storage. Storage should be inside the building and have 110% secondary containment. 3) No dry wells, floor drains or other infiltration structures shall be sued in the buildings, and 4) A pollution prevention and emergency response plan should be developed for any hazardous material.

Relative to the DEP Air Bureau's Permit to Construct and Operate for the Cheshire Compressor Station, the following minor points are noted:

- On page 3-123, reference is made to Section 22a-174-3 of the Regulations of Connecticut State Agencies. This section had been replaced with Section 22a-174-3(a).
- A general conformity analysis should be conducted if there is federal involvement associated with this project. Please refer to 40 CFR 93.150, Subpart B, which states "No department, agency or instrumentality of the Federal government shall engage in, support in any way or provide financial assistance for, license or permit, or approve any activity which does not conform to an applicable implementation plan."
- The project is located in an area that is classified as non-attainment for ozone and maintenance for CO. Therefore, a general conformity analysis should evaluate emissions of NO_x, VOC, and CO associated with this project. The analysis should include all emissions, direct and indirect as defined in 40CFR 93.152).
- Per our comments provided during the scoping phase of this project, best management practices should be utilized to minimize air quality impacts. DEP recommends the use of construction equipment with air pollution control devices, such as diesel oxidation catalysts or particulate filters.
- As identified in the previous review of the project, construction of the compressor station should consider noise sensitive receptors in the area. The compressor station must conform to State noise regulations, Section 22a-69 of the Regulations of Connecticut State Agencies.

Mid-line Buoys

Cable sweep impacts account for the majority of this project's acreage of disturbed bottom of Long Island Sound. As shown on the tables on pages 3-38 through 3-41, the extent of this impact can be significantly reduced through the use of mid-line buoys to suspend the anchor cables above the Sound floor. Depending on the pipeline placement method chosen, cable sweep impacts are reduced 37-44% from the area impacted without the buoys. Therefore, we ask if it is possible to employ perhaps two buoys per anchor cable and thereby achieve a further significant reduction by suspending a greater percentage of the anchor cable length off the bottom. Obviously, a point of diminishing returns is soon reached. However, if the buoys, once set upon the cables, do not require further manual efforts to reset them, it may be practical to employ two (or more) buoys per line and achieve worthwhile further reductions in cable sweep impacts. In any case, we will require the applicant to address this or other methods to reduce cable sweep impacts during the permitting process.

Alternative Onshore Construction Methods

The DEIS states that the "stove pipe" or "drag section" methods may be used where residences and businesses are closer than 25 feet from the work area or where the construction right-of-way is narrow. These methods are not described with the same level of detail as the other methods. It appears these methods would cause less disturbance and thus potentially fewer environmental impacts. The FEIS should address

why these methods are not proposed to be utilized more extensively throughout the corridor.

Pipeline Life Span

What is the predicted useful physical life (not economic life) of a pipeline using current technology and standards? Who is responsible for removing it after abandonment should that need arise, in whole or in part? While it may be worthwhile to leave an abandoned pipeline in place rather than risk the impacts of removal, it could be necessary or desirable to remove al least portions of it someday. Does FERC's authorization anticipate and speak to that situation?

Again, DEP appreciates the opportunity to review this DEIS and to submit these comments. Please feel free to contact Frederick Riese of my staff at (860) 424-4110 if you have any questions about any points contained herein.

Sincerely,

Arthur J. Rocque, Jr.
Commissioner

AJR:FLR