UNITED STATES DEPARTMENT OF COMMERCE

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Federal Consistency Appeal

By Millennium Pipeline Company

From an Objection by the

New York Department of State

Reply Brief and

Supporting Information and Data

of the New York Department of State

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PRELIMINARY STATEMENT

The New York State Department of State (DOS) submits this Reply Brief in support of its determination that Millennium s project to construct a natural gas pipeline along the proposed route is inconsistent with New York's Coastal Management Program (CMP). DOS s objection to the Millennium proposed project is premised on the adverse coastal effects of excavating, backfilling, and blasting through bedrock across 2.1 miles of Hudson River bottom in Haverstraw Bay, one of the most significant coastal fish and wildlife habitats in the northeastern United States, traversing the Wellfield of the Village of Croton-on-Hudson s primary domestic water supply and its arboretum, and crossing the fragile Bryn Mawr Siphon of the Catskill Aqueduct which supplies 40% of the daily drinking water supply for nearly 9 million people within and outside the City of New York.

DOS s objection to the Millennium proposal is founded on concerns about poor siting and planning for this particular proposed pipeline route in several critical locations. Indeed, DOS recognizes the benefits and desirability of introducing new natural gas supplies and transmission facilities into New York. The State strongly endorses that objective and has worked hard to ensure that adequate pipeline capacity continues to exist in the State. Moreover, DOS has determined numerous pipeline and cable projects to be consistent with the CMP, including projects that cross the Hudson River. [1] If it had been routed more appropriately, Millennium s pipeline would also have been found consistent. Indeed, if Millennium adopts one or more of

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[1] Islander East, F-2002-1515; Coastal Gas Pipeline, F-2002-00845-RS; Iroquois Natural Gas Pipeline; Central Hudson Gas & Electric Corp., F-2001-1069; and Niagara-Mohawk-Hudson River Gas Line Crossing, F-96-326. Central Hudson Gas & Electric Corp., F-97-282; Trancontinental Gas Pipeline Corp., F-97-521 and F-98-259; TCI of New York, F-96-510; MFS Network Tech. F-97-688; Telenergy Joint Venture, F-98-278, among others.

the alternatives identified by DOS as consistent with the CMP, no further consistency review would be necessary.

Instead, Millennium proposes to construct its pipeline across one of the most biologically productive and important coastal wildlife habitats in the northeastern United States, through pristine wetland preserves, and over critical water supply facilities. Millennium urges us to ignore these serious environmental impacts, in light of the great need for this pipeline. However, the Millennium pipeline would merely add to the many natural gas facilities that are already in operation or under development to serve the northeast energy market; this pipeline is simply not presently needed to relieve constraints or achieve cost savings in that market. More importantly, Millennium has several alternatives to its proposed route which would allow the project to proceed, while eliminating its impacts to critical coastal resources.

The proposed crossing of Haverstraw Bay was a critical planning flaw of the Millennium project. Construction of the pipeline would require dredging, backfilling, and -- as we learned only very late in the review process -- underwater blasting, which will effectively destroy at least 108 areas of the designated Significant Coastal Fish and Wildlife Habitat, permanently fragment a previously undredged, highly productive area, and result in adverse long-term, population-level effects to important Hudson River and North Atlantic fisheries. Construction operations will also have immeasurable impacts on critical fish and wildlife resources in the Bay, including mortalities of endangered species and numerous other benthic and aquatic organisms. Dredging and blasting activities will destroy valuable habitat. Furthermore, 108.5 acres of benthic communities and habitat in the vicinity of the pipeline trench will be significantly impaired by the sediments that will be resuspended in the water column and which will settle back onto the

riverbed during and after the dredging and backfilling activities. Blasting will not only destroy benthic habitat in the bay, permanently altering this portion of the significant habitat but also change the physical and hydrologic properties of the bay. As evidenced by a few pipeline projects in the Hudson River that involved dredging, backfilling, and blasting activities, the habitat may never successfully recover from the construction activities. The impacts to the habitat would indeed be incalculable.

In response, Millennium claims that all these issues have been resolved, and that FERC has determined the habitat impacts to be minimal and temporary. But Millennium s reliance on FERC is entirely misplaced. FERC does not have or even claim to have expertise or authority in coastal resource matters[2], and that it is inappropriate for Millennium to suggest that the Secretary defer to FERC in this appeal.[3] Moreover, all of the commenting federal agencies that do have actual jurisdiction over, and institutional expertise with regard to, natural resource matters, including NOAA Fisheries, the U.S. Army Corps of Engineers (Corps), and the U.S. Fish and Wildlife Service, unanimously disagree with Millennium s self-serving no impact claims regarding the Haverstraw Bay crossing.

Millennium s proposed pipeline would also cut directly across two important coastal zone

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[2] This objection raises issues of topography, water flow, and its effects, if any, on coastal environments, that are not generally within the mission and expertise of FERC. Expertise on those subjects rests with NOAA. Mountain Rhythm Resources v. FERC, 302 F.3d 958, 964 (9th Cir. 2002).

[3] Prior CZMA appeal decisions consistently hold that the Secretary s review is *de novo*, and that, as such, [t]he concept of deference is inappropriate in the appeals process. Decision and Findings in the Consistency Appeal of Amoco Production Company from an Objection by the Division of Governmental Coordination of the State of Alaska, U.S. Secretary of Commerce (July 20, 1990)(rejecting appellant Amoco s argument that the Secretary must defer to the U.S. Department of Interior regarding the proposed activity).

resources located in the Village of Croton-on-Hudson: (1) the Wellfield that provides the Village its only viable source of drinking water, and (2) the Jane E. Lytle Memorial Arboretum, a Village-owned nature preserve and pristine wetland. The weight of the record evidence supports the finding that the pipeline will create significant, direct, and irreparable impacts to these protected natural resources. In the Wellfield, the pipeline would traverse the Zone 1 Wellhead Protection Area, posing an unjustifiable risk of impairing the Village s sole source of drinking water. Moreover, pipeline setback requirements would eliminate a key section of the Wellfield from consideration for the development of needed new water wells. In the Arboretum, the pipeline would destroy a critical forested buffer zone laced with feeder streams, threatening the viability of Arboretum wetland. These conclusions are based on several site-specific studies prepared by three different consultants over a period of more than 20 years. In contrast, Millennium has not advanced a single site-specific study or plan that supports its untenable position that the pipeline will have no impact on these areas. Instead, Millennium claims that these areas have "no coastal significance," and launches an unseemly attack on the credibility of one of the Village s consultants.

The proposed pipeline also crosses the Catskill Aqueduct of the New York City Watershed at the Bryn Mawr Siphon and the water supply land located in the New Croton Reservoir Watershed, thereby impacting locations in the coastal area which are dependent on the water supply. Based on a field examination conducted by Millennium, there exists as little as a 1.71-foot separation between the proposed pipeline and the public water supply aqueduct of the nation s largest city. Millennium contends in its Reply Brief that the environmental and safety related issues regarding the Bryn Mawr Siphon are well under control. Millennium assures the

Secretary that it will find undiscovered solutions to problems - engineering or otherwise - where it does not now have answers. It claims that it will work closely with the NYCDEP to find a solution to the Bryn Mawr Siphon problem even though NYCDEP represented that it disagrees with and opposes Millennium's crossing plans. Millennium has not presented any evidence that their route will protect the City s Catskill Aqueduct at the Bryn Mawr Siphon. Given the water supply system s critical importance to the City of New York and other municipalities and that the proposed routing of the pipeline poses significant risks that have not been adequately addressed by Millennium, the adverse coastal impacts of routing the pipeline in this critical water supply area are enormous and outweigh any conceivable national benefit of the project. The City s water supply is irreplaceable and of greater importance. Furthermore, an alternative is available and consistent with the CMP.

In addition to Millennium s failure to acknowledge the coastal impacts created by its proposed route, Millennium has refused to accommodate the recommendations of DOS and numerous federal agencies that the pipeline be re-routed around these protected portions of the coastal zone. DOS has set forth numerous alternatives, in its decision and its Initial Brief, which are reasonable, available and consistent with the Coastal Management Program. Any of these alternatives, if adopted, would be deemed consistent with the New York Coastal Management Program without further consistency review.

In its Reply Brief, Millennium and its consultant (Baker) speculated about potential difficulties with the alternatives. As result, for purposes of preparing this brief, DOS retained O Brien & Gere, an engineering firm having prior experience with the Millennium project, to conduct site visits of certain DOS alternative routes in light of the comments made by

Millennium in its Reply Brief. After conducting several field visits with Millennium s issues in mind, O Brien & Gere reconfirmed the availability and reasonableness of such routes and as appropriate, suggested slight modifications in certain routes to ensure their engineering and cost feasibility. Certain of these alternative routes would be much shorter overall, would have shorter Hudson River crossings, and would either eliminate entirely, or substantially reduce, the impacts of the pipeline to significant habitat and other critical coastal zone resources. The results of the O Brien & Gere reassessment has been incorporated into the text of this document and are described in greater detail in the Alternatives section.

There are numerous reasonable alternatives available but Millennium chooses not to pursue them. The alternatives DOS has identified are reasonable ones that are available to Millennium to properly route its pipeline and accomplish its objectives, and consistent with the CMP. Thus, in light of the critical problems associated with Millennium s proposed route, together with the demonstrated existence of several readily available alternative routes or realignments that would eliminate or greatly reduce the pipeline s impacts, DOS urges the Secretary to conclude that routing the pipeline through Haverstraw Bay, the water supply and arboretum of Village of Croton-on-Hudson, and the Bryn Mawr Siphon of the Catskill Aqueduct is neither consistent with the objectives of the CZMA nor necessary in the interest of national security.

Appellant is not entitled to relief on the procedural ground of timeliness because DOS and Millennium entered into an agreement to extend the six-month review period, within which the DOS objection was timely made. The six-month review period for this project commenced on March 12, 2001, and was extended by agreement between DOS and Millennium. That

agreement provided for an additional 60 days, but also contemplated additional time to address changes to the project, which was still evolving at that time. A further significant project change - blasting in Haverstraw Bay -requiring additional review by DOS and the Federal agencies was introduced by Millennium. DOS issued its objection on May 9, 2002, only 16 days following receipt of the necessary information from Millennium.[4] The DOS objection should be sustained as timely, and Millennium s appeal on the basis that the objection was untimely should be rejected.

For all the reasons stated herein, DOS respectfully urges the Secretary of Commerce to uphold the DOS consistency objection and find that:

- The Millennium pipeline does not further any of the objectives of the CZMA in a significant or substantial manner;
- The Millennium pipeline will have significant, permanent, and unnecessary impacts to critical and irreplaceable natural resources in New York s coastal zone, which impacts far outweigh any marginal benefits of the project;
- There are several reasonable and available alternative routes that would allow Millennium to serve the purposes of the project, while eliminating or substantially reducing the coastal impacts of the proposed project;
- The project is not necessary in the interests of national security;
- Millennium is not entitled to relief on procedural grounds, because DOS and Millennium entered into an agreement to extend the six-month review period,

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[4] DOS Exhibit 1. Letter from George R. Stafford, Director, Division of Coastal Resources, DOS to Thomas S. West (May 9, 2002).

within which the DOS objection was timely made.

Upholding the DOS decision will allow Millennium to return to FERC with reasonable and available alternatives and to encompass all relevant siting and routing issues in a single amendment. The vast majority of the route has already been the subject of a FEIS and, as such, only a portion of it would need to be revised or supplemented to reflect the modified routes.

I. THE DOS OBJECTIONS WERE TIMELY

Millennium proposes to construct a high-pressure natural gas pipeline that would cross (1) Haverstraw Bay, one of the most biologically productive and important coastal fish and wildlife habitats in the northeastern United States, (2) the Bryn Mawr Siphon of the Catskill Aqueduct, the source of 40% of the drinking water for nearly 9 million people in the New York City area, and (3) the well-field of the primary domestic water supply for the Village of Croton-on-Hudson.

DOS fulfilled its obligations under the Coastal Zone Management Act (CZMA; 16 USC Sections 1451 et seq.) by reviewing the project for consistency with New York s Federally-approved Coastal Management Program (CMP). DOS received the last of the information necessary to perform this review on April 23, 2002, when Millennium delivered its plans and related information for proposed blasting in Haverstraw Bay. Just sixteen days later, on May 9, 2002, DOS completed its review and found the project to be inconsistent with the CMP.

Despite the short 16-day turnaround, Millennium continues to argue that the consistency objections made by DOS should be dismissed as untimely. Millennium s argument regarding timeliness is based on a false premise and Millennium s procedural arguments fail, for the reasons discussed below.

A. Chronology of DOS s consistency determination

An evaluation of Millennium s timeliness argument requires a review of events leading up to the issuance of DOS s consistency objection.

1. On March 12, 2001, DOS received a copy of the Supplemental Draft Environmental Impact Statement (SDEIS) prepared by the Federal Energy Regulatory Commission (FERC). Shortly thereafter, DOS received a letter from Millennium dated March 23, 2001; transmitted with that letter was a copy of a supplemental submission by Millennium regarding the purported consistency of this project with the New York CMP. Millennium s letter referenced the SDEIS and the supplemental submission, and contained the following representation: . . . DOS now has *all information it needs* to proceed with its decision-making concerning the Millennium Project. [5]

2. Significantly, neither the SDEIS nor Millennium s supplemental submission nor the March 23, 2001 letter from Millennium discussed blasting in Haverstraw Bay. Indeed, the March 23, 2001 letter extolled Millennium s proposed lay barge construction technique as a low-impact technology, and represented that

> . . . the construction through Haverstraw Bay will cause no permanent or long-term loss, destruction or impairment of habitat. There will be no permanent or biologically consequential change in substrate . . . . [6]

Thus, it is clear that as of March 2001, the project before DOS for review did *not* include blasting in Haverstraw Bay.

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[5] DOS Exhibit 15, at page 8 (emphasis added).

[6] DOS Exhibit 15, Thomas S. West, Esq. letter dated March 23, 2001 to William F. Barton, at page 2 and page 4 (emphasis in original).

3. DOS relied on Millennium s representations and, by letter dated April 5, 2001, DOS informed Millennium that DOS commenced its review of this project.[7] However, DOS s letter stated that review was commenced

> . . . because the SDEIS and other documentation that you provided *appear* to address all relevant coastal concerns and it is likely that the proposed project will not be significantly changed in the FEIS. [8]

Further, DOS s letter stated that

> should Millennium s project be significantly changed as a result of the federal environmental review process, a new consistency review may be necessary. [9]

4. Responding by letter dated April 17, 2001, Millennium expressly acknowledged that changes in the project, as then proposed, would result in further consistency review:

> (Millennium s) request for final decision-making is subject to the understanding stated in your letter dated April 5, 2001, that should Millennium s project be significantly changed as a result of the federal environmental review process, a new consistency review may be necessary. *Millennium concurs with that procedure.* [10]

5. On July 26, 2001, Millennium submitted an amended consistency certification and analysis detailing its new Con Ed Offset/Taconic Parkway route. The amended consistency certification[11] contained no discussion of blasting in Haverstraw Bay.

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[7] DOS Exhibit 3, William F. Barton letter dated April 5, 2001 to Thomas S. West, Esq.

[8] Id, at page 1 (emphasis added).

[9] Id, at pp 1-2.

[10] DOS Exhibit 33, Thomas S. West, Esq. letter dated April 17, 2001 to William F. Barton (emphasis added).

[11] See Millennium s Exhibit 15.

6. A major revision of the SDEIS data was undertaken for the FEIS. However, the FEIS was not expected until October 2001. Thus, Millennium knew that it would be unable to fulfill its obligation to provide DOS with the information necessary for DOS to conduct its review until some point well after September 12, 2001 (the six-month anniversary of the date on which DOS received the SDEIS).

7. On September 10, 2001, just two days before the end of the initial six-month period, Millennium e-mailed a draft extension letter to DOS.[12] On September 12, 2001, Millennium and DOS exchanged letters agreeing to extend the time for DOS to render its consistency determination. Millennium s letter[13] indicates that review would be completed after issuance of the FEIS. The DOS letter states that DOS expects to complete its review within 30 to 60 days after its receipt of the FEIS *barring any significant pipeline routing or other project changes which may have effects upon the coastal zone of New York State.* [14] Thus, the September 2001 extension agreement reflected the continuation of the concept first agreed to in April 2001: changes to the project would result in further consistency review. Significantly, Millennium did not object to the continuation of this concept when the September 12, 2001

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[12] DOS Exhibit 5. In its Reply Brief, Millennium denies that it was the party that requested the extension. For the record, DOS would like to reiterate that, in fact, Millennium *did* request the extension. More importantly, DOS would like to point out that for the purposes of this appeal, it is wholly irrelevant who first requested the extension: what is important is that the parties agreed to alter the review period, and that DOS issued its consistency objections well within any applicable time period.

[13] DOS Exhibit 6, Thomas S. West, Esq. letter dated September 12, 2001 to William Barton.

[14] DOS Exhibit 7, William Barton letter dated September 12, 2001 to Thomas S. West, Esq. (emphasis added).

letters were exchanged (although it apparently now seeks to do so for the purposes of this appeal).

8. On October 5, 2001, DOS received a copy of the FEIS. The FEIS contained no discussion of any proposal to conduct blasting in Haverstraw Bay.

9. On October 11, 2001, Millennium submitted a draft of the Millennium Pipeline Environmental Compliance Management Program to the U.S. Army Corps of Engineers (the Corps). This document contained new project information related to underwater blasting in Haverstraw Bay. Millennium did *not* notify DOS of this project change, or provide DOS with this document, at this time.

10. On or about November 27, 2001, DOS received an indication that Millennium s project had been changed by the addition of proposed blasting. DOS did not receive this indication from Millennium, but by a notation in a cover sheet prepared and transmitted by the Corps. After DOS received the Corps cover sheet, DOS contacted the Corps to obtain clarification and further information regarding Millennium s change of plans to incorporate blasting.

11. By letter dated December 11, 2001,[15] the Corps advised Millennium that information regarding blasting, including a complete description of the proposed blasting plan, an assessment of water quality impacts, an assessment of fish and wildlife impacts, and other information, would be required. The Corps letter of December 11, 2001

" identified the proposed blasting as new project information ,

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[15] DOS Exhibit 9, George Nieves (Chief, Corps Western Permits Section) letter dated December 11, 2001 to Millennium.

" pointed out that there is no information in the (FEIS) describing blasting in the Hudson River ,

" specified that the information was required in connection with the processing of (Millennium s) application , and

" indicated that Millennium should provide a copy of the blasting-related information to a number of other agencies, including DOS.

12. By letter dated December 14, 2001,[16] DOS notified Millennium, as well as FERC, the Corps and OCRM, that:

" the proposed blasting in Haverstraw Bay was a project change which may have effects upon the coastal zone of New York State (referencing DOS s September 12, 2001 letter confirming the agreement to alter the review period in this matter),

" DOS required the blasting-related information identified in the Corps letter of December 11, 2001 . . . so that we may determine the consistency of this project, and

" (w)ithout this information, DOS must find the proposed pipeline project inconsistent for lack of necessary data and information.

13. On December 19, 2001, FERC issued its Interim Order in this matter. With regard to Millennium s proposed blasting in the Hudson River, the Interim Order

" provides that Millennium must file a Hudson River crossing work plan for review *and approval,* noting that such approval is required since blasting in the Hudson River will modify Millennium s filed Hudson River crossing procedures, [17]

" identifies Millennium s plan to blast in the Hudson River as new information, [18]

" directs Millennium to continue consultation with the United States Fish and Wildlife Service (FWS) and to re-enter into consultation with the National Marine

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[16] DOS Exhibit 11, William F. Barton letter dated December 14, 2001 to Thomas S. West, Esq.

[17] 97 FERC 61,292, at page 51.

[18] 97 FERC 61,292, at page 52.

Fisheries Service (NMFS) and the New York State Department of Environmental Conservation (NYSDEC), noting that the Water Quality certificate previously issued by NYSDEC required Millennium to construct its Hudson River crossing as described in Millennium s application and supplements and in more detail in the final EIS, [19]

" conditions commencement of construction of any project facilities upon the filing of a determination of consistency with the New York State CMP,[20]

" conditions commencement of construction upon Millennium obtaining a Rivers and Harbors Act Section 10 permit and a Clean Water Act Section 404 permit from the Corps,[21]

" provides and acknowledges that (t)he potential blasting will also affect the ongoing permitting process for the Corps ... and (DOS), [22] and

" specifies that Millennium cannot be constructed until it receives a coastal zone consistency determination from (DOS). [23]

Thus, in its Interim Order, FERC reaches the same conclusion previously reached by the Corps and DOS: Millennium s proposal to blast in the Hudson River was a new and significant project change, and Millennium would be required to provide detailed information with regard to its blasting proposal in connection with its still-ongoing permit and license application processes.

14. By letter dated February 15, 2002 (and received by DOS on March 8, 2002), the National Marine Fisheries Service (NMFS) advised FERC of the following:

" that in letter dated January 23, 2002, . . .counsel for (Millennium) states that

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[19] Id. As previously discussed, the FEIS does not discuss blasting in Haverstraw Bay.

[20] 97 FERC 61,292, Condition 54 at page 104.

[21] 97 FERC 61,292, at page 52.

[22] Id.

[23] 97 FERC 61,292, at page 58.

(Millennium s) construction plans for the Hudson River have changed and that Millennium . . . now proposes to fracture the rock with blasting techniques . . . [24]

" that NMFS agreed with FERC s determination that this revision to the construction plans merits additional evaluation and that it was necessary to reinitiate project review . . . to address blasting and other unevaluated techniques to be used for a Hudson River crossing [25] and

" that NMFS requested coordination with FERC to analyze the potential effects under the National Environmental Policy Act.

Thus, NMFS joined the ranks of the other involved Federal agencies, each of which determined that Millennium s proposal to blast in the Hudson River was a new and significant project change, and that Millennium would be required to provide detailed information with regard to its blasting proposal in connection with its still-ongoing permit and licensing application processes.

15. In its letter to DOS dated January 25, 2002, Millennium admitted that

> . . . we appreciate the fact that the possibility for blasting in a very limited area of the Hudson River *was not addressed* in Millennium s Coastal Consistency filings with the DOS . . . . Millennium is committed to providing the DOS with *full and complete information* on all aspects of the Millennium Project that are subject to review by the DOS.[26]

Millennium made essentially the same admission again in its letter to DOS dated March 14, 2002.[27]

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[24] DOS Exhibit 10, National Marine Fisheries Service letter dated February 15, 2002 to FERC.

[25] Id.

[26] DOS Exhibit 12, at page 2 (emphasis added).

[27] Millennium, nevertheless, recognizes that the possible need for a limited amount of blasting in the Hudson River *was not addressed* until recently in Millennium s submissions to DOS, *regrets that oversight*, and *renews its commitment* to provide DOS with *full and complete information* on all aspects of the Millennium Project that are subject to review by DOS. (DOS Exhibit 13, Thomas S. West, Esq. letter dated March 14, 2002 to George Stafford, at page 2

16. On April 23, 2002, Millennium provided to DOS: (1) the Blasting and Mitigation Plan and (2) the Impact Assessment and Mitigation Plan for Blasting on the Millennium Pipeline in Haverstraw Bay.

17. On May 9, 2002, the Department rendered its consistency determination for the Millennium Pipeline Project.

B. DOS Concurrence Cannot be Presumed

Generally, consistency review should be completed within six months following commencement of State agency review.[28] However, NOAA regulations authorize the parties to extend the six-month period of review. Specifically, 15 C.F.R. § 930.60(a)(3) provides that:

> State agencies and applicants (and persons under subpart E of this part) may mutually agree to stay the consistency time clock or extend the six-month review period.

Further, commencement of review is a term of art. For the purpose of determining when a six month review period might begin to run, the time when a State agency is considered to have commenced its review must be determined in light of applicable NOAA regulations and the applicable State CMP.

As is clear from the foregoing chronology of events (the Chronology), and as will be more fully discussed below, any six-month review period that may have started in this matter was duly extended by the parties, and the DOS objections were issued well within the extension. In the alternative, the six-month time period did not commence until April 23, 2002 (when DOS

[emphasis added]).

[28] 15 C.F.R. § 930.62(a).

received the blasting-related information) and, accordingly, the DOS objections were timely when issued on May 9, 2002. In either case, NOAA regulations provide that DOS concurrence with this project cannot be presumed:

> A Federal agency shall not presume State agency concurrence with an activity where such an agreement exists or where a State agency's review period, under paragraph (a)(1)(I) of this section, has not begun.[29]

C. Any six-month review period that began prior to April 23, 2002 was duly extended by the parties.

DOS began to review this matter for consistency when it received the SDEIS. In doing so, DOS relied on the affirmative representations contained in Millenniums s March 2001 submissions.[30] DOS also acted in good faith and in furtherance of the NOAA regulation providing that consistency concurrence or objection be issued at the earliest practicable time. [31]

However, when DOS began its review, it expressly advised Millennium that the earlier-than-usual commencement of review was based on the assumption that DOS had received all required information when it received the SDEIS.[32] DOS also expressly advised Millennium that if the stated assumption proved to be unfounded, and if Millennium s project was subjected to any significant change, further consistency review would be required.[33] *Millennium expressly*

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[29] 15 C.F.R. § 930.60(a)(3).

[30] See items 1 and 2 in the Chronology.

[31] 15 C.F.R. § 930.62.

[32] DOS Exhibit 3. See also item 3" in the Chronology. DOS was clearly justified in making that assumption on the basis of Millennium s express representations as described in items 1" and 2" in the Chronology.

[33] DOS Exhibit 3, at pages 1-2.

concurred with this procedure.[34]

Following DOS s receipt of the SDEIS, Millennium s project was subjected to several significant changes. First, Millennium significantly changed the route of its pipeline in the coastal area. This change gave rise to significant new concerns.[35] It became apparent that, contrary to original assumptions, the SDEIS did not address all relevant coastal concerns. So extensive were the route modifications that, on July 26, 2001, Millennium submitted an amended consistency certification and analysis detailing its new Con Ed Offset/Taconic Parkway route.[36] The environmental aspects of this new route required a new, thorough analysis. A major revision of the SDEIS data was undertaken for the FEIS, which was not expected to be issued until October 2001.

After the changes mentioned above came to light, Millennium and DOS held discussions during which DOS indicated that it would find the project inconsistent with the CMP for lack of information. Millennium requested DOS to extend the review period to avoid such a finding at that time. Millennium s first draft proposed that:

> DOS will use its best efforts to determine consistency of the referenced project promptly (30 to 60 days) following issuance of the Final Environmental Impact

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[34] DOS Exhibit 33. See also item 4" in the Chronology.

[35] For example, the New York Attorney General expressed concern over the changes and their potential for adverse environmental impact on the New York City water supply that serves nearly 9 million people both within and without the city. See DOS Exhibit 4, Comments of the New York Attorney General Concerning Adverse Environmental Impacts of the ConEd Offset/Taconic Alternative Pipeline Route on the New York City Drinking Water Watershed , submitted in the application of Millennium Pipeline Company, L.P. to the Federal Energy Regulatory Commission (Sept. 4, 2001).

[36] See Millennium s Exhibit 15.

Statement for the project by the Federal Energy Regulatory Commission. [37]

The flexibility inherent in Millennium s proposal merely reflects the fact that the project was still evolving. On September 12, 2001, Millennium sent DOS a signed extension proposal with even more flexibility, proposing only that:

> DOS will determine consistency of the referenced project after issuance of the Final Environmental Impact Statement for the project by the Federal Energy Regulatory Commission.[38]

This request was made by Millennium in anticipation of the imminent release of the FEIS containing new routes and other matters of coastal concern. In light of these significant changes, and in an effort to avoid an objection, it is no wonder that Millennium proposed an extension of the review period without a specific time frame.

The DOS reply agreeing to an extension was sent that same day. The DOS letter of September 12, 2001 provided, in pertinent part, as follows:

> The Department of State acknowledges the receipt of your letter dated September 12, 2001 and agrees to extend the time period for its review of the above referenced project for consistency with the New York State Coastal Management Program. The Department *expects* to complete its consistency review within 30 to 60 days after receipt of the Final Environmental Impact Statement on the proposed project, *barring any significant pipeline routing or other project changes that may have effects upon the coastal zone of New York State.* [39]

Thus, the DOS letter made the following very clear: receipt of the FEIS would enable DOS to

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[37] DOS Exhibit 5. Draft letter from Thomas S. West to William Barton (September 10, 2001).

[38] DOS Exhibit 6. Letter from Thomas S. West to William Barton (September 12, 2001).

[39] DOS Exhibit 7. Letter from William F. Barton, Assistant Director, Division of Coastal Resources, DOS dated September 12, 2001 to Thomas S. West, Esq. (emphasis added).

complete its consistency review if *but only if* there were no further pipeline routing changes or other project changes that may have coastal impacts, and if any significant project change were introduced by Millennium, further consistency review would be required.[40]

D. The extension agreed to by the parties contemplated that further review would be required in the event that significant project changes were subsequently identified.

Millennium asserts in its Reply Brief that in the letters exchanged on September 12, 2001, DOS and Millennium agreed . . . that the state agency review would begin on October 5, 2001, when the NYSDOS received the . . . FEIS, and that the review period ended either 60 days or six months after the FEIS was issued.[41] Thus, Millennium attempts to portray the September 12 letters as reflecting DOS s agreement that delivery of the FEIS would be a monumental watershed event that would start a review period (lasting either 60 days or 6 months) and preclude consideration of project changes not reflected in the FEIS.

Millennium s position is clearly untenable. The DOS letter of April 5, 2001 reflected (1) DOS s then-current assumption that the SDEIS, and other materials furnished by Millennium to that point, contained all data and information necessary for DOS to complete its review, and (2) the then-current *expectation* that the review could be completed on the basis of the SDEIS (and such other materials). Unfortunately, the SDEIS (and such other materials) did not reflect the project changes that were subsequently introduced by Millennium, and further review was required.

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[40] This understanding was first expressed by DOS in its April 5, 2001 letter (DOS Exhibit 3) and was agreed to by Millennium in its April 17, 2001 letter (DOS Exhibit 33). This understanding was not nullified by the September 12 agreement.

[41] Millennium Reply Brief, at page 5.

The DOS letter of September 12, 2001 reflected (1) DOS s then-current assumption that the FEIS would provide the remainder of the necessary data and information, and (2) the then-current *expectation* that the review could be completed within 30 to 60 days after delivery of the FEIS.

Most importantly, both the DOS letter of April 5, 2001 and the DOS letter of September 12, 2001 provided for flexibility, and contemplated further review in the event of project changes.

Millennium s characterization of the September extension as an agreement that rigidly fixed the delivery of one particular document (the FEIS) as an event that would lock in a review period is patently incorrect. Millennium would ask the Secretary to ignore the understanding, first agreed to in April of 2001, that significant project changes would result in further review. Millennium would also ask the Secretary to ignore the language in DOS s letter (. . . *barring any significant pipeline routing or other project changes that may have effects upon the coastal zone of New York State)* that reflects the continuation of that understanding. Finally, Millennium would ask the Secretary to ignore the context in which the September extension was made.[42]

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[42] As discussed above, when DOS began its review in March of 2001, it did so on the expressly stated assumption that the SDEIS and other documents then provided by Millennium contained all information required for the review. Between March of 2001 and September of 2001, a number of significant project changes came to light, and it became clear that the SDEIS and other information provided by Millennium prior to or during March 2001 did not constitute all information required for the review. Millennium would now ask the Secretary to believe that with those developments fresh in its mind, that DOS would abandon the April 2001 agreement to provide for further review in the event of project changes, and that DOS would willingly agree that the future delivery of the then-unseen FEIS would trigger a rigid deadline, with no flexibility to take into account project changes or other matters not covered by the FEIS. As is made abundantly clear by DOS s letter of September 12, 2001, DOS made no

The circumstances leading up to the September 2001 agreement, and the salient points of that agreement, can best be described as follows: (1) by September 2001, the parties recognized that the SDEIS did not provide all necessary data and information required for review, (2) it was anticipated that the FEIS would provide the remainder of the necessary data and information, (3) if, *but only if*, the FEIS provided such data and information, DOS would attempt to complete its review on an expedited basis following receipt of the FEIS, and (4) if it turned out that the FEIS did not provide such data and information, due to route changes or other project changes, further review would be required.

As it turned out, the flexibility contemplated by the extension in this matter was beneficial to Millennium, as Millennium was afforded additional time to obtain and submit the necessary data and information relevant to the project change. DOS received the FEIS on October 5, 2001. However, the proposal to blast in the Hudson River was not then part of the project, and blasting was not discussed in the FEIS. DOS learned about the blasting, indirectly, in late November of 2001, after the FEIS was delivered. DOS diligently attempted to obtain further information about the blasting proposal.[43] It was not until April 23, 2002 that DOS finally received all of the necessary data and information from Millennium. By reason of the flexibility afforded by the extension, DOS was not required to find the project inconsistent for lack of information during the period in which Millennium was gathering and presenting the

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such agreement, and DOS did not abandon parties understanding with regard to the flexibility needed for proper review of this project.

[43] The *applicant* has the obligation to provide all necessary data and information (15 C.F. R. §930.58(a)). DOS s proactive efforts to obtain this information is further evidence of DOS s good faith attempts to make its determination at the earliest practicable time.

blasting information and data.[44]

Millennium argues that when DOS took the time to review Millennium s project change, DOS unilaterally stopped, stayed or otherwise altered the review period. This argument is based on Millennium s mis-characterization of the applicable extension agreement. An essential element of the agreement, as reflected in the DOS letter of September 12, 2001, was the understanding that project changes would require further review. Millennium is now attempting unilaterally to disavow that part of the agreement. Clearly, effect should be given to the *entire* agreement, and Millennium should not be allowed to disregard a selected portion of the agreement.

E. The proposal to conduct blasting in the Hudson River was a significant project change.

Blasting in Haverstraw Bay was not part of the project before DOS for review in March 2001, when DOS received the SDEIS and Millennium s supplemental submissions, or when Millennium made the representations contained in counsel s letter dated March 23, 2001[45] (see items 1 and 2 in the Chronology).

Nor was blasting in Haverstraw Bay part of the project before DOS for review in April 2001, when DOS sent its letter indicating that review had commenced, subject to the need for further review in the event of project changes, or when Millennium sent its letter concurring with

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[44] The benefit realized by Millennium is not negated by the final determination by DOS in this matter. The agreed to procedures permitted a full review in the shortest time, without requiring Millennium to go through the cumbersome, time consuming and expensive process of applying over and over again for a consistency determination, only to be forced to start all over each time it failed to provide all necessary information and data within any given six-month period. Ultimately, the project was found inconsistent with the New York State CMP because it is, in fact, inconsistent, and not because of the flexible procedures used by the parties.

[45] DOS Exhibit 15.

the procedure that included further review in the event of project changes (see items 3 and 4 in the Chronology).

Nor was blasting in Haverstraw Bay part of the project before DOS for review on July 26, 2001, when Millennium submitted its amended consistency certification (see item 5 in the Chronology), or on September 12, 2001, when the parties exchanged letters regarding the extension (see item 7 in the Chronology), or in October 2001, when DOS received the FEIS (see item 8 in the Chronology).

On or about November 27, 2001, DOS finally received an indication that Millennium s project had been changed by the addition of proposed blasting in Haverstraw Bay, by virtue of a notation in a cover sheet prepared by the Corps (see item 10 in the Chronology). DOS diligently attempted to obtain further information regarding the proposed blasting from the Corps and from Millennium (Chronology, items 10 and 12). On January 25, 2002 and again on March 14, 2002, Millennium sent letters to DOS admitting that blasting in Haverstraw Bay was not addressed in Millennium s prior coastal consistency filings with DOS, and asserting Millennium s commitment to provide DOS with full and complete information on all aspects of the project that are subject to review by DOS (see item 15 in the Chronology).

Millennium now makes the startling assertion that its proposal to perform blasting in the Hudson River is clearly not a project change .[46] This assertion defies reason and is in deep contrast to the determinations of the Corps, FERC, and NMFS.[47]

In any event, notwithstanding any cursory reference (in Millennium s response to a prior

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[46] Millennium Reply Brief at page 7.

[47] See items 11, 13 and 14 in the Chronology.

FERC data request) to the Hudson River as a place where blasting may be required, it is clear that the more detailed plans thereafter filed by Millennium with the affected Federal agencies did *not* contemplate blasting in the Hudson River. In particular, the plans Millennium filed with the Corps and FERC -- plans upon which the consistency review was, in major part, predicated -- did not specify blasting in Haverstraw Bay. Moreover, neither original consistency certification nor the amended consistency certification submitted on July 26, 2001 nor the SDEIS nor the FEIS contained a description or analysis of blasting in the sensitive State-designated Haverstraw Bay Significant Coastal Fish and Wildlife Habitat (SCFWH).

Upon learning of Millennium s proposal to conduct blasting in the Hudson River, the reaction of the affected Federal agencies was prompt and unanimous: each agency recognized and determined that (1) the blasting proposal was a significant project change, (2) no environmental review of the proposed blasting had been conducted, and (3) Millennium would be required to provide detailed information with regard to its blasting proposal in connection with its still-ongoing permit and license application processes.[48]

The conclusion is clear an inescapable: Blasting in Haverstraw Bay is a project change that would have effects upon the coastal zone of New York State. Millennium s attempt to

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[48] Millennium s current contention was previously presented to, and flatly rejected by, NOAA s National Marine Fisheries Service. See the NMFS letter dated February 15, 2002 to FERC (DOS Exhibit 10). In that letter, NMFS refers to Millennium s claim that blasting was raised as a possible blasting technique in early submissions to FERC, then continues as follows: However, we note that for the Haverstraw Bay Hudson River crossing the technique was not mentioned or discussed in the . . . (FEIS), the biological assessment used in the Endangered Species ACT (ESA) Section 7 consultation, and in the essential fish habitat (EFH) assessment. Nor are assessments for blasting and related activities analyzed and evaluated. In that this *new construction requirement modifies the project description*, it needs to be given sufficient consideration in these documents . . . (emphasis added).

minimize this issue is disingenuous and not supported by the record. Millennium alone made the project change and therefore Millennium alone necessitated additional consistency review. Indeed, it was exactly for this type of situation that the Department agreed to the conditional review time in its September 12, 2001 letter.

F. The DOS objections were timely because they were issued within the extension contemplated by the September 2001 agreement.

Millennium s introduction of a significant project change (blasting in the Hudson River) gave rise to Millennium s obligation to provide DOS with all necessary data and information regarding blasting. By virtue of the extension agreement, Millennium was afforded time to gather and submit the necessary data and information. The blasting plan and other information delivered by Millennium on April 23, 2002 were parts of the necessary data and information that Millennium was required to deliver under 15 C.F.R. Section 930.58(a).[49] DOS acted diligently and expeditiously, and completed its review and issued its objections a mere 16 days after it received Millennium s April 23, 2002 submissions.

Therefore, the DOS objections were timely.

G. Millennium is estopped from asserting that the review time was not extended to at least May 9, 2002.

At all times prior to May 9, 2002 (the date on which DOS issued its objections),

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[49] On February 15, 2002, NOAA s National Marine Fisheries Service (NMFS) characterized the blasting information that had been provided by Millennium up to that late date as cursory and preliminary and stated that additional information is necessary before NMFS can reinitiate formal consultation. See DOS Exhibit 10, NMFS letter dated February 15, 2002 to FERC, at page 2. The blasting plan and other information delivered by Millennium on April 23, 2002 are parts of the necessary data and information that an applicant must provide to the State agency under 15 C.F.R. Section 930.58(a).

Millennium acted in a manner consistent with the continuation of the applicable review period.[50] In its letters of January 25, 2002 and March 14, 2002, Millennium acknowledged its prior failures to provide DOS with information regarding blasting, and stated and renewed Millennium s commitment to provide DOS with full and complete information regarding all aspects of the project that are subject to DOS s review.[51] On April 23, 2002, Millennium provided DOS copies of its blasting and mitigation plans; the accompanying letter concluded as follows:

> On the basis of the foregoing, we respectfully request that the DOS complete its review of the Millennium Project . . . .[52]

Note that April 23, 2002 is *after* the date now asserted by Millennium to be the deadline for completion of review.

DOS personnel expended a great deal of time and effort in continuing to review this project, including review of the new information regarding blasting as provided, on an on-going basis, by Millennium. Millennium now takes the position that the decision it consistently asked DOS to make would count only if Millennium was satisfied with the decision. Having consistently urged DOS to render its decision, Millennium is now judicially and equitably estopped from asserting that the decision was not timely.

In its Reply Brief, Millennium attempts to characterize its repeated requests that DOS continue its review as repeated requests that DOS end its review. This is a distinction

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[50] See the discussion in DOS s Initial Brief at pages 20 to 21.

[51] DOS Exhibits 12 and 13.

[52] DOS Exhibit 16, page 3.

without a difference because the review process would have to continue before it could end. What is significant is that Millennium consistently treated the review process as an on-going process that still needed to be brought to an end, and not as a process that had already come to an end by virtue of the expiration of any applicable time period. Millennium s present assertion that the DOS objections were untimely is an attempt by Millennium to rewrite history.

Millennium also argues that it reserved its right to contest the timeliness of the (DOS) decision. [53] This argument fails for several reasons.

First, the letter cited by Millennium states that this purported reservation of rights was based upon the wholly untenable assertion that the blasting proposal was not a project change.[54] The assertion in Millennium s January 25, 2002 letter indicates that Millennium knew, and was implicitly acknowledging, that it was mutually understood and agreed that project changes *would* result in further review. Millennium was in no way contesting that point in its January 25, 2002 letter. Rather, Millennium was attempting to convince DOS that the blasting proposal was not a project change and accordingly there was no need for further review.

As discussed at length above, Millennium s assertion that its blasting proposal was not a project change flies in the face of reality, and is directly contrary to the findings and determinations by all affected federal agencies (and, of course, is contrary to the position taken by DOS in its communications and discussions with Millennium; see, e.g., item 12 in the

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[53] Millennium Reply Brief, page 9.

[54] Millennium does not believe that the possibility for blasting . . . is a project change . . . *Accordingly*, Millennium reserves all of its rights . . . . (DOS Exhibit 12, letter from Thomas S. West, Esq. dated January 25, 2002 to William Barton [emphasis added]. This is the letter cited by Millennium in its Reply Brief, in footnote 9 at page 9).

Chronology). Therefore, the underlying premise upon which Millennium relied for its rights (viz., that blasting in Haverstraw Bay was not a project change) fails.

Further, Millennium fails to acknowledge a fundamental concept: an applicant does not obtain rights with regard to timeliness until the applicant has fulfilled its *obligation* to provide all necessary data and information. Millennium s continued assertion that the review period began (and, indeed, ended) before Millennium fulfilled its obligation to provide all necessary data and information should be resoundingly rejected. To do otherwise would sanction future end runs around the Coastal Consistency Program.

Finally, it should again be stressed that Millennium finally provided DOS with the blasting plan and related information on April 23, 2002. This is after the April 5, 2002 deadline now urged by Millennium. Yet the letter used to deliver the blasting plan and related information contains the following statement:

> . . . Millennium has decided to submit this information so that there can be no question that the DOS now has all necessary information to complete its review and render a decision regarding this project. [55]

The April 23, 2002 letter contains no purported reservation of rights and concludes with Millennium s request that DOS complete its review.

Indeed, even if April 5, 2002 was a deadline for completion of review (and it was not), Millennium waived any right it had to assert that purported deadline when, 18 days later, it submitted its blasting plans to DOS and requested DOS to complete its review and render a decision.

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[55] DOS Exhibit 16, letter from Thomas S. West, Esq. dated April 23, 2002 to George Stafford.

DOS completed its review and issued its objections only 16 days after Millennium provided all necessary data and information. Clearly, no timeliness rights were violated in this case. Again, Millennium is judicially and equitably estopped from asserting that the decision was not timely.

Additionally, Millennium s first written communication to DOS regarding blasting in Haverstraw Bay is found in Millennium letter dated January 25, 2002. In that letter, Millennium s attorney asserted that there was a very real possibility that blasting would reduce the amount of material that must be remove by as much as 50% and, accordingly, that there may be a minor *benefit* associated with the need for blasting . . . . [56] Having held out this possibility, Millennium should not now be permitted to complain that DOS reviewed all data and information relevant to blasting (including the data and information delivered by Millennium on April 23, 2002), and assessed the possible benefits of this project change, before issuing its consistency decision. Once again, Millennium is judicially and equitably estopped from asserting that the decision was not timely.

H. Alternatively, the six-month review period began on April 23, 2002 and expired on October 23, 2002 and, accordingly, the DOS objections were timely.

Applicable NOAA regulations provide that (1) the applicant has the affirmative obligation to provide all necessary data and information to the State agency, and (2) until the applicant has fulfilled that obligation, the six month review period does not even begin.[57]

The necessary data and information required by §930.58(a) include, *inter alia*,

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[56] DOS Exhibit 12, paragraph 5 at page 4 (emphasis added).

[57] 15 C.F. R. §§ 930.58(a), 930.60(a).

> a detailed description of the proposed activity, . . . comprehensive data and information sufficient to support the applicant s consistency certification, . . . a copy of the federal application and all supporting material provided to the Federal agency, . . . (and) information specifically identified in the (CMP).

The federally-approved New York State CMP contains an informational requirement for activities requiring federal agency authorizations, as contemplated by 15 C.F.R. §930.58(a). The New York State CMP states:

> . . . whenever possible, the Department of State will base its consistency determination on documents normally required for compliance with Federal regulations or approval. Generally, these will include *environmental impact statements*, and assessments, *applications for Federal permits and licenses*, Federal grant applications, *and supporting information*.[58]

The Federal permits and licenses involved in the Millennium Pipeline Project include, but are not necessarily limited to, the permits and licenses issued or hereafter to be issued by FERC and by the Corps. When they learned of Millennium s blasting proposal, both of these agencies made it quite clear that they required a great deal of data and information regarding Millennium s blasting proposal in connection with Millennium s on-going Federal permit and license application processes.[59]

The blasting information required by the Federal agencies is information that the applicant is required to provide to DOS under 15 C.F.R. §930.58(a).[60] The review period did not

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[58] NOAA, State of New York Coastal Management Program and Final Environmental Impact Statement, at II-9-13 (August 1982)(emphasis added).

[59] See items 11 and 13 in the Chronology.

[60] Millennium appears to argue that the information relating to Millennium s blasting proposal is additional information of the type referred to in 15 C.F.R. §930.60(b). Any such argument is specious. Section 930.60(b) provides that a State agency request for information or data *in addition to that required by §930.58(a)* shall not extend the date of commencement of State agency review (emphasis added). Yet the blasting-related information

begin to run until the blasting information was delivered to DOS.[61]

DOS made good faith efforts to review this matter expeditiously. However, DOS consistently made it clear that project changes would necessitate further review. **Simply put, DOS never agreed that it would complete its review before Millennium fulfilled its obligation to provide all necessary data and information.**[62]

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discussed herein is information *required* by §930.58(a). Clearly, any reliance by Millennium on 15 C.F.R. §930.60(b) is misplaced.

[61] The review time does not begin when the applicant merely commences some aspect of its application process, it begins when the applicant completes its task of providing all necessary data and information. See *In the Consistency Appeal of Ford S. Worthy, Jr., to an Objection from the North Carolina Department of Natural Resources and Community Development*, 1984 NOAA LEXIS 63 (May 9, 1984), where the necessary data and information to be submitted by the applicant included a certain state-issued CAMA permit . The Secretary of Commerce ruled as follows: Despite the fact that more than six months passed between the date of the public notice of the Appellant's application for the COE permit (April 29, 1982) and the date of the DNRCD consistency objection (July 7, 1983), a timely consistency objection was made. Section 930.63(a) of Title 15 of the Code of Federal Regulations (the CZMA regulations) provides that concurrence by a State coastal management agency in the consistency certification by an applicant for a Federal permit or license shall be conclusively presumed in the absence of an objection by the State agency within six months following commencement of review. State agency review of a consistency certification commences when the agency receives a copy of the certification and the necessary data and information to support it. 15 CFR 930.60(a). The "necessary data and information" required to be submitted with the consistency certification is described in 15 CFR 930.58, and may include State or local government permits which are required in addition to the Federal license or permit. 15 CFR 930.56(b). North Carolina's Federally-approved coastal management program requires that a State CAMA permit be obtained prior to a State consistency determination being made and that the applicant submit this determination to the Federal agency in order to complete the application for the Federal license or permit. NCCMP, p. 235. Because the issuance of the CAMA minor permit was appealed, on June 18, 1982, and, after a hearing, revoked on May 19, 1983, State agency review could not have begun until that date. Therefore, the July 7, 1983 consistency objection by the DNRCD, occurring less than two months after revocation of the CAMA minor permit, was timely made.

[62] Indeed, it is doubtful that NOAA regulations would permit any such agreement. As noted, the review period cannot begin until the applicant has provided all necessary data and information pursuant to 15 C.F.R. Section 930.58(a). While 15 C.F. R. Section 930.60(a)(3) authorizes the parties to agree to *extend* the period, no regulation authorizes the parties to agree

Nevertheless, DOS issued its objection on May 9, 2002, within 16 days of receiving the last of the necessary data and information. This was well in advance of October 23, 2002, the six-month anniversary of the date on which the necessary data and information was delivered. Therefore, the DOS objection was issued in a timely manner and the Millennium appeal on this point should be rejected.

The conclusion set forth above is not negated by the statement in DOS s April 5, 2001 letter that review commenced on March 12, 2001, when DOS received the SDEIS. Any indication by DOS that the review period commenced at any time prior to April 23, 2002 was based on Millennium s express representations that DOS then had all data and information required to complete its review. Those representations proved to be unfounded. Therefore, Millennium is equitably estopped from asserting that any applicable review period began before Millennium did, in fact, provide DOS with all necessary data and information.

The elements of equitable estoppel[63] are clearly established in this case:

- All materials submitted by Millennium to DOS prior to early 2002 can only be read as indicating that blasting was *not* a component of this project. As is now all too clear, blasting is a component of this project. Therefore, Millennium s pre-2002 submissions amount to a misrepresenation or concealment of this material fact.

- Millennium intended DOS to act upon Millennium s words (i.e., Millennium intended, and requested, DOS to commence review).

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to *shorten* the period by agreeing to ignore necessary data and information. Moreover, such action would be contrary to the federally-approved CMP. Any argument by Millennium that DOS agreed to complete its review before DOS received all necessary data and information (including, in this case, all necessary data and information pertaining to blasting) would necessarily amount to an argument that the parties had agreed to an unauthorized reduction of the review period.

[63] See DOS s Initial Brief at pages 18 to 20.

" Millennium knew or should have known that blasting was to be a component of this project, and Millennium knew or should have known that DOS did not have all necessary data and information.

Millennium should not now be rewarded for its failure to include information regarding blasting in its March, 2001 submissions.[64]

I. Conclusion

Any six-month review period that began prior to April 23, 2002 was duly extended by the parties. The extension agreed to by the parties contemplated that further review would be required in the event that significant project changes were subsequently identified. The proposal to conduct blasting in the Hudson River was such a significant project change. The DOS objections were timely because they were issued within the extension contemplated by the September 2001 agreement. Even if April 5, 2002 was a deadline for the DOS consistency decision (and it was not), Millennium waived any right to assert that purported deadline by its subsequent submission of necessary data and information and its subsequent request that DOS complete its review and render a decision. Alternatively, the six-month review period began on April 23, 2002 and expired on October 23, 2002 and, accordingly, the DOS objections were

[64]If the Secretary finds that the review period began on October 5, 2001, that the review period was not extended, and that DOS is presumed to have concurred with Millennium s consistency certification, then the Secretary must also find that the project as to which concurrence is presumed is the project that was before DOS as of October 5, 2001. As is made abundantly clear in Part II(E) of this Reply Brief, the project before DOS and the affected federal agencies as of October 5, 2001 does not include blasting in the Haverstraw Bay. As noted at page 15 of DOS s Initial Brief, the detonations of explosives in the Haverstraw Bay SCFWH alone would be sufficient to require a new, full consistency review. Accordingly, even if the Secretary accepts Millennium s arguments and finds that DOS is presumed to have concurred, the only project that can now proceed on the basis of such presumed concurrence is a project that includes absolutely no blasting whatsoever in Haverstraw Bay.

timely. In either event, DOS concurrence cannot be presumed.

II. MILLENNIUM S APPEAL SHOULD BE DISMISSED BECAUSE THE PROJECT IS NOT CONSISTENT WITH THE OBJECTIVES OR PURPOSES OF THE ACT

The CZMA provides that, to override a state s consistency objection, an applicant must prove to the Secretary that the project is either consistent with the objectives of [the Act], or necessary in the interest of national security. [65] DOS s Initial Brief and this Reply Brief persuasively show Millennium has failed to carry its burden of proving that the activity satisfies either ground for an override.[66] Accordingly, the DOS consistency objection should be upheld.

A. The Millennium Pipeline Does Not Further any of the Objectives of the CZMA in a Significant or Substnatial Manner

In order to find that a project is "consistent with the objectives and purposes of the Act" the Secretary must find that the action satisfies each of the following three requirements (or elements) of 15 CFR 930.121:

> (a) The activity furthers the national interest as articulated in § 302 [16 USC 1451] or 303 [16 USC 1452] of the Act, in a significant or substantial manner.
> (b) The national interest furthered by the activity outweighs the activity's adverse coastal effects, when those effects are considered separately or cumulatively.
> (c) There is no reasonable alternative available which would permit the activity to be conducted in a manner consistent with the enforceable policies of the management program. When determining whether a reasonable alternative is

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[65] 16 U.S.C. § 1456 (c)(3)(A).

[66] 5 CFR 920.130. See also In the Consistency Appeal of Korea Drilling Company. Ltd. from an Objection by the California Coastal Commission. U.S. Secretary of Commerce. (January 19, 1989).

> available, the Secretary may consider but is not limited to considering, previous appeal decisions, alternatives described in objection letters and alternatives and other new information described during the appeal.[67]

As detailed below, Millennium s pipeline does not satisfy any of these three requirements.

To satisfy the first element, Millennium must show the activity furthers one or more of the competing objectives or purposes contained in 16 USC §§ 1451 and 1452 in a significant and substantial manner. In its Initial and Reply Brief, Millennium claims that its project will further the following four objectives of the CZMA: siting of major energy transportation facility; enhancing the Nation s energy self-sufficiency; promoting compatible economic development; and protecting coastal resources. In fact, Millennium has failed to prove its proposed facility will satisfy any of these elements.

1. Siting of Major Energy Transportation Facilities

Millennium continues to assert that major energy facilities require priority treatment under the CZMA and, accordingly, that its pipeline should be presumed to further the national interest in a significant or substantial manner. As an energy transmission facility, Millennium contends that its burden has been satisfied. But nothing in the CZMA or NOAA s implementing regulations stands for the proposition that <u>every</u> natural gas pipeline seeking a coastal location furthers the national interest in a significant or substantial manner by its mere existence, and should therefore be accorded priority over other vital coastal policy objectives. As explained in detail below, Millennium has misconstrued the express language and legislative intent of the CZMA, which only calls on states to establish orderly processes for determining where in the coastal zone such major facilities should be located, if at all, and for managing the impacts of

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[67] 15 C.F.R. § 930.121.

such facilities on coastal resources. Contrary to Millennium s claims, the CZMA makes it clear that priority is accorded only to coastally dependent uses, and to the location of new facilities in areas where development already exists in order to ensure that ecologically important coastal resources are protected and preserved. Millennium cites the Congressional policy statement in 16 USC § 1452 (2)(D) in arguing that priority consideration must be given to major energy facilities in the coastal area. That national policy statement does not support Millennium s viewpoint. It provides that state coastal programs should provide for:

> **priority consideration being given to coastal-dependent uses** and **orderly processes for siting major facilities related to national defense, energy,** fisheries development, recreation, ports and transportation, and the location, to the maximum extent practicable, of new commercial and industrial developments in or adjacent to areas where such development already exists.
> (Emphasis added.)

As discussed extensively in DOS s Initial Brief, the CZMA s Congressional declaration of policy only requires states to consider and, where appropriate, include policies for siting major energy facilities. Nothing in the statute establishes a policy preference for major energy facilities over other national policies, only priority for orderly processes for siting major facilities related . . . to energy . . .

This statutory section must be read in conjunction with 16 U.S.C.A. § 1455(d). Before approving a coastal management program submitted by a coastal state, the Secretary of Commerce must find that the state gave adequate consideration to the national interest in planning for the siting of major energy facilities.

DOS s Initial Brief[68] extensively discusses and cites numerous authorities for the

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[68] DOS s Initial Brief pp. 30-34

proposition that, under the CZMA, energy facilities are not accorded priority over other important coastal interests and objectives. States participating in the coastal program are required to give adequate consideration to the siting of such facilities, and New York does so.[69] Several additional sources of authority on this point should be mentioned.

In 1976, the CZMA was amended to require state planning for coastal energy facility siting[70] and state procedures for anticipating and managing their impacts.[71] These requirements are substantive, but the actual siting and mitigation decisions remain within the state. The Senate Report accompanying the energy amendments elaborates:

> The Secretary of Commerce (through NOAA) should provide guidance and assistance to the States under this section 305(b)(8), and under section 306, to enable them to know what constitutes **adequate consideration of the national interest in the siting of energy facilities** necessary to meet the requirements other than local in nature. The Committee wishes to emphasize, consistent with the overall intent of the Act, that this new [§ 305(b)](8) requires a State to develop, and maintain a planning process, **but does not imply intercession in specific siting decisions**. The Secretary of Commerce (through NOAA) in determining whether a coastal State has met the requirements, is restricted to evaluating the adequacy of the process.[72]

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[69] New York s approved Coastal Management Program contains an energy facility siting policy, Policy 27. It considers public energy needs, compatibility of such facilities with the environment, and the facility's need for a shorefront location. The New York Coastal Management Program assigns no greater priority to siting such facilities than it does to any other non-coastal dependent use nor does it provide that siting these facilities outweighs other critical coastal resource management concerns. Energy facilities are evaluated in the context of other coastal values, including their impacts on coastal resources of special concern, such as New York State s designated Significant Coastal Fish and Wildlife Habitats.

[70] Pub. L. No. 94-370, § 5(3), 90 Stat. 1013, 1018 (1976) (codified at 16 U.S.C. § 1455(c)(8) (1982)).

[71] Id. at § 4, 90 Stat. at 1016, 16 U.S.C. § 1454(b)(8) (1982).

[72] Senate Comm. On Commerce, Coastal Zone Management Act Amendments of 1975, S. Rep. No. 277, 94th Cong., 1st Sess. 24 (1975), Reprinted in Legislative History of the

NOAA regulations implementing this section explain that

> [t]he primary purpose of this requirement is to assure adequate consideration by States of the national interest involved in the planning for and siting of facilities (which are necessary to meet other than local requirements) during
> (1) the development of the State's management program,
> (2) the review and approval of the program by the [NOAA] Assistant Administrator, and
> (3) the implementation of the program as such facilities are proposed.[73]

Before approving New York s CMP, the Secretary of Commerce was required to find that the program adequately balances state and national interests.[74] Federal courts have held that, under the statute and NOAA regulations, national interests are a factor, but not the only factor, to be considered in the planning process and a state cannot be forced to site on national interests concerns alone.[75] The national interest provisions do not contain substantive requirements that would force a state to site an energy facility it considered not in its interest as long as the state

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Coastal Zone Management Act of 1972, at 725, 760 (1976) (emphasis added).

[73] 15 C.F.R. § 923.52(b).

[74] State coastal management programs accommodate national energy interests in two ways. First, states develop their programs in coordination with and addressing the concerns of affected federal agencies. The Secretary must find that the state has provided federal agencies, including FERC, an opportunity for full participation prior to approving its management program.16 U.S.C. § 1455(d)(1). Second, state management programs must provide procedures that allow for consideration of the national interest in energy facility planning and siting.

[75] The court in American Petroleum Institute v. Knecht, 609 F.2d 1306 (9th Cir. 1979) concurred with and quoted from the district court s conclusion that "while the primary focus of subsection 306(c)(8) is on the planning for and siting of facilities, adequate consideration of the national interest in these facilities must be based on a balancing of these interests relative to the wise use, protection and other development of the coastal zone." Therefore, the national interest in energy facility siting is simply another factor which the state balances in its planning process.

considers other than local interests. [76]

Millennium also contends that its project is a coastal-dependent use and requires a coastal location. It attempts to justify its position because its route traverses the coastal zone of Lake Erie and the Hudson River. While, priority consideration is accorded to "coastal-dependent" industry and land uses within the coastal zone,[77] Millennium s project is not a coastal-dependent use.

Millennium is mistaken in arguing that its pipeline is presumptively a coastal-dependent use simply because it crosses coastal waters. Not all facilities that make use of coastal waters and adjacent lands are coastal dependent. A coastal-dependent use is one that, by its nature, can only be conducted on, in, over or adjacent to a water body because such activity requires direct access to coastal waters, and which involves, as an integral part of such activity, the use of such waters. One prime example is an outer continental shelf energy facility or an industry which because of its use of water for its processes, requires a coastal location. Although it may traverse coastal waters, such routing does not transform Millennium s pipeline into a coastal-dependent use.

Contrary to its assertions otherwise, Millennium continues to argue that the Natural Gas Act defines the national interest in coastal zone matters and that FERC s expert judgment on coastal issues eliminated the need to consider the state s role under the Coastal Zone

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[76] NOAA, U.S. Department of Commerce, the CTARP Energy Facility Siting Study: Coastal Facility Siting and the National Interest, Vol. 1, at 97-102 (1979).

[77] Decision and Findings in the Consistency Appeal of Davis Heniford from an Objection by the South Carolina Coastal Council, U.S. Secretary of Commerce (May 21, 1992) p. 11;16 USC 1452(2)(D).

Management Act. Were that the case, the consistency provisions of the CZMA would be meaningless. Of course, FERC s viewpoint on the Millennium project is entitled to consideration in the CZMA context, in the same manner as those of other federal agencies. DOS has never suggested that FERC s views are entitled to little or no weight. However, Millennium attempts to confer upon FERC the sole responsibility and exclusive jurisdiction for determining whether a proposed interstate pipeline furthers the national interest as defined in 16 USC 1451 and 1452. While FERC s informed judgement on interstate gas supplies are entitled to great weight, its views on siting issues that affect environmental and coastal resources must be given less importance in light of the key role played by the states under the CZMA and the expertise of other federal environmental agencies. Yet Millennium, in its opening remarks on page 13 of its Reply Brief, attempts to argue both ways by quoting FERC staff comments which incorrectly state that the Commission had considered, in its Final Order, the impacts to New York s coastal zone (when in fact it did not).[78]

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[78] FERC Order paragraph 232, p. 69 states: Finally, various claims are raised that our final EIS failed to consider adequately certain CZMA issues. These claims misapprehend the purpose of an EIS and the relationship between NEPA and the CZMA. The purpose of an EIS is to ensure that an agency, in reaching its decisions, will have available and will carefully consider, detailed information concerning significant environmental impacts; it also guarantees that the relevant information will be made available to the larger audiences that may also play a role in both the decision making process and the implementation of that decision. (See Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989).) The EIS prepared by Commission staff for Millennium sets forth the information necessary to achieve those purposes, including significant amounts of information and analysis relevant to the Hudson River crossing and other environmental impacts of the project on the coastal zone. **The EIS, however, is not intended to exhaustively analyze all issues arising under New York's Coastal Management Plan or other issues arising under the CZMA. Rather, those issues arise under the CZMA and are to be considered in the NYSDOS consistency determination under that statute, which was done, resulting in the May 9, 2002 objection by the NYSDOS to the consistency certification for Millennium.** Thus, we will reject these claims. (Emphasis added.)

No federal agency, including FERC, acting under its respective statute, is entitled to define the national interest in this matter under a completely different and co-equal federal statute, the CZMA. Yet, despite its denials, that is precisely what Millennium has attempted to do. Millennium s attempt to use a different federal statute and another federal agency to determine the national interest should be entirely rejected as undermining the intent of the CZMA.

Notwithstanding the concerns expressed by FERC Chairman Wood, it is clear that DOS s review will not forestall development of natural gas infrastructure. It is important to recognize that from the start of the consistency process, DOS has worked and continues to work with this applicant to adopt an alternative route that will not destroy a precious invaluable habitat or threaten the drinking water supplies of the nation s most populated city and a suburban village. Moreover, the Natural Gas Act and the Coastal Zone Management Act are co-equal congressional statutes. The role of state agencies under the Coastal Zone Management Act is to apply its enforceable coastal policies to proposed projects that affect its coastal resources. This is the essence of the coordination and cooperation function that Congress envisioned when it enacted 16 USC § 1456. States are expected to exercise, not abdicate their function, in a reasonable manner, as DOS has done here.

a. The demand for natural gas

Millennium portrays its pipeline as serving the needs of the New York City metropolitan and the Northeast energy situation, which Millennium alleges is dire. It cites to the studies footnoted in FERC s Final Order projecting the energy needs in the Northeast region. Millennium expresses a desire to employ its pipeline to help meet those projected needs.

Unquestionably, sometime in the future the New York City area will need additional pipeline capacity to serve natural gas fired electric generation needs. However, according to the New York State Energy Plan, current demands for natural gas are being met, and based on the pipelines recently constructed or under construction, it appears that the region s energy needs will be accounted for the foreseeable future.

Millennium alludes to this past winter as a basis for arguing that its transmission facilities and gas supply are necessary to meet the region s energy demand. To the contrary, the long and cold winter of 2002-2003 tested the natural gas delivery infrastructure in the region and affirmed the State Energy Plan s conclusion. Based on projections to 2005, there is more than adequate capacity to serve the New York City metropolitan area, without taking into account several new pipelines entering service in late 2002 and 2003.

An important recent report, issued in July 2002, entitled The Ability to Meet Future Gas Demands from Electricity Generation in New York State[79] looked at gas and electric system Risks and Uncertainties:

> Higher than expected electric demands pose another potential risk to the gas and electric system. However, our finding that the gas and electric systems can reliably meet their future loads across the range of scenarios included in our analysis holds true, even with higher electric loads. In a 2005 case with extreme weather loads, defined as an increase in both peak demand and annual energy requirements consistent with the extreme weather peak forecast reported in the NYISO Gold Book and 4,435 MW of new capacity, **electric loads can be met under all pipeline addition scenarios**. However, slightly more oil

[79] Exhibit 30. The Report The Ability to Meet Future Gas Demands from Electricity Generation in New York State was prepared for New York State Energy Research and Development Authority (NYSERDA) and New York Independent System Operator, by Charles River Associates 200 Clarendon Street Boston, Massachusetts 02116. A copy of the Report appears as Attachment and can be accessed electronically at www.nyserda.org.

needs to be burned by electric generators in each corresponding pipeline scenario.[80]

As the Report predicted, during the past winter, there was more than adequate energy supplies to serve New York s electric generation and non-generation needs. In addition, some of the new gas transmission companies licensed to supply the New York area sold their gas in other markets because the New York energy generation market was saturated, while construction of new generating facilities was stagnant.

The Report addressed concerns about the adequacy of the New York gas delivery infrastructure for simultaneously meeting traditional gas demands and future gas demands for electric generation. In the context of pipeline capacity additions, the Report stated:

> Prior to the autumn of 2001, no substantial pipeline expansions had been built in New York since the Iroquois addition in 1991. The EIA has noted that, as a result of this limited supply expansion and substantial gas demand growth, downstate gas deliveries in the New York City area have approached their throughput limits.[81] However, substantial expansion of the New York pipeline infrastructure is already under way. With projects that have recently been completed or are expected to be completed by the end of 2003, a total of 465 MDT per day of new delivery capacity will be available into the downstate region, for an increase in delivery capacity of 16 percent. This additional capacity exceeds forecasted growth in nongeneration gas demands through at least 2005.
>
> In addition to the 465 MDT per day of expansions already being added, there are numerous pipeline proposals for new and expanded capacity to serve New York, totaling more than one billion cubic feet per day of capacity. Not all of the projects will be built, as some are competing to effectively serve the same markets and some are seeking markets that will not evolve. A substantial portion of the proposed capacity has begun to clear regulatory hurdles; the FERC has provisionally approved projects that could provide a total of approximately 800 MDT per day, primarily to the downstate region (an increase in capacity of approximately 27 percent).[82]

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[80] Id. at p. 7 (Emphasis added).

[81] Status of Natural Gas Pipeline System Capacity Entering the 2000 2001 Heating Season, EIA *Natural Gas Monthly*, October 2000; *Natural Gas Transportation Infrastructure Issues and Operational Trends*, EIA Natural Gas Division, October 2001.

[82] Exhibit 30 at p. 49.

In addition to those new natural gas pipelines which have been operating in the Northeast, the State Energy Plan lists at least 10 proposed pipelines, including Millennium, which are in the process of seeking or have recently received FERC approval.[83] The 10 proposed pipelines would deliver in excess of 1939 MDT per day to the Northeast. According to the Report, if only 800 MDT per day of new line is provided, natural gas could meet 100% of electric generation fuel needs without the Millennium Project, even assuming generators entirely abandoned further use of other kinds of energy sources.

Millennium has described its market as encompassing the Northeast. Other states in the Northeast had experiences similar to New York during this past winter. Firm customers of distribution companies had their natural gas demands met without interruption of service. Low natural gas storage inventories could have caused problems in a "design" peak day at the end of the season, however, the utilities, in fact, planned for a "design" winter. No firm customer went without gas. It should be noted that natural gas currently only accounts for 20 to 30 percent of the fuel used for electric generation in New England.[84] Some companies move in and out of the market to buy some gas. The utilities may have interrupted service to a class of customers who received discounted rates with the proviso that the service would be interrupted when the utilities needed the gas to serve firm customers. These are called in the trade "interruptible

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[83] DOS Exhibit 29, State Energy Plan (2002) p 3-169 to 3-171. There are now 10, as Independence Pipeline abandoned its project.

[84] New England Natural Gas Update March 2003, Northeast Gas Association. See http://www.nega.com/industry_trends/mkt_update_03.pdf. The NGA report also indicates that with the addition of several new pipelines, primarily from the Maritimes, the New England and Northeast region s future energy outlook is very favorable. Millennium is not mentioned as a pipeline needed to serve that region.

customers."[85] They burn oil when gas is interrupted. Utilities will need additional capacity to meet the load growth of firm customers in the future but that growth can be handled through the addition of new and expansions of existing pipelines without the need to construct the Millennium pipeline.

Similarly, electric supply in the Northeast during this severe winter was more than adequate to meet customer s demands. On December 19, 2002, ISO New England issued a press release projecting adequate electricity supply for the winter season of 2002-03. Said ISO: The forecast projects record energy consumption this winter; however, the addition of newly installed generating capacity ensures that electricity supply should be adequate to meet peak demand this season. [86] According to the Northeast Gas Association, ISO on its web site as of January 13 projected a surplus of from 6,700 to 7,300 megawatts for the week, with total installed capacity of 30,000 megawatts, and with projected peaks of close to 22,000 megawatts on the coldest days of January 15 and 16.[87]

A substantial amount of the natural gas shipped to New York City and the Northeast is utilized for electric power generation. As Millenniums knows, the New York City electric

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[85] On the topic of interruptible customers, see EIA report entitled Impact of Interruptible Gas Service on Northeast Heating Oil Demand. The Executive Summary is available on the web at http://www.eia.doe.gov/pub/oil_gas/natural_gas/data_publications/natural_gas_monthly/historical/2001/2001_01/pdf/200101sf.pdf.

[86] ISO New England s Electricity Demand Outlook Forecasts Adequate Supply for Winter Season, ISO Press Release, Decmber 19, 2002. http://www.iso-ne.com/iso_news/2002_Archive/2002-2003_Winter_Outlook.doc

[87] DOS Exhibit 35, Northeast Gas Association at 5 (January 2003); www.nega.com/industry_trends/power_gen.pdf.

generation market has, due to market forces, become virtually stagnant.[88] The investment climate for new electric plant construction facilities remains poor, especially since the collapse of Enron.[89] Many new electric generation facilities, although licensed, are not being built. Of those slated to serve the New York City area, most have an in-service date in late 2004 or 2005, but may not be built until investment conditions change.[90] Importantly, several major natural gas transmission companies began serving customers in other states because they could not find buyers in the New York City electric generation market (ie Marketlink I). Therefore, it is hyperbole for Millennium to claim that its transmission facilities are needed to provide gas in a saturated energy market that is experiencing stagnant growth in new electric generation .[91]

b. The Millennium Project Is Not Needed to Promote Competition or Diversity

Millennium argues that its Project would also further national interests in realizing the benefits of competition. It quotes FERC as follows:

> The addition of a new pipeline in the region, with access to multiple supply areas, will expand shippers options, promoting the growth of competitive markets for natural gas and potentially contributing to lower and more stable natural gas prices over the long term.[92]

DOS does not dispute the benefits of promoting competitive markets for natural gas.

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[88] Beleaguered Energy Firms Try To Share Pain With Utility Units, Wall Street Journal, December 26, 2002; New York State Energy Plan, Section 3.4, Electricity Resource Assessment.

[89] The Economy: States Step Up Watch on Utilities-Regulators Monitor Sector To Guard Local Consumers From Energy Tailspin, Wall Street Journal, August 16, 2002, p. A2.

[90] Astoria Energy 3Q 2005; Brookhaven 2Q 2006; East River Repowering 4Q 2004; Poletti, 4Q 2004; Ravenswood, 1Q 2004; Wawayanda, 2005.

[91] There has also been some industry discussion concerning new electric transmission. See e.g., Group Pledges to Bring Cheaper Power from Upstate , Journal News, March 4, 2003 and Proposed transmission line draws cautious optimism Journal New, March 5, 2003.

[92] Millennium Reply Brief at 21.

However, the Millennium Pipeline is not necessary to promote compatible economic development in New York s Coastal Area. The natural gas it would supply is not necessary to meet the region s energy generation requirements. The Millennium project is of no greater consequence to the promotion of economic development in the region than any other pipeline. Indeed, the Energy Plan, which projected natural gas needs to the year 2005, states on page 3-177 that:

> [I]f no post-2003 pipeline expansion projects are built, the existing gas and oil systems will be adequate to meet all generation scenarios.

The analysis upon which that conclusion is based did not consider the Millennium Pipeline in developing estimates of the volumes of gas to be delivered to the New York City area.[93]

Millennium contends that, had its project been built, it would have reduced the cost of gas to New York shippers.[94] Using its chart, Millennium cites to the cost of supplies on the spot market, where there was no purchase contract in place. Typically, spot prices increase during the winter months when demand is greater and decrease during the summer months when demand is lower. Most other transporters and shippers bought gas during this period under contract, at an agreed upon price, and not on the spot market. For this reason alone, Millennium s figures are misleading. Additionally, 2002-2003 was a severe winter where the gas storage reserves in

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[93] In addition to already proposed projects, the industry continues to discuss other potential projects. See e.g. Gas Daily (February 11, 2003) Sponsor Touts Subsea Pipeline to Serve N.Y., (El Paso has introduced plans to construct, Blue Atlantic, a 1,000-mile subsea 36 inch pipeline that would provide 1,000 MDT/D from offshore Nova Scotia to the New York City market area.)

[94] Millennium Reply Brief at 23. The period December 2002 through March 2003 was one of the coldest on record.

Dawn, Ontario, Leidy, Pennsylvania and elsewhere were brought to unusually low levels. Incredibly, with a winter in which consumers used substantially more than the normal amount of natural gas, there was sufficient transportation and supply of natural gas to serve the New York firm energy market, even without the contribution of many pipelines under development. Rather than save New Yorkers from a Cold Day in January, Millennium s pipeline would have presumably charged the spot market rate to retail purchasers, instead of the substantially less expensive contract prices. Millennium has not previously stated that it would sell its gas at a discount, but if it did, it would certainly benefit New Yorkers.

Millennium s chart a Cold Day in January is misleading not only because it focuses only on spot market prices but because it compares spot prices from the Henry Hub in Louisiana with Millennium s proposed tariff for transporting natural gas from Canada. A more realistic comparison would have been between newer pipelines with excess capacity serving the Northeast. Any of these new pipelines would have produced comparably low transportation costs.

Millennium s statement that its project could have helped to lower gas prices and saved New Yorkers as much as $200 million in New York is therefore faulty because it uses the spot (non-firm contract) price and is comparing costs for transporting natural gas from pipelines with different levels of excess capacity. Its estimates also do not factor in who pays for the discounts to these same marketers during the summertime. In this regard, the Millennium Project is not needed to relieve existing capacity constraints nor to achieve cost savings.

2. Enhancing the Nation s Energy Self-sufficiency

Millennium argues that its project will contribute to the National goal of energy self-sufficiency. While there is a general national interest in assuring greater degree of energy self-sufficiency, Millennium s proposal to import from a foreign country supplies of natural gas does not advance that goal.

Energy self-sufficiency is achieved through development of domestic sources of natural gas so the Nation is not dependent on foreign supplies and suppliers. Millennium advises that the Millennium Project will import both U.S. and Canadian gas supplies. In a footnote it reports that [s]ome of the gas received by Millennium at the Canadian border will originate from domestic supplies that have been transported from domestic producing regions to the Chicago market area and then on to the Canadian market hub (Dawn) from which most of Millennium s gas supply will emanate, while other domestic gas supplies will be received by Millennium at interconnections in the U.S. with a number of other interstate gas pipeline systems in New York State. [95]

It has been stated that the natural gas transported by Millennium will primarily come from Canada. [96] Indeed, it may all come from Canada because the Dawn, Ontario facility is the sole market hub for Millennium. Even if domestic gas is routed through Chicago (much of which has its origins in the gas fields of western Canada), the transportation point for the gas into the United States is from Dawn, Ontario, Canada. The Dawn facilities are owned by Westcoast Energy Inc, a Canadian subsidiary of Duke Energy and a sponsor of the Millennium project. Foreign shipment of energy supplies does not promote or further the goals energy self-

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[95] Millennium Reply Brief at p. 26, footnote 22.

[96] FERC Staff Comments at p. 4, attached to November 15, 2002 letter of FERC Chairman Pat Wood III.

sufficiency.[97]

Millennium points out that the North American Free Trade Agreement (NAFTA) assures open borders for exports, however it does not eliminate restrictions applicable to citizen and non-citizen alike. In the mid-1980's, the Canadian National Energy Board (NEB) implemented a policy, still in effect, to address exports of natural gas.

> [T]he NEB implemented the Market-Based Procedure (MBP) to assess the merits of an application before granting a gas export licence. The MBP is founded on the premise that the marketplace will generally operate in such a way that Canadian requirements for natural gas will be met at fair market prices. The main premise of the MBP is that interested Canadian natural gas buyers have the opportunity to purchase natural gas on similar terms and conditions as the proposed export sales; if such an opportunity has not been provided, Canadian natural gas buyers may complain to the NEB prior to the export taking place. [98]

Natural gas shipments to the United States are controversial on the Canadian side of the international border. In July 2002, the Hon. Bernard Lord, Premier of New Brunswick, petitioned the Canadian National Energy Board to give the province access to off-shore natural gas resources; NEB agreed to closely monitor the natural gas situation. A Canada Too! campaign has sprung up to try to keep gas in Canada, perhaps because the price of natural gas for Canadian has also gone up as a result of demand. Notwithstanding the firm conviction that Canada will not restrict exports, the United States cannot control the actions of foreign governments.

Energy self-sufficiency is achieved through domestic control of natural gas so the Nation is not dependent on importing gas from foreign suppliers. Whatever its origin, the gas to be

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[97] Because it is importing gas from Canada, Millennium requested, pursuant to Executive Order 10485 and Subpart C of Part153 of the Commission's Regulations, a Presidential Permit and authorization under section 3 of the Natural Gas Act to site, construct, and operate facilities at the international border in order to import natural gas from Canada.

[98] Exhibit 36, Canadian National Energy Board- Frequently Asked Questions. http://www.neb.gc.ca/energy/ngprice_e.htm#NaturalGasPricesDetermined.

transported by the Millennium Pipeline is imported from Canada. Therefore, because the natural gas is imported from a foreign source, the Millennium Pipeline does not further the national interest of the United States in energy self-sufficiency.

3. The Millennium Project is Not Needed to Promote Compatible Economic Development in the Coastal Zone

CZMA Section 303(2) recognizes the needs for compatible economic development in the coastal zone.[99] Millennium argues that its project will promote compatible economic development in the Coastal Zone by providing the energy infrastructure it claims is necessary to meet increasing demands for natural gas in the region. As noted earlier, the 2002 New York State Energy Plan debunks the claim that Millennium is needed to meet demand. Since not all of the natural gas from the ten proposed projects is necessarily needed, competition will result in some projects not being built. The Millennium project is of no greater consequence to the promotion of economic development in the region than any other pipeline. The natural gas it would supply is not necessary to meet the region s energy generation requirements. Therefore, the Millennium Pipeline does not meet this national CZMA objective.

4. Protecting Coastal Zone Resources

In its Reply Brief, Millennium again contends that its pipeline will benefit the coastal zone by substantially reducing air emissions, improving water quality, protecting fisheries resources and decreasing oil/coal barge traffic. While using natural gas to generate electricity would produce fewer emissions, Millennium s project is not critical to meeting that objective. As stated above, Millennium is not unique. Natural gas projects are proposed, some of which will

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[99] *See, e.g.*, Decision and Findings in the Consistency Appeal of Davis Heniford (May 21, 1992), at 15.

not be built due to competition and/or due to the environmental harm they may cause. Any natural gas, not just Millennium s, which is used to replace dirtier coal burning electric generating plants, may improve air quality, by reducing emissions of SO_2, NOx, carbon monoxide, carbon dioxide and particulates.

The role of Millennium's proposed pipeline in achieving New York State's air quality goals is not as critical as Millennium portrays.

Millennium cannot show that the additional natural gas capacity they are proposing will result in an overall decrease in air emissions. While natural gas combustion is cleaner in comparison to combustion of other, "dirtier" fossil fuels, such as oil or coal, there is not credible evidence that Millennium gas will actually substitute for such other fuels. Given the current circumstances, it is not at all likely that the few coal and oil-fired generators will be replaced by gas facilities in the near future.

In stark contrast to Millennium s fictional calculations of pollutant reductions, real world reductions are not easily achieved, especially in this high-demand electricity market. Real-world reductions require actual implementation of improvements, retrofits, and plant conversions. Millennium provides no evidence that these implementation measures are underway, or that their pipeline project will in any way foster such implementation measures. In any event, it is certainly not the case that "the Project will substantially reduce air emissions"[100] as claimed by Millennium.

FERC Chairman Pat Wood III submitted a letter[101] during the public comment period that

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[100] Millennium Reply Brief at p.28.

[101] Exhibit 37. Letter from Pat Wood III, FERC Chairman to Scott B. Gudes, Deputy Under Secretary for Oceans and Atmosphere (November 15, 2002).

reaches a startling, though unsupported, conclusion:

> The Commission s analysis also included an exhaustive study of the project s environmental impacts, as required by the National Environmental Policy Act and other environmental statutes; this analysis focused in particular on the appropriate location for crossing the Hudson River and the impacts of the project on surrounding coastal areas, the matters which are the subject of the instant appeal to the Secretary. This analysis, which was subject to review and comment by local, state and federal agencies, the public and other entities, concluded that the project would have acceptable environmental impacts , including crossing the Hudson River at Haverstraw Bay.

With all due respect, Chairman Wood s comments about such environmental impacts are unfounded and do not reflect the views of the principal federal and state agencies charged with protecting the environment and natural resources that commented on Millennium s appeal. A discussion of their comments follows shortly.

FERC s role as lead agency under the National Environmental Policy Act was to take primary responsibility for the preparation of the EIS and to supervise the process.[102] Rather than being a matter exclusively within FERC jurisdiction, the Army Corps of Engineers is the other federal agency which has regulatory responsibility for the Millennium Project. The proposed pipeline cannot cross Haverstraw Bay, the Croton River or Lake Erie without the Corp s approval. Indeed, Deputy Assistant Secretary of the Army Corps George Dunlop, speaking on behalf of Secretary of Defense Donald Rumsfeld, wrote during the public comment period:

> I am enclosing a letter dated August 13, 2002, signed by the District Engineer, Colonel John O Dowd, to the Millennium Pipeline Company, that outlines the New York District s concerns with the subject project. **The District s concerns are similar concerns being expressed by the New York Department of State (DOS) regarding the environmental impacts of the proposed Hudson River crossing. Additionally, the District Engineer noted that alternatives recommended by DOS that would avoid**

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[102] 40 CFR § 1501.5.

the necessity for crossing the Hudson River could largely address his concerns.[103]

Similarly, Colonel O Dowd expressed the Corps views about the project:

> I also have substantial concerns about the environmental impacts of the proposed Hudson River crossing, similar in nature to those expressed by DOS. **As a result, I must consider whether a permit authorizing the proposed project might compromise the public interest.**
>
> In making any decision to issue a DA permit as requested by Millennium, I must determine that a permit would not be contrary to the public interest, and I must weigh carefully expressions of the public interest as defined by those providing comment, including state and federal government agencies. For that reason I encourage you to keep me advised of possible project modifications Millennium may be considering, to meet its needs to furnish gas supplies to downstate New York, while protecting resources that have been identified as important.[104]

Recently, Richard Tomer, Chief of the Corp s Regulatory Branch in New York, sent Millennium a two-page letter indicating that the Corps continue[s] to have concerns with your proposal to construct the pipeline within Haverstraw Bay to cross the Hudson River. [105] He requested Millennium to provide the Corps with extensive data on alternative crossings, plume modeling, turbidity, cumulative effects of construction multiple overlapping components and the movement of tidal currents. He concluded that:

> These facts, in combination with the statements of our waterway Experiment Station that the predicted plume life would be more like 1 to 2 hours (versus your prediction of 30 minutes), lead us to believe that the turbidity would be substantially more than you stated and that it would be near impossible to meet the required timeframes to complete the

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[103] Exhibit 38. Letter from George Dunlop, Deputy Assistant Secretary of the Army (Civil Works) to Scott B. Gudes, Deputy Under Secretary for Oceans and Atmosphere (November 21, 2002).

[104] Letter from John B. O Dowd, Colonel, Corps of Engineers, District Engineer to Richard E. Hall Jr. dated August 13, 2002.

[105] Exhibit 39. Letter from Richard Tomer, Chief of the Corps Regulatory Branch in New York City, to Richard Hall (January 31, 2003).

crossing if only one bottom dump were to occur as per NYSDEC s request.[106]

In response to the request for extensive data, Millennium replied with a two page letter, attempting to dismiss many of the Corps concerns and attaching the Baker Study.[107] Rather than documenting their evidence, Millennium s letter repeatedly refers to undocumented personal communications during a meeting and a site visit. This type of non-responsive and deceptive attitude has been evidenced whenever an agency questions Millennium s desire to excavate and blast in Haverstraw Bay.

In an effort to hide its own deficiencies, Millennium accuses DOS of "NIMBY-ism. However, for more than 20 years, New York s Coastal Management Program has concurred with the consistency of numerous natural gas pipeline crossings and other major industrial facilities and public works projects, including many which serve the New York City area. Most recently, New York Secretary of State Randy Daniels issued a press release to announce DOS s concurrence with the extension of the Iroquois Gas Pipeline across Long Island Sound into New York City.[108] The approved Iroquois extension will interconnect with the existing pipeline at Northport and go through Long Island Sound into the East River to the Bronx. It will deliver approximately 230,000 decatherms or 230,000,000 cubic feet of natural gas per day for electric generation for residential, commercial, and industrial uses in New York City.

In his announcement, Secretary Daniel s stated:

> After a thorough review, the proposed Iroquois pipeline extension has been determined to be consistent with both the State s Coastal Management Program and the City of New

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106 Id.

107 Millennium s Exhibit 78.

108 Exhibit 40. DOS Press Release (June 19, 2002).

> York Waterfront Revitalization Program. The applicant s proposed route was designed to avoid sensitive coastal resources and construction will avoid in-water disturbances by using directional boring and trenching with a high pressure water jet. The project is consistent with Governor Pataki s goal of bringing affordable energy to the New York City area while at the same time ensuring the protection of natural resources.[109]

New York actively encourages new pipeline infrastructure and natural gas supplies, provided they are responsibly sited.

In drastic contrast to "NIMBY" arguments, DOS objects to the project because Millennium proposes new dredging across 2.1 miles of Hudson River bottom, in a previously undredged area of outstanding ecological significance, identified by federal and state agencies as a significant habitat area, and critical in supporting most of the main anadromous commercial and recreational fishery populations in the North Atlantic.

Finally, it is illogical for Millennium to claim that due to the future need for electric power generation that its pipeline actually benefits the coastal zone. It does not follow that the need for gas transportation infrastructure constitutes an endorsement of all aspects of that infrastructure in all circumstances. Millennium is arguing, in effect, that its project is "the lesser of two evils" from an environmental persective. The conclusion which must be reached is that the Millennium can avoid the ill effects of its project by choosing one of the several reasonably available, alternative routes.

B. Any National Interest Furthered by the Activity Does Not Outweigh the Activity's Adverse Coastal Effects, When Those Effects Are Considered Separately or Cumulatively

The second element that Millennium failed to prove is that "[t]he national interest

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[109] Id.

furthered by the activity outweighs the activity's adverse coastal effects, when those effects are considered separately or cumulatively."[110] This element requires that the Secretary weigh the adverse effects of the proposed activity on the land and water uses and natural resources of the coastal zone against its contribution to the national interest.[111] In deciding this element of the appeal, the Secretary should consider: 1) the adverse coastal effects of the objected-to activity itself, ignoring other activities affecting the coastal zone; 2) the cumulative adverse coastal effects from the objected-to activity being performed in combination with other activities affecting the coastal zone; and 3) the proposed activity's contribution to the national interest. Millennium has not made a credible case that it s propose route satisfies these considerations.

Millennium avers that its pipeline, being a major energy facility, advances the Nation s interest in energy self-sufficiency, economic development and the protection of coastal resources.[112] However, because the Millennium project fails to further any of the objectives of the CZMA in a significant or substantial manner, the national interest of the project is outweighed by the adverse coastal effects. Even assuming that the project furthers such an interest, it is outweighed by the adverse coastal effects. Instead of advancing the national interests identified in the CZMA, Millennium s project undermines those objectives by increasing this Nation s reliance on foreign sources of energy and destroying coastal resources.

1. The Project s Effects on Haverstraw Bay

Millennium proposes to place its pipeline across one of the most biologically productive

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110 15 CFR 930.121(b)

111 Consistency Appeal of Ford S. Worthy Jr. at 7.

112 Initial Brief of Millennium Pipeline Company at 22.

and important wildlife habitats in the northeastern United States. This route is one which impairs or destroys the functions of a substantial portion of the habitat. However, Millennium, in its reply brief, for the first time,[113] attempts to portray the pipeline s impact on Haverstraw Bay as minimal and temporary. The federal environmental agencies strongly disagree with this assessment. Moreover, neither the FEIS, the Biological Assessment nor the Supplemental Biological Assessment ever reached such a far-fetched conclusion.

Recently, William T. Hogarth, Phd., NOAA Assistant Administrator for Fisheries, stated:

> Based on consideration of the facts as related to authorities and trust resources, it appears that the New York State Department of State has a substantial basis for its position in this matter. A portion of the pipeline route occurs in ecologically sensitive areas of special significance designated under New York State s Coastal Management Program (NYCMP). The unique and sensitive ecological character of these areas and associated resources of special concern make protection particularly important with respect to construction of this project.[114]

Millennium has attempted to summarize the project s likely impacts in a misleading, self-serving and dismissive manner.[115] The DOS does not agree with Millennium's assessments or summations of the proposed pipeline's impacts, and can only speculate as to how Millennium arrived at this conclusion. As stated previously, DOS found that the adverse impacts of the route chosen by Millennium are substantial, will result in unacceptable impacts to the Significant Coastal Fish and Wildlife Habitat of Haverstraw Bay, and that the substantial body of data, the

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[113] Based on an unsubstantiated remark of FERC Chairman Pat Woods III during the public comment period, an incorrect assertion that has not previously been made.

[114] Exhibit 41. Letter from William T. Hogarth, National Marine Fisheries Service, to Branden Blum, NOAA Senior Counselor at 1 (December 5, 2002).

[115] Millennium falsely asserts that the DOS and other involved federal resource and permitting agencies agree with Millennium's "temporary and minimal" impact characterization, when in fact, the opposite is true. See Millennium Reply Brief at 31, 32 and 47.

concerns of key resource agencies, and the policies and standards of the Coastal Management Program have been ignored by Millennium in their analysis.

Recently, the USFWS submitted the following assessment:

> The FWS maintains our recommendations to the Corps to deny a permit, and for the NYSDOS s denial of coastal zone consistency to be upheld for this crossing due to unacceptable impacts to aquatic resources of national importance. Haverstraw Bay has been recognized as an important resource by NMFS, the FWS and the State of New York.[116]

Millennium correctly points out that DOS habitat narratives indicate that new dredging in undisturbed areas outside the shipping channels in Haverstraw Bay is unacceptable and that the potential turbidity impacts on the 108 acres of the bay that will be affected are also unacceptable. Characterizing this conclusion as dogmatic, Millennium claims that the DOS offers its **own** designation of the Bay as a Significant Coastal Fish & Wildlife Habitat, selective quotations from its own habitat documentation characterizing the Bay, and its **own** generalized concerns regarding the proposed pipeline. [117]

Contrary to Millennium s assertion otherwise, implementation of State policy by a State agency, and the adherence of a State agency to the procedures of an established program based on State law and policy, is not in any way remarkable. The DOS offers "its own" designation of Haverstraw Bay because DOS has been charged by the State of New York with establishment and administration of a significant habitats program, and Haverstraw Bay was identified in 1987 as a Significant Coastal Fish and Wildlife Habitat (SCFWH) area under this program. The DOS uses "its own" documentation characterizing the Bay because the SCFWH program requires the

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[116] Exhibit 42. Letter from Dr. Mamie A. Parker, USFWS Regional Director, to Branden Blum, NOAA Senior Counselor, at 3 (November 27, 2002).

[117] Millennium Reply Brief at 32.

development and use of such documentation to guide natural resource management in New York State, and support consistency decision making where the designated habitats are concerned.

Although Millennium appears to be implying that the SCFWH designation of Haverstraw Bay was designed to impede their pipeline's progress, development of the SCFWH program and its supporting documentation was neither recent nor arbitrary. Nor has it been developed and administered in isolation. The Waterfront Revitalization and Coastal Resources Act (WRCRA) of 1981 declared it to be the policy of New York State to conserve, protect and where appropriate, promote commercial and recreational use of fish and wildlife resources and to conserve fish and wildlife habitats identified by the Department of Environmental Conservation (NYSDEC) as critical to the maintenance or re-establishment of species of fish and wildlife.[118] Implementation of this policy required that fish and wildlife habitats in the coastal area be evaluated so that the most important or "significant" habitats could be identified and then designated for protection. The DOS has the statutory authority to manage all aspects of the coastal program, while NYSDEC has management responsibility for fish and wildlife. The Significant Coastal Fish and Wildlife Habitat program, therefore, has always been a joint enterprise between the two primary resource management agencies in New York State.

The SCFWH program is based on a rating system developed by scientists at the NYSDEC Division of Fish and Wildlife, used to identify the highest priority sites in need of special consideration.[119] The procedures established therein were reviewed and approved prior to

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[118] New York Executive Law §§ 910-920.

[119] Technical Memorandum: Procedures Used to Identify, Evaluate and Recommend Areas For Designation As Significant Coastal Fish and Wildlife Habitats, New York State Department of Environmental Conservation (July 24, 1994).

publication by 13 federal agencies including the Federal Energy Regulatory Commission (FERC), Department of Energy (DOE), United States Army Corps of Engineers (USACE), Environmental Protection Agency (EPA), Department of the Interior (DOI), Department of Transportation (DOT), and Department of Agriculture (USDA). They have been applied to all proposed SCFWH areas statewide, beginning with the first state designations in 1987 (Hudson River, Long Island, and the Great Lakes). It should also be noted that following designation by the Secretary of State, individual SCFWH designations, maps and habitat narratives are submitted to NOAA OCRM for federal concurrence. Therefore, each SCFWH designation, including boundaries and habitat documentation, is directly supported by a comprehensive and scientifically robust analysis and is, in addition to undergoing public hearings, reviewed by two New York State agencies and the federal Office of Ocean and Coastal Resource Management.

New York State is not alone in characterizing Haverstraw Bay as significant. The United States Fish and Wildlife Service includes Haverstraw Bay in the "Lower Hudson River Estuary" complex (#21) in its "Significant Habitats and Habitat Complexes of the New York Bight Watershed,"[120] citing its large areas of submerged aquatic vegetation and less intense shoreline development. According to USFWS, this significant habitat complex is "a regionally significant nursery and wintering habitat for a number of anadromous, estuarine and marine fish species, including the striped bass (*Morone saxatilis*), and is a migratory and feeding area for birds and fish that feed on the abundant fish and benthic invertebrate resources in this area."[121] More specifically:

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[120] USFWS Southern New England-New York Bight Coastal Program, Charlestown, RI at 629-652 (November 1997).

[121] Id. at 629.

> Haverstraw Bay and Tappan Zee occupy the area between Piermont Marsh and Stony Point. This wide, shallow section of the river is the areas of the seasonal (and annual) salt front. This is the area where the freshwaters from the upper river mix with the marine water of the Atlantic, producing brackish water habitats in the 0 to 10 parts per thousand salinity range. Primary (submerged aquatic vegetation and phytoplankton) and secondary (zooplankton, invertebrates, and fish) biological productivity is very high in this extensive shallow water habitat, and the area serves as a major nursery and feeding area for anadromous and estuarine-dependent species. This area is a major nursery area for striped bass, white perch, tomcod, and Atlantic sturgeon that spawn elsewhere in the Hudson; it is, as well, a wintering area for the federally listed endangered shortnose sturgeon. This bay is critical habitat for the estuarine-dependent fish that the Hudson River system contributes to the New York Bight. Waterfowl use is extensive during the spring and fall migration periods for feeding and resting. Small numbers of wintering waterfowl include mallard, American black duck, Canada goose, mergansers, canvasback, common goldeneye (*Bucephala clangula*), and scaup. Peregrine falcons have consistently been using a nesting box on the Tappan Zee Bridge since about 1985, but have had low fledgling success. A network of marshes behind Grassy Point adjacent to Haverstraw Bay is one of the few sizable marshes along the lower Hudson, but tidal circulation has been greatly reduced by the construction of roads and the marsh has been impacted by landfills and sewage treatment plants.[122]

The USFWS narrative for this area states that "**Structural alteration of the habitat from filling and inwater structure construction poses significant impairments to the habitats and should be avoided**."[123]

Haverstraw Bay is also described as a significant habitat by non-governmental organizations working to protect natural resources.[124]

2. The Lay-Barge Construction Technique Will Directly Destroy Significant Coastal Habitat

Millennium's proposed "lay-barge" construction method is neither innovative nor

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122 Id. at 634.

123 Id. at 635 (Emphasis added).

124 See, e.g. Hudson River Significant Tidal Habitats: A Guide to the Function, Values and Protection of the River s Natural Resources, The Nature Conservancy at 151 (March 19890) (dredging of the shallows and construction or filling in the habitat is an incompatible use.

fundamentally low impact. The use of bucket dredges coupled with barges is a common practice worldwide. The "closed bucket" element of this method is the only element specifically designed to respond to environmental concerns. Millennium cites the use of this technique as a means to reduce turbidity and sediment resuspension. However, current research shows that the closed buckets, while reducing the visual appearance of surface water turbidity, actually increase turbidity in the near-bottom zone.

> Turbidity temporarily increases at varying levels near operating dredges. The levels of turbidity at any one site are a function of a combination of factors that include substrates, currents, and operational parameters....As the studies reflect, turbidity or suspended sediment concentrations vary throughout the water column with larger plumes typically occurring at the bottom closer to the actual dredging action and plume sizes decreasing exponentially as you move away from the dredging site both vertically and horizontally. The differences between the water column impacts of the closed bucket versus the open bucket dredges deserve further analysis in order to assess the trade-offs involved in using a tightly sealed bucket for excavating contaminated sediments **at the potential cost of producing a larger plume near the bottom** [emphasis added].[125]

This white paper cites research in Florida that observed a 56% reduction in suspended sediment in the upper water column, with a concomitant 70% increase in suspended sediment in the lower water column, with the use of the closed bucket dredge system.[126]

The bucket dredge technique, with or without the closed bucket, is certainly not "the most environmentally benign technique available" as asserted by Millennium. The Nightingale and Simenstad report states:

> LaSalle (1990) reports that suspended concentrations in surface and bottom waters

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[125] Pg. 55, *Dredging Activities: Marine Issues*, Nightingale and Simenstad, School of Marine Affairs and School of Aquatic and Fishery Sciences, University of Washington, Seattle, WA at 55 (July 2001) (prepared for the Washington State Transportation Commission and the U.S. Department of Transportation) (emphasis added); WA-RD 507.1a and WA-RD 507.1b available at http://depts.washington.edu/trac/reports/reports.html.

[126] Id. at 56.

> are highest (as high as 2.5 times that of other dredges) for bucket dredges due to: 1) sediment suspension from the bucket's impact to the bottom and the withdrawal of the bucket from the bottom; 2) material washing from the tops and sides of the bucket as it passes through the water column; 3) sediment spillage as it breaks the water's surface; 4) spillage of material during barge loading, or 5) intentional overflow in an attempt to increase the barge's effective load.[127]

Millennium claims that there is no alternative construction technique that could minimize ecosystem impacts to any greater degree. [128] However, adopting a DOS alternative crossing route which avoids impacts to Haverstraw Bay and allows Millennium to deliver gas to the New York City marketplace, would truly minimize enviromental impacts.

C. The Effects on the Haverstraw Bay Significant Coastal Fish and Wildlife Habitat Will Be Long-Term and Significant

Millennium claims that the lay-barge technique is a low-impact construction method, which in combination with the natural restorative processes of Haverstraw Bay, will result in only short-term and limited effects on the coastal zone. As indicated in DOS s Initial Brief and explained in the following sections, the evidence and opinions of federal and state experts reveal this is an inaccurate perspective on a sensitive, important coastal resource.

Millennium attempts to distinguish between functional and designated habitats[129], but such distinction makes no ecological sense. The teams of scientists involved in researching the Haverstraw Bay habitat and assigning boundaries for the state's Significant Coastal Fish and Wildlife Habitat designation did not include areas that were not "functional" habitat. The state-designated habitats are supported by a wealth of scientific investigation, analysis, and review that

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127 Id. at p.59

128 Millennium Reply Brief at 34.

129 Millennium s Reply Brief at 35.

has been documented and supplemented throughout the program's twenty-year history. It is not clear what purpose this distinction serves other than to provide additional acreage that, when used for percentage calculations, obfuscates the size and degree of the pipeline's footprint and overall construction impact area.

Millennium wrongly argues that DOS failed to take account of the short term nature of the construction, the specific construction window, the restoration measures that will be implemented to restore benthic contours and composition, and the other extensive avoidance and mitigative measures to which Millennium has committed.

1. The Pipeline Footprint

By focusing on the size of the "pipeline footprint", Millennium trivializes the significant adverse impacts of its proposed project on Haverstraw Bay.[130] Although the footprint is 0.2% of

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[130] In its Reply Brief, Millennium inaptly attempts to draw an analogy between the Millennium pipeline "footprint" in the nationally-important Haverstraw Bay habitat and the "footprint" of mooring anchors used in oil and gas drilling equipment the Decision and Findings in the Consistency Appeal of Texaco, Inc. from an Objection by the California Coastal Commission, U.S. Secretary of Commerce (May 19, 1989) and Decision and Findings in the Consistency Appeal of Amoco Production Company from an Objection by the Division of Governmental Coordination of the State of Alaska, U.S. Secretary of Commerce (July 20, 1990). The analogy, as well as those opinions, are inapplicable to this situation. While in certain circumstances, such as offshore oil exploration, the footprint of an object, such as a mooring anchor, may be one pertinent factor in assessing the project's environmental impact, in Millennium it is not an appropriate measure of long-term, permanent impacts to an ecologically sensitive habitat, where the construction area is many times greater than the eventual pipeline footprint and the turbidity and sedimentation resulting from construction activities would extend over vast portions of the habitat. In the Texaco decision, the Secretary considered, among other things, the drilling rig's anchor. He stated "Anchor placement represents a very small surface area, and no damage is expected to hardbottom habitats." That is very different situation than excavating and blasting in 108.5 acres of significant Bay habitiat. As to the other environmental impacts in Texaco, the USFWS and NOAA Fisheries found the impacts to be acceptable, whereas during the Millennium public comment period, both agencies found Millennium's project to have unacceptable impacts to Haverstraw Bay and both urged the Secretary not to override DOS's decision. In the Amoco decision, Amoco proposed to use a floating drilling unit,

Haverstraw Bay s designated habitat, the total in-water pipeline construction area is 4,724,000 square feet or 108.5 acres of habitat, that would be directly and adversely impacted by the proposed crossing. Moreover, the proposed pipeline project involves dredging more than 200,000 cubic yards of river bottom sediments in the bay to excavate a 2.1 mile trench in which the 24 inch gas pipeline would be placed.

Millennium asserts that the area of impact associated with their pipeline will be "minimal," equal to only 1.5% of the bay's 7,040 acres. Even using Millennium's numbers, it is difficult to arrive at the conclusion that the size of impact is "minimal". Millennium asserts that 108.5 acres will be negatively impacted by construction of the pipeline - an area quite substantial in size. Conversion to percentage of total area does not alter the fact that 108.5 acres (almost 109 football fields) is quite a large area. The proposed area of negative impact to the bay is clearly substantial.

Converting the area of impact into a percentage of total area is also ecologically erroneous. Assessing the degree and nature of impact is more complex than simply determining the size of the impacted area. The proposed Millennium crossing may be more significant in terms of fragmentation of Haverstraw Bay than in terms of the size of the pipeline footprint, an aspect of the impact analysis missing from Millennium's record. Habitat fragmentation, a fundamental concept in the field of landscape ecology, is characterized by the break up of a continuous landscape containing large habitat areas into smaller, more numerous and less-connected patches. Ecological integrity is determined in large part by the amount of connected, undisturbed "interior" habitat that is remote from the disturbance "edge." The proposed pipeline

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moored by anchors, the footprint of which had little impact on the environment.

crossing effectively inserts a disturbance "edge" through the center of Haverstraw Bay's 7,040 acres of habitat, characterized as "one of the most important fish and wildlife habitats in the Hudson River estuary".[131] In other words, by crossing the Hudson River at nearly its widest point (east-west) and segmenting Haverstraw Bay approximately into two halves (north-south), disturbance is not minimized but actually maximized.

The Haverstraw Bay Significant Coastal Fish and Wildlife Habitat would be adversely affected by the dredging, backfilling, and blasting activities required for the construction of the proposed pipeline. Those effects would include mortality of benthic and aquatic organisms and destruction of valuable habitat within the bay. Dredging and blasting activities will destroy valuable habitat. Furthermore, 108.5 acres of benthic communities and habitat in the vicinity of the pipeline trench will be significantly impaired sediment resuspension and sedimentation during and after the completion of the dredging and backfilling activities. Moreover, blasting will permanently alter this portion of the habitat and change the physical and hydrologic properties of the bay. Millennium has not demonstrated that this large area would recover. Thus, the proposed project would result in an immediate destruction of a portion of the designated habitat and impair the viability of the designated Haverstraw Bay habitat during and after construction of the pipeline in the bay.

Millennium states that increased sedimentation will be confined to "the vicinity of the trench".[132] This "vicinity" will be at least 1,300 feet in length, 10 to 20 feet deep, and 70 to 150 feet wide. Since the dredging operation and the trench backfilling will occur simultaneously, in

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[131] Exhibit 19 at 3.
[132] Millennium Reply Brief at 38.

reality the length of the active sources of turbidity at any given time will total 2,600 feet.[133] The "vicinity" of the trench is not just limited to its active areas. Sediment plume research on bucket dredge systems has observed the "visible" surface water plume extend 300 meters (984 feet) from the point of dredging, and the bottom water plume extend close to 500 meters (1,640 feet).[134] The Water Quality Certificate issued for the proposed project restricts the visible plume to less than 460 feet.[135] Millennium's analysis of the impacts of the proposed dredging system was apparently not sufficiently exhaustive to include evaluation of the cumulative effects of their planned multiple barge, multiple active area system, because they propose in their most recent correspondence with permitting agencies an after-the-fact impact analysis:

> Therefore, **it may well be possible** [emphasis added] to have 2 bottom dump barges positioned and have one dump at the beginning of the window and the other at the end of the window, and still work within the more conservative plume life predicted by the Corps Waterways Experiment Station. **This procedure could be field tested during construction to ensure compliance and that there are no 'overlapping effects'**.[136]

[emphasis added]" (Richard E. Hall letter, pg. 2) Millennium finally concludes that "Importantly, in any event, on-site field monitoring will confirm compliance with the turbidity standards at all times."[137] It should be noted that on-site monitoring will confirm compliance with the turbidity standards if Millennium is actually in compliance.

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[133] Exhibit 43. Letter from Richard E. Hall, Jr. to Richard Tomer (March 14, 2003) The primary sources of turbidity are the dredging operation and backfilling with bottom dump barges. These two operations will typically be separated by approximately 1,100-1,300 feet.

[134] Pg. 56, *Dredging Activities: Marine Issues*, Nightingale and Simenstad, School of Marine Affairs and School of Aquatic and Fishery Sciences, University of Washington, Seattle, WA at 56.

[135] Exhibit 43.

[136] Id. at 2.

[137] Id.

It is unclear what kind of science led Millennium to the conclusion that: Because this functional habitat possesses high productivity but low diversity and is relatively uniform spatially, temporal impacts to this minute part of the Bay will be ecologically insignificant. [138] Millennium repeats the phrase "high productivity, low diversity, spatially uniform" throughout its brief, but its characterizations makes no sense in terms of current scientific understanding of the Bay. These conclusions also make no sense in terms of both Millennium's and its own hired consultants' assertions that "Haverstraw Bay is far too sensitive an area" to attempt uncertain crossing technologies that would "devastate the sensitive bottom sediments."[139] Characterizations of Haverstraw Bay from reputable scientists and the resource management agencies universally acknowledge the bay's unique ecology and resources. For example, the regular occurrence of brackish water over extensive areas of shallow bottom creates highly favorable conditions for high biological productivity of submerged vegetation, phytoplankton and zooplankton, aquatic invertebrates, and many fish species. Although the location of the salt front varies annually and seasonally, Haverstraw Bay regularly comprises a substantial part of the nursery area for Hudson River fish and crustacean species including striped bass, American shad, white perch, hogchokers, Atlantic tomcod, Atlantic sturgeon, shortnose sturgeon, and young of the river blue crab population. Depending on the location of the salt front, many river species utilize Haverstraw Bay for overwintering, including striped bass, white catfish, white perch, Atlantic sturgeon, and shortnose sturgeon. Anadromous species, such as blueback herring and alewife, spawn in upstream freshwater areas, but move south and congregate in the bay before leaving the

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[138] Millennium s Reply Brief p. 36.
[139] Millennium s Reply Brief at 121

river in the fall. Haverstraw Bay is also a major nursery and feeding area for certain marine species, most notably bay anchovy, Atlantic menhaden, bluefish, weakfish, and blue claw crab. The area serves as a migratory pathway to and from spawning and mating locations for many of the above species, including alewife, blueback herring, American shad, striped bass, Atlantic sturgeon, white perch, Atlantic tomcod, hogchoker, and blue claw crab. Atlantic tomcod, bay anchovy, and Atlantic sturgeon all spawn in Haverstraw Bay. In addition, significant numbers of waterfowl use the Bay during spring and fall migrations.

2. The Millennium Project Will Have Long-Term Physical Effects

Millennium makes the unsupported claim that since the proposed construction in Haverstraw Bay will utilize the lay-barge construction method, construction will be completed within 2 ½ months and the contour will be closely re-established, the project will have only short term and temporary impacts.

However, there is no evidence that the impacts of the proposed pipeline will be temporary. DOS and NOAA Fisheries share a common concern about the long-term impacts of Millennium s project on Haverstraw Bay. As stated by NOAA Assistant Administrator for Fisheries, William T. Hogarth, PhD:

> Our review of the Millennium proposal indicates that the project would create significant and long-term impacts in New York's coastal zone, including the Haverstraw Bay habitat.[140]

Additionally, the Hudson River Estuary submerged lands mapping project, conducted by NYS Department of Environmental Conservation, has found several locations where scars from

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[140] Exhibit 41 at 2.

laying pipelines remain, including the scar of a buried pipeline crossing the Hudson River near Kingston north of Rondout Creek.[141]

In addition, NOAA Fisheries cites other Hudson River evidence that the impacts of pipeline construction are not as temporary as Millennium asserts:

> Evidence from the Hudson River collected from benthic profiling performed by LaMont-Doherty Geological Obseratory for the State of New York, indicated that **other utility crossing, undertaken in the Hudson even decades ago, continued to have discernible impacts on the bottom geology and topography in the project alignments.** Other projects in the Hudson where such problems have been observed have been the subject of remedial efforts that required placement of large volumes of rock and concrete mattresses to protect sections of pipe that were exposed or even undermined by natural river processes. Examples are several Central Hudson Gas and Electric crossings. **These facts indicate that habitats were destroyed or significantly impaired for many years by a variety of factors including changes in the substrate, changes in local erosion or accretion rates, changes in benthic community structure that could reduce ecological productivity, a reduction in carrying capacity due to loss of prey, or similar impacts that are all related to project installation**.[142]

The evidence of significant, long term adverse impacts associated with gas and electric crossings is supported by Millennium's and its own consultants' characterization of the effects to be expected from horizontal directional drill (HDD) technology. HDD technology is often a preferred alternative for pipeline and cable crossings because drilling occurs under the crossing area, leaving the land surface or river bottom largely intact. In its Reply Brief, Millennium concedes an important environmental point:

> As pointed out by Baker (Millennium Exhibit 78 at 20) and clearly admitted by Cherrington in its correspondence with O'Brien & Gere, "project of this magnitude is completely outside the realm of conventional HDD technology" and the so-called "Environmental Beneficial Boring" technology "has had limited opportunities for use therefore placing it in the realm of research and development also." In fact, a 2.1 mile

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[141] Mapping the Hudson Estuary's Submerged Lands, John W. Ladd, PhD et al., Clearwaters at 7 (2002).

[142] Exhibit 41 at 2 (emphasis added).

> HDD would represent a crossing more than an order of magnitude longer than has accomplished by Cherrington (or any other firm) using any boring techniques. Cherrington offers no specifics on how this order of magnitude increase will be achieved and simply states that "[w]e have observed several such evolutionary advancement.... **This is hardly the basis for a sound construction plan and Haverstraw Bay is far too sensitive an area to even attempt crossing technologies which are in the "realm of research and development**.
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> Moreover, such an attempted crossing with an unproven technology **would devastate the sensitive bottom sediments either by introducing huge volumes of bentonite clay or, worse, a complete collapse of the drilled hole with no way to remediate the impacts**. It is highly unlikely that either the NY Department of Environmental Conservation or the US Army Corps of Engineers would permit such a poorly developed construction plan.[143]

These "devastating" impacts of a failed HDD crossing, cited by Millennium, closely resemble what will occur using Millennium's proposed trenching and blasting methodology. Indeed, the 20-foot deep trench, and the area of bedrock blasted out of the eastern portion of Haverstraw Bay will be similar in nature to "a complete collapse of the drilled hole with no way to remediate the impacts." DOS agrees with Millennium both that such impacts would "devastate the sensitive bottom sediments", and that there is no acceptable method of remediating these impacts to restore the habitat.

The USFWS offers evidence of other, potential long-term impacts to the benthic and aquatic environment of Haverstraw Bay resulting from pipeline leaks or ruptures:

> In addition to direct mortality of fish and aquatic species resulting from any pipeline failure, methane gas release have been shown to have toxic effects on aquatic organisms...For example, the Crossing at maximum operating pressures (1,000 pounds per square inch) with 34,200 cubic feet of gas is equivalent to 2.3 million cubic feet of gas at standard atmospheric pressure. Although Millennium has argued that they would immediately detect a leak and shut down the pipeline at the nearest valve, response times would likely be significantly longer than for leaks in more accessible areas. The final EIS documented relatively low

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[143] Millennium Reply Brief at 121 (emphasis added).

incidences of pipeline failure, and the FWS believes that there is significant risk of undetected failure in Haverstraw Bay.[144]

3. Biological Effects

Millennium contends that [t]he biological impacts of [it s] Hudson River crossing will also be of no ecosystem significance, because they will be limited to the short-term loss of benthic life and the temporary displacement of mobile aquatic life in the vicinity of the pipeline s footprint. [145] Nor, it argues, will the crossing affect the migratory behavior of fish, since the sequential nature of the construction will leave the vast majority of the river width available for their movement at any given time. [146] These statements could not be further from the truth.

Although Millennium refuses to acknowledge basic ecological principles, alteration of ecosystem-wide characteristics can easily result from seemingly "temporary", or geographically limited, disturbances. For example, detrimental impact to multiple year classes is more destructive to fish populations as a whole than impacts of the same magnitude on a single year class. Multiple year class impacts can cause population declines for several years after an impact event. The seriousness of a given impact is dependent on the species. Species with races or distinct groups which rely on the resources of a particular water body or which reside in a specific area for a significant portion of any component of their life history are more at risk. Their fidelity and length of presence increases the likelihood of succumbing to persistent perturbations within the system.

Fisheries with populations dependent solely or primarily on the Hudson River for many

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144 Exhibit 42.
145 Millennium Reply Brief at 39.
146 Id.

or all of their life cycle activities are among those using Haverstraw Bay. Haverstraw Bay is a critical habitat for most estuarine-dependent fisheries originating from the Hudson River, largely because of its geophysical characteristics and temporal relationship with the estuary s salt front. This area contributes directly to the production of in-river and ocean populations of a variety of crustaceans and forage fish species. Consequently, commercial and recreational fisheries throughout the Mid- and North Atlantic depend on, or benefit from, the biological inputs from the Hudson River.

NOAA Fisheries asserts the important role of Haverstraw Bay in support of North Atlantic fisheries:

> The Haverstraw Bay habitat is a uniquely productive portion of the Hudson Estuary that provides essential habitat values and functions for most estuarine-dependent species originating from the Hudson River and species managed under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) and Endangered Species Act. Many of these species recruit to commercial and recreational populations throughout the North Atlantic. Our review of the Millennium proposal indicates that the project would create significant and long-term impacts in New York's coastal zone, including the Haverstraw Bay habitat.[147]

Likewise, the US Fish and Wildlife Service[148] stated:

> Our evaluation considers the balance between the benefits and reasonably foreseeable detriments of the proposed activity on the public interest. We believe that the [Haverstraw Bay] Crossing will contribute directly to the degradation of important fish and wildlife habitats and may lead to increased secondary impacts associated with the construction of laterals and compressor stations. The public benefits of an additional pipeline do not exceed public loss with respect to public trust resources, including fish, wildlife and their habitats.

Populations of Atlantic striped bass up and down the Atlantic coast depend in large measure on production and recruitment from the Hudson River stock. Atlantic coast fisheries are

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147 Exhibit 41 at 2.

148 Exhibit 42.

derived primarily from production by populations spawning in the Hudson and Delaware Rivers and in the tributaries of Chesapeake Bay. Historically, the Chesapeake Bay stock produced most of the striped bass along the Atlantic coast, however, there has been a decline in juvenile recruitment in the Chesapeake in recent years, while the Hudson and Delaware Rivers stocks have produced moderate to strong year classes. Consequently, maintaining the Atlantic coastal population of striped bass depends on maintaining sufficient production and recruitment from the Hudson River.

DNA-based approaches have been used to assess the relative contribution of Hudson River and Chesapeake Bay recruitment. For example, mtDNA and single copy nuclear DNA analyses were used to discriminate Hudson River and Chesapeake Bay striped bass and estimate relative contributions to eastern Long Island, NY coastal harvests. For the fall of 1989, mtDNA analysis suggested that approximately 73% of fish were of Hudson River origin. For the fall of 1991, analyses of a combination of mtDNA and single copy nuclear DNA suggested that the contribution of the Hudson was about 52%.[149] In other words, a majority of the coastal migratory population of striped bass in recent years, sampled in eastern Long Island, was derived from Hudson River production and recruitment.

Protecting the early life stages of striped bass in the Hudson River, found almost exclusively in Haverstraw Bay, from anthropogenic disturbances is vital to the stock s overall well-being. A variety of studies have demonstrated the importance of bluefish predation on the

[149] Abstracted in Special Report No. 67, ASMFC, Proceedings of the Atlantic Striped Bass Workshop, July 1999.

early life stages of striped bass in the Hudson River Estuary.[150] In the Hudson River, predation by young-of-the-year bluefish is a significant source of mortality in young-of-the-year striped bass. The compounding effect of changes in environmental variables on recruitment in the presence of significant predation has been shown for striped bass.[151] In the Chesapeake Bay, while egg and larval predation are shown to be important to fluctuations in striped bass recruitment, it is the relationship between the magnitude and timing of egg production and environmental variables that primarily determine year-class success. However, it should be noted that predation of age-0 striped bass by age-0 bluefish has been demonstrated to be much more significant in the Hudson River Estuary than in Chesapeake Bay.[152] Therefore, the compounding effect of changes in environmental variables affecting egg and larval stages of striped bass development are likely to be more pronounced in the Hudson River.

During fall (September through November), juvenile fish begin to migrate downstream in response to changing environmental conditions, including stronger winds and decreasing temperatures. Dredging in September and October could affect concentrations of young striped bass and white perch, early life stages of Bay anchovy, emigrating young American shad and river herring, as well as aggregations of feeding young bluefish and weakfish. Species that

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[150] Texas Instruments, 1976, Predation by Bluefish in the Lower Hudson River, Final Report Prepared for Consolidated Edison, N.Y.; Juanes et al., 1993, Predation by age-0 bluefish on age-0 anadromous fishes in the Hudson River Estuary, Trans. Amer. Fish Soc. 122:348-356; Buckel and Conover, 1997, Movements, Feeding Periods, and Daily Ration of Piscivorous Young- of- the- Year Bluefish,*Potatomus Saltatrix,* in the Hudson River Estuary, Fish Bull. 95:655-679; Buckel et al., 1999; Buckel et al., 2000.

[151] McGovern and Olney, 1996. Factors Affecting Survival of Early Life Stages And Subsequent Recruitment of Striped Bass on the Pamunkey River, Virginia. Can. J. Fish Aq. Sci. 53:1713-1726.

[152] Rutherford et al., 1997, Relationship of Larval-Stage Growth and Mortality to Recruitment of Striped Bass, *Morone Saxatilis,* in Chesapeake Bay. Estuaries 20:174-198.

overwinter in Haverstraw Bay including shortnose sturgeon congregate in the area, but water temperatures remain sufficiently high that fish are still motile. Generally, by mid-November, water temperatures have dropped substantially and overwintering species in the Bay become inactive. Other species are migrating out of Haverstraw Bay to locations downriver, or out of the Hudson River.

For these reasons, the Project s anticipated biological effects on Haverstraw Bay are significant and adverse from an ecological perspective, having extended temporal and ecosystem ramifications.

4. Impacts from Blasting Will Be Significant

Millennium continues its efforts to downplay the adverse effects of blasting approximately 185 feet of the Haverstraw Bay Significant Coastal Fish and Wildlife Habitat.

As noted in DOS s Initial Brief, blasting in the Haverstraw Bay Significant Coastal Fish and Wildlife Habitat is a significant action. Blasting will directly remove critical nearshore habitat which cannot be restored. Millennium fails to adequately acknowledge the permanent, irreversible impact of the proposed blasting on the eastern shore of the Hudson River to fracture the underlying bedrock.[153] The permanence of the impacts associated with blasting out a proposed 260 cubic yards of rock along 185 feet of the eastern shore of the river cannot be understated. Contrary to Millennium's assertions, backfilling the blasted trench with spoil and fractured rock "to the approximate original elevation"[154] does not result in ecological restoration of an undisturbed riverine shallows environment. Characteristics of the river floor in the project

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153 Millennium s Reply Brief, footnote pp. 38-39, discussion pp. 44-46.

154 Id. at 45.

area will be permanently altered, possibly resulting in hydrologic changes to water velocity and flow patterns, changes in the stability of the sediment and its physical characteristics, mobility of contaminants and rates of chemical partitioning and adsorption, and changes in benthic habitat value, for example substrate for demersal larvae, for benthic spawners, or establishment of SAV.

Moreover, the effects of blasting in the Hudson River were not considered in FERC s FEIS,[155] as blasting was not formally proposed until after it was issued. Importantly, the FEIS is a document which must also be relied upon by the Army Corps of Engineers and it is deficient in this regard.

In July 2002, FERC prepared a Supplemental Biological Assessment (BA)/EFHA, which in part concludes that the effects of blasting will be temporary and of short duration. The Supplemental BA does not state that underwater blasting will not adversely affect the Haverstraw Bay Significant Coastal Fish and Wildlife Habitat. The cumulative impact of blasting by Millennium for the Haverstraw Bay crossing would cause significant disturbances to shallow estuarine habitats and destruction of the shoreline profile. Further, any mitigation measures which would reduce fish mortality do not address the physical changes to the habitat. The Haverstraw Bay Significant Coastal Fish and Wildlife Habitat, possessing outstanding natural values, will be fundamentally changed. Blasting is an activity which is incompatible with this area. The Supplement BA/EFHA is no substitute for the analytical and open process which

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[155] Exhibit 10. Letter of February 15, 2002, from Patricia A. Kurkul, Regional Administrator, NOAA Fisheries to Magalie Roman Salas, FERC Secretary, p. 1; see attachment. On page 5 of its brief, Millennium says that the project will cause limited adverse environmental impacts as shown by the copious evidence set forth in FERC s 2 volume FEIS, but that document did not address blasting. As noted, all the federal environmental agencies agree that blasting could well have significant adverse environmental effects.

characterizes well-prepared environmental impact statements.

FERC s lead agency status did not give it greater environmental knowledge than the federal environmental agencies, which participated in the NEPA and consistency process, particularly because it did not analyze the adverse affects of blasting on the habitat. The federal environmental agencies do not agree with FERC that blasting and excavating in Haverstraw Bay is an acceptable course of action.

As noted in the comments submitted by NOAA Fisheries[156] during the public comment period:

> Acute and chronic effects from dredging, detonating explosives, backfilling and other construction impacts would impair ecological values and functions.

Blasting, in addition to trenching, would result in other adverse effects in addition to those resulting from trenching alone. Mitigation techniques are proposed for adverse effects on limited types and numbers of invertebrates and fishes. However, the habitat documentation classifies Haverstraw Bay Significant Coastal Fish and Wildlife Habitat as irreplaceable , indicating that there are no methods available, at any cost or any degree of difficulty, that could mitigate valuable habitat loss in undisturbed areas of Haverstraw Bay. While the proposed methods would mitigate to varying degrees direct adverse effects on fishes during construction, they do not avoid the destruction of the shallow benthic habitat. The physical characteristics of the bay, particularly its nearshore shallows, will be directly and permanently altered, constituting an adverse effect on the habitat. The mitigation proposes to replace fractured rock and sediments

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[156] Exhibit 41.

in the dredged trench. However, that so-called mitigation serves only to return the bottom to an approximation of its former state. It does not avoid the destruction of valuable habitat in the designated Significant Coastal Fish and Wildlife Habitat.

Even if the irreplaceability of the area were disregarded, nothing has been provided by Millennium that factually demonstrates the original characteristics, functions, and values of the shallow nearshore habitat could be fully restored. This is especially important given the impact assessment and habitat impairment test in the documentation for the designated Significant Coastal Fish and Wildlife Habitat which states:

> In order to protect and preserve a significant habitat, land and water uses or development shall not be undertaken if such actions would: destroy the habitat; or, significantly impair the viability of a habitat.
>
> Habitat destruction is defined as the loss of fish or wildlife through direct physical alteration, disturbance, or pollution of a designated area or through the indirect effects of these actions on a designated area. Habitat destruction may be indicated by changes in vegetation, substrate, or hydrology...
>
> Any physical modifications of the habitat...through dredging, filling... would result in a direct loss of valuable habitat area.

Blasting and trenching, even with mitigation measures imposed on Millennium, would have adverse affects on the Significant Coastal Fish and Wildlife Habitat of Haverstraw Bay that outweigh any project benefits to the national interest in energy. Adopting various mitigation measures does not transform the habitat destruction which would inevitably result from construction activities in Haverstraw Bay into an acceptable activity in that location.

5. Cumulative Adverse Effects

As DOS pointed out in the Initial Brief, there are currently no pipelines in this area of the Haverstraw Bay Significant Coastal Fish and Wildlife Habitat. The absence of pipelines serves to advance the efforts to protect and restore its relatively undisturbed natural character and important habitat functions. The construction of a pipeline in this area would be precedent setting and could lead to similar proposals to construct other pipelines across inappropriate areas in the Haverstraw Bay Significant Coastal Fish and Wildlife Habitat. If constructed in a similar manner, the cumulative effects of such structures in the wetlands, mudflats, shoals, substrate and shallow open estuarine waters in Haverstraw Bay would significantly degrade the quality and integrity of the designated habitat by changing the physical, biological, and chemical parameters that the habitat and many species using it are dependent upon.

The US Fish and Wildlife Service submitted a letter, dated November 27, 2002[157] during the public comment period which stated:

> The U.S. Fish and Wildlife Service (FWS) has recommended denial of the crossing s Corps permit. This recommendation is based on our evaluation of the crossing s probably impacts to fish, wildlife and their habitats, including cumulative impacts as defined under the National Environmental Policy Act and the Clean Water Act.

USFWS earlier expressed concerns over cumulative impacts of pipelines in Haverstaw Bay. In its April 28, 2000 letter to the Corps, the USFWS warned:

> Cumulative impacts can result from the incremental succession of collectively significant actions taking place over a period of time. Thus, the cumulative impacts of multiple pipelines on Haverstraw Bay is a significant concern and should be considered in the project evaluation. [158]

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[157] Letter of Dr. Mamie A. Parker, Regional Director, USFWS to Branden Blum Senior Counselor, November 27, 2002, p.1.

[158] Exhibit 27. Letter dated April 28, 2000 from David A. Stilwell, Field Supervisor, USDOI Fish and Wildlife Service to Lt. Colonel Mark D. Feierstein, District Engineer, Buffalo District USCorps, p. 5.

6. Millennium s Project Will Have Significant Adverse Effects on Haverstraw Bay

DOS conclusions of significant adverse effects on Haverstraw Bay are not unfounded. DOS did not base its conclusions on the report of O'Brien & Gere Engineers. Millennium's assertions about the OBG Report, or the report itself, have no bearing on the DOS record demonstrating the ecological significance of Haverstraw Bay, and the magnitude, nature, and duration of impacts to the Bay that would occur from the proposed project.

As DOS has shown, the impact of the pipeline will be far from "minimal." Millennium asserts that 108.5 acres will be negatively impacted by the pipeline footprint. This area is approximately the size of 109 football fields, more than twice the size of the Boston Common, and just under seven times the size of the World Trade Center site.

Nor will the negative impacts of pipeline construction be confined to the pipeline footprint. Millennium states that there will be increased sedimentation in "the vicinity of the trench" an area, at any given time, at least 2,600 feet in length, 10 to 20 feet deep, and 70 to 150 feet wide. In addition to the active areas of trenching and dumping, there will be negative effects extending over the area of the sediment plume. Sediment plume research on bucket dredge systems has shown "visible" surface water plumes extending 300 meters (984 feet) from the point of dredging, and bottom water plumes extending close to 500 meters (1,640 feet).

In addition, the impact of the pipeline will not be "temporary". Ecological principles express that ecosystem-wide characteristics may indeed be altered by disturbances of a limited duration. For example, detrimental impacts to multiple year classes of fisheries can cause population declines for years after an impact event. Haverstraw Bay is a critical habitat for most

estuarine-dependent fisheries originating from the Hudson River, and contributes directly to the production of in-river and ocean populations of a variety of crustaceans and forage fish species. Ramifications of adverse impacts to Haverstraw Bay fish populations would extend to the commercial and recreational populations of the Mid- and North Atlantic.

The proposed Millennium crossing will also result in permanent fragmentation of the Haverstraw Bay habitat. Habitat fragmentation, a fundamental concept of landscape ecology, is characterized by the break up of a continuous landscape containing large habitat areas into smaller, more numerous and less-connected patches. The proposed pipeline crossing effectively inserts a disturbance divide across the center of Haverstraw Bay at nearly its widest point, resulting in the break up of this previously undredged, continuous benthic habitat.

Whatever its alleged shortcomings it would be impossible for the OBG Report, or anyone else, to acknowledge "the detailed Federal agency opinions finding that..listed species would not be jeopardized and the ecosystem as a whole would not be significantly impaired. [159] Such Federal agency opinions are not found in the record.

For example, NOAA Assistant Administrator for Fisheries William T. Hogarth, PhD asserts: "Based on consideration of the facts as related to NOAA Fisheries' authorities and trust resources, it appears that the New York Department of State has a substantial basis for its position in this matter....Our review of the Millennium proposal indicates that the project would create significant and long-term impacts in New York's coastal zone, including the Haverstraw Bay habitat...Acute and chronic effects from dredging, detonating explosives, backfilling, and other construction impacts would impair ecological values and function. Evidence from the

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[159] Millennium Reply Brief at 47.

Hudson River collected from benthic profiling performed by LaMont-Doherty Geological Obseratory for the State of New York, indicated that other utility crossing, undertaken in the Hudson even decades ago, continued to have discernible impacts on the bottom geology and topography in the project alignments. Other projects in the Hudson where such problems have been observed have been the subject of remedial efforts that required placement of large volumes of rock and concrete mattresses to protect sections of pipe that were exposed or even undermined by natural river processes. Examples are several Central Hudson Gas and Electric crossings. These facts indicate that habitats were destroyed or significantly impaired for many years by a variety of factors including changes in the substrate, changes in local erosion or accretion rates, changes in benthic community structure that could reduce ecological productivity, a reduction in carrying capacity due to loss of prey, or similar impacts that are all related to project installation. Imposing these impacts in Haverstraw Bay would diminish the ecological and habitat value provided the the Bay and affect a variety of species of national importance. This empirical evidence suggests that if a pipeline were constructed across Haverstraw Bay, the bottom would be ecologically impaired or compromised by project installation for an unspecified but protracted period....Based upon existing information of the biological importance of Haverstraw Bay, constructing a pipeline segment across Haverstraw Bay would likely affect fishery resources through a loss of a forage habitat and by water quality degradation. These acute impacts would be accentuated by the long-lasting nature of this habitat disturbance."[160]

U.S. FWS Regional Director Dr. Mamie A. Parker, responding on behalf of Service

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[160] Letter of William T. Hogarth NOAA to Branden Blum, Senior Counselor December 5, 2002.

Director Steven Williams, states:

> The U.S. Fish and Wildlife Service (FWS) has recommended denial of the Crossing's Corps permit. This recommendation is based on our evaluation of the Crossing's probable impacts to fish, wildlife, and their habitats, including cumulative impacts as defined under the National Environmental Policy Act and the Clean Water Act. Our evaluation considers the balance between the benefits and reasonable foreseeable detriments of the proposed activity on the public interest. We believe that the Crossing will contribute directly to the degradation of important fish and wildlife habitats and may lead to increased secondary impacts associated with laterals and compressor stations. The public benefits of an additional pipeline do not exceed public losses with respect to public trust resources, including fish, wildlife, and their habitats.[161]

U.S. Corps District Engineer John B. O'Dowd, Colonel writes:

> I also have substantial concerns about the environmental impacts of the proposed Hudson River crossing, similar in nature to those expressed by DOS.[162]

Deputy Assistant Secretary of the Army George Dunlop, responding on behalf of Donald Rumsfeld, Secretary of Defense, reasserts this opinion:

> The District's concerns are similar to concerns being expressed by the New York Department of State (DOS) regarding the environmental impacts of the proposed Hudson River crossing.[163]

New York District Chief of the Regulatory Branch Richard Tomer continued to express reservations in January 2003:

> As affirmed previously in our letter of August 2, 2002, and as discussed during the meeting, we continue to have concerns with regard to your proposal to construct the

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[161] Letter of Dr. Mamie A. Parker, Regional Director, USFWS to Branden Blum Senior Counselor, November 27, 2002.

[162] Letter from John B. O Dowd, Colonel, Corps of Engineers, District Engineer to Richard E. Hall Jr. dated August 13, 2002.

[163] Letter from George Dunlop, Deputy Assistant Secretary of the Army (Civil Works) to Scott B. Gudes, Deputy Under Secretary for Oceans and Atmosphere, November 21, 2002.

pipeline within Haverstraw Bay to cross the Hudson River.[164]

D. Impacts to the Village of Croton-on-Hudson s Wellfield and Arboretum

Millennium s proposed pipeline route would traverse two important coastal zone resources located in the Village of Croton-on-Hudson: (1) the Wellfield in the Croton River Gorge that serves as the primary source of drinking water for the Village, and (2) the Jane E. Lytle Memorial Arboretum ("Arboretum"), a Village-owned parkland and nature preserve. As detailed in the DOS objection and Initial Brief, the pipeline would have direct, significant, and permanent impacts on these sensitive resources, as a result of which DOS determined that these segments of the pipeline were inconsistent with the enforceable policies of New York State s CMP and the Village s Local Waterfront Revitalization Program ("LWRP"). In addition, DOS has reviewed, and incorporates here by reference, the reports and findings concerning the Wellfield and Arboretum that are detailed in Croton-on-Hudson s Amicus Brief, dated October 23, 2002, and Supplemental Comments, dated January 8, 2003. In striking contrast to these several site-specific studies prepared by three different consultants, all of which support DOS s position, Millennium has, to date, advanced no site-specific studies or plans that support its untenable position that the pipeline will have "no significant adverse effects" on these coastal resources.[165] Instead, Millennium repeats old arguments that these areas are not "true" coastal resources meriting protection under the CZMA, and launches an unseemly and hypocritical attack on the credibility of one of the Village s consultants.

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[164] Letter of New York District Chief of the Regulatory Branch Richard Tomer to dated, January 31, 2003.

[165] Millennium Reply Brief at 52, 59.

The great weight of the record evidence clearly supports the finding that the pipeline will create significant direct impacts and pose unjustifiable risks of great magnitude to these protected coastal zone resources. In light of these findings, together with the demonstrated existence of several readily available and reasonable alternatives or realignments that would either eliminate or greatly reduce the most severe of these impacts, DOS urges the Secretary to conclude that routing the pipeline through these areas of Croton-on-Hudson is neither consistent with the objectives of the CZMA nor necessary in the interest of national security.

1. The Wellfield and Arboretum are Important Coastal Resources Warranting Full Consideration by the Secretary.

It has been amply established in the record that the Wellfield and Arboretum are important natural resources located within New York s coastal zone, which therefore warrant protection under the CZMA and a fulsome review on appeal before the Secretary. DOS s CMP, which was approved by the U.S. Department of Commerce, designates the coastal zone of New York to include the entire area within the borders of the Village of Croton-on-Hudson. The Arboretum and Wellfield are located within the Village and therefore are, by definition, natural resources within the approved coastal zone.

Nonetheless, Millennium advances a baseless claim that these are not "true" coastal resources, and, as such, the pipeline s impact on them does not merit full consideration by the Secretary on appeal.[166] But Millennium s concept of so-called "true" or "traditional" coastal resources simply does not exist under the CZMA. The CZMA s consistency requirement is

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[166] Millennium Reply Brief at 52.

triggered by federally-permitted activities "in or outside of the coastal zone, affecting any land or water use or natural resource of the coastal zone &."[167] The coastal zone, by express definition, includes not only "coastal waters" and "adjacent shorelands," but also extends inland to include other geographical areas that influence the quality and use of coastal waters and shorelines. [168] Moreover, the CZMA s jurisdictional scope does not simply stop at the boundary of the coastal zone ; in fact, consistency is required for activities that may adversely impact resources in the coastal zone, regardless of the geographic location of the activity itself. It is this broader ecosystem-oriented approach to coastal management, together with the "effects test" as the jurisdictional trigger, that were the principal legislative innovations of the CZMA.[169] Millennium s attempt now to fashion new sub-classes of "true" coastal resources and other (allegedly, unimportant) coastal resources, contradicts the express language and Congressional intent of the CZMA.

Millennium cites to one federal circuit court opinion, which, in Millennium s view, supports this position. However, that case, Mountain Rhythm Resources v. FERC, 302 F.3d 958 (9th Cir. 2002), does not contain a single reference to the notion of "true coastal resources," and, in fact, clearly supports DOS s position with respect to the Wellfield and Arboretum on both legal and factual grounds. In Mountain Rhythm, the 9th Circuit held that FERC did not act arbitrarily or capriciously when it relied on a NOAA-approved map of the coastal zone for the State of Washington to require applicants for a license to operate hydropower facilities proposed for a location remote from the coast to obtain a CZMA consistency certification from the State.

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167 16 U.S.C. § 1456(c)(3)(A).

168 16 U.S.C. § 1453(1).

169 *See* NOAA s CZMA Regulations, 65 Fed. Reg. 77124.

Washington s coastal zone is defined to include all 15 counties that touch the Pacific coast, including Whatcom County, the site of the proposed projects. The proposed projects were to be located within Whatcom County approximately 30 miles from the coast, and between 900 and 4000 feet above sea level. The applicants argued that the State s coastal zone was defined too broadly and that, as such, the projects should not be considered part of the coastal zone and should not be required to obtain a consistency certification.[170] The 9th Circuit dismissed these claims and concluded that [w]e uphold FERC s decision & and reject Mountain Rhythm Companies claim that the project sites do not fall within the coastal zone. [171] The Court reasoned that questions regarding the proper definition of the coastal zone and whether or not a particular activity would have coastal impacts were factual issues for the expert agency, and that FERC did not unreasonably rely on NOAA s expertise in determining such questions. [172]

In light of Mountain Rhythm, the factual bases for including the upland portions of the Village in the New York coastal zone are unquestionably valid and compelling. Specifically, Croton-on-Hudson lies between two designated Significant Habitat areas -- Haverstraw Bay and the Croton River and Bay -- and all storm water runoff (and associated pollutants) from upland portions of the Village discharges into these Significant Habitats. Upland activities that diminish forest or ground cover, disturb wetlands or riverbeds, cause soil erosion, or release contaminants to the surface, will have an impact on coastal waters. The Wellfield is located within the Croton River Gorge directly upstream from the Croton River and Bay Significant Habitat. Similarly, the Arboretum is directly connected to the Hudson River by a stream leading from the Arboretum s

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170 Mountain Rhythm, 302 F.3d at 961, 964.

171 Id. at 965.

172 Id. at 964.

wetland to the shores of the Hudson River.[173] In Mountain Rhythm, projects located 30 miles from the coast were found to be properly within the coastal zone; here, both the Arboretum and Wellfield are located well within 1 and 2 miles, respectively, from the Hudson River.

In sum, neither the CZMA nor judicial interpretations of the scope of the CZMA support Millennium s contention that the Wellfield and Arboretum do not warrant protection merely because they are located some distance from the shoreline. Notably, among the key Congressional findings underpinning the enactment of the CZMA was the determination that "[l]and uses in the coastal zone, and the uses of adjacent lands which drain into the coastal zone, may significantly affect the quality of coastal waters and habitats &".[174] The Wellfield and Arboretum are not only properly located within the coastal zone, both areas drain directly into two Significant Coastal Fish and Wildlife Habitats within the coastal zone. The pipeline route through these areas will give rise to both direct impacts to coastal zone resources, as well as indirect impacts to other portions of the coastal zone. These areas, therefore, warrant the full scope of protections accorded to coastal zone resources under the CZMA, and the pipeline s impact on these areas demands careful scrutiny by the Secretary.

2. Impacts to the Village Wellfield and Water Supply

The proposed pipeline would descend the steep cliffs of the Croton River Gorge and cut directly through the water supply Wellfield that is the primary source of drinking water for the residents of the Village of Croton-on-Hudson. The Wellfield is a critical natural resource which provides the Village an excellent (and its only) source of clean, untreated water via well heads

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173 *See* Village Amicus Brief at Exhibit 1.

174 16 U.S.C. § 1451(k) (emphasis added).

located in the southern portion of the site. With respect to the Wellfield, Millennium claims the pipeline will have "no effects of any significance,"[175] and that "there is no evidence supporting the NYSDOS s objection to the proposed crossing of the Wellfield."[176]

To the contrary, DOS objection to this segment of the pipeline route is based on several site specific studies conducted over a period of more than 20 years by three different engineering firms. These studies all point unmistakably to the conclusion that the pipeline will: (1) unnecessarily place at risk both the quality and quantity of the Village s only viable source of public drinking water; (2) eliminate an entire section of the Wellfield from consideration for needed future well head development, in the very area that has been identified as the best location for future wells; (3) directly violate the enforceable policies of the State CMP and Village LWRP; and (4) adversely impact forest cover, wetlands, riverbed, wildlife, and other natural resources in the Croton River Gorge at a location that is both within the coastal zone and immediately upstream of the designated Croton River and Bay Significant Coastal Fish and Wildlife Habitat.

With regard to the pipeline s impacts on the Village s water supply, Millennium merely claims that Wellfield concerns have been "resolved," citing to a variety of generic protocols and yet-to-be developed plans.[177] But all of the measures Millennium presents as evidence of its purported efforts to protect the Wellfield -- namely, FERC s Plans and Protocols, the "Environmental Construction Standards," and a Spill Prevention, Control and Countermeasures (SPCC) Plan -- are generic standards, not site-specific measures designed to address the special

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175 Millennium Reply Brief at 59 (emphasis added).
176 Millennium Initial Brief at 74 (emphasis added).
177 Millennium Reply Brief at 61.

concerns presented by the Wellfield.

DOS also notes that, despite the numerous site-specific, objective studies in the record regarding the Wellfield, Millennium continues to bootstrap its claims from its own reports -- none of which are based on actual site-specific data. For example, Millennium relies on the conclusions of its new consultant, Baker Engineering NY, Inc. to speculate that "the risk of contaminant release into the Wellfield during pipeline operations is extremely remote, as the Baker Report concludes."[178] But Baker Report s entire discussion of the contamination risk is found in a few conclusory sentences, none of which advance a single new finding or claim that had not already been repeated by Millennium since the outset of this project. As such, it is hypocritical for Millennium to criticize O Brien & Gere of "parroting" the Village s position,[179] when Millennium s own consultant appears to do just that as well.

While Millennium s Reply Brief devotes considerable effort to a character assassination of O Brien & Gere, tellingly, nowhere in its Reply Brief does Millennium mention the findings of the several site-specific hydrogeologic studies of the Wellfield conducted by Geraghty & Miller (upon which the O Brien & Gere findings are based).[180] Nor does Millennium mention anywhere in its Reply Brief the more recent findings of URS Corporation, a consultant retained by the New York State Department of Health ("NYSDOH"), regarding the vulnerability of the Village s Wellfield..[181]

a. Geraghty & Miller Studies and Aquifer Protection Plan

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178 Millennium Reply Brief at 61.

179 Millennium Reply Brief at 57-58

180 *See* Village Amicus Brief, Exhibits 7, 8, and 9.

181 *See* Supplemental Comments of the Village of Croton-on-Hudson, et al., dated January 8, 2003, at 4.

Geraghty & Miller conducted a series of site-specific hydrogeologic studies, aquifer modeling analyses, and mappings of soil and bedrock geologic conditions in the vicinity of the Wellfield. These studies were conducted from 1970 through 1989. The principal outcome of Geraghty & Miller s nearly 20 years of research on the Wellfield was the creation of the Village s Aquifer Protection Plan and Local Law No. 5 of 1989 (which the Village titled Water Supply Protection Law), which designated three "zones" of protection around the Wellfield.[182] The three zones established by the Village s Water Supply Protection Law are:

- Wellhead Protection Area, Zone 1: This zone includes the area of the well field itself with a protective perimeter around each of the water supply wells.
- Aquifer Recharge Area, Zone 2: This zone consists of the valley floor immediately surrounding the well field that contributes recharge directly to the aquifer.
- Watershed Area, Zone 3: This zone consists of the uplands surrounding the aquifer recharge area that provide surface water drainage to the aquifer recharge area and the well field.[183]

For each of these zones, the Water Supply Protection Law sets forth increasingly stringent degrees of regulations, designed to preserve, protect, and maintain the existing purity and

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[182] *See* Aquifer Protection Plan, Village Amicus Brief, Exhibit 9, at 18 ("Based on previous hydrogeologic studies carried out in the well field (Geraghty & Miller, Inc. 1970; 1977; 1978; 1988), Geraghty & Miller recommends establishment of the following three protection zones &.").

[183] LL No. 5-1989 at § 223-17(A); *see also* Village Amicus Brief, Exhibit 1, Figure 2 (Map of Croton-on-Hudson Wellfield and Croton River Gorge)

quality of the groundwater within the Village of Croton-on-Hudson. [184] Zone 1 is subject to the most severe level of regulation; specifically, the Law states that within Zone 1, "all systems, facilities and activities are prohibited except for physical pumping and treatment facilities and control. The area shall not be used for any purpose other than public water supply." It is clear from the express language of the Local Law that under no circumstances were pipelines such as the Millennium pipeline to be sited in Zone 1. The Millennium pipeline would pass through all three protection zones and, most importantly, cut directly across Zone 1.

Millennium claims that the pipeline will have "no effects" on the Wellfield, Millennium Reply Brief at 59. But the notion that a project of this magnitude poses no threat to the Wellfield simply flies in the face of every study that has been conducted of actual conditions at the Wellfield over the last 20 years. The Geraghty & Miller reports clearly document, among other findings, the highly permeable nature of the Wellfield and the great vulnerability of this valley fill aquifer to any changes in land use or releases of pollutants -- not only in Zone 1 but also in Zone 2 and throughout the entire Zone 3 watershed region. Millennium cites its SPCC Plan, which purports to limit equipment refueling operations to an area 400 feet from the Wellfield, as having "resolved" concerns about the potential for releases of contaminants from refueling operations. But this limited measure is plainly contrary to the Local Law and Aquifer Protection Plan, as refueling, storage of diesel and other polluting substances, and other construction operations would still take place in both Zone 2 or the Zone 3 watershed area. In fact, the Local Law and Aquifer Protection Plan contain several pages of specific requirements and recommendations for protective measures within Zones 2 and 3. For example, the Law contains

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[184] LL No. 5-1989 at § 223-16(E).

expressly prohibits underground storage tanks and pipelines from both Zone 2 and Zone 3, stating that such facilities are prohibited, unless measures have been taken to ensure that leakage will not occur. [185]

By way of example, the Aquifer Protection Plan also contains four pages of specific recommendations including:

- "Commercial properties within the watershed should be checked for the existence of tanks storing fuel or other potentially hazardous material."
- "All underground fuel storage tanks within 500 ft of Zone 1 should be inventoried."
- "All unprotected tanks & should be tested for leaks &"
- Spills along Route 129 and other roads in the watershed are an important concern &.The consequences of a spill are serious."
- "In the event of a spill, the containment effort and equipment should be concentrated far enough below the front edge of the spill to ensure ample time for installing the containment and retrieval equipment &. Techniques such as sand bagging, construction of earth-filled dams, and straw barriers can all be used &"
- "A drainage system should be constructed & to divert a spill and potentially contaminated runoff from the well field."[186]

Therefore, pipeline construction activities, which would involve the operation and refueling of vehicles and heavy equipment, refueling of vehicles, storage of fuel and other hazardous substances, and the overnight parking of equipment, most importantly in Zone 1 but

[185] LL No. 5-1989 at § 223-22(C)(19), (D)(12)(d) This conditional prohibition of pipeline construction in Zones 2 and 3 stands in stark contrast the unqualified ban on any construction activities in Zone 1, where Millennium seeks to install its pipeline.

[186] Aquifer Protection Plan at 25-30, Village Amicus Brief, Exhibit 9.

also throughout Zone 2 and the entire Zone 3 watershed area, do present a serious risk to the Wellfield. Due to the high permeability of the Wellfield aquifer and the proximity of the well heads to the pipeline route, contaminant releases in the area would cause immediate and significant impacts to the water supply, posing a serious threat to public health. The Village Engineer, Daniel O Connor, also pointed out the potential for the pipeline to create a "curtain drain" effect, whereby contaminated storm water runoff would collect in the pipeline trenches along the banks of the Croton Gorge and be channeled toward the well heads.[187]

These potential risks are greatly magnified by the fact that Croton-on-Hudson lacks any viable alternative sources of drinking water; should the Wellfield or water supply be impacted, the Village would be left without any potable water.[188] Therefore, even if the probability of releases or other impacts is low, as Millennium claims, the magnitude of potential harm to the Village is great enough to demand that, in the absence of compelling site-specific analyses to the contrary, these risks must be eliminated by rerouting the pipeline outside of the Wellfield.

b. NYSDOH Source Water Assessment

Further evidence of the potential public health risk posed by the pipeline s route through the Wellfield was provided recently in the context of New York State s ongoing Source Water Assessment ("SWA"), a program that is part of the State s efforts to safeguard public drinking water supplies under the federal Safe Drinking Water Act ("SDWA") and implementing State-level requirements. As part of the SWA program, in 2002, the New York State Department

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187 Village Supplemental Comments, Exhibit 2.

188 *See* Village Supplemental Comments at 8.

of Health ("NYSDOH") commissioned an assessment of the condition and vulnerability of the Croton-on-Hudson public water system. NYSDOH retained URS Corporation, an environmental engineering firm, to conduct the SWA for Croton-on-Hudson s Wellfield; the revised draft SWA report was released on November 26, 2002[189]. This report sets forth NYSDOH s findings with regard to the condition of the Village s water supply system and assigns to each well head in the system a "sensitivity rating" that indicates the level of susceptibility of the system to contamination. Significantly for the purposes of this proceeding, the SWA report assigns a sensitivity rating of "High" to every well head in the Village s Wellfield. This "High" sensitivity rating means that any contaminants that are released in the vicinity of the Wellfield, or which might drain into the Wellfield through storm water runoff from the watershed area, would migrate rapidly through the surface into the well heads, thereby contaminating the Village s sole drinking water supply. The vulnerability of the Village water supply is particularly acute, because it is presently unfiltered and untreated, relying instead on the natural filtration function of the soils and substrate in the Wellfield. While subject to ongoing review by NYSDOH, the URS findings provide additional, objective, third-party evidence that clearly supports DOS position that the pipeline poses an unacceptable risk to the Wellfield and water supply for Croton-on-Hudson.

c. Restrictions on Future Well Development

Installation of the proposed pipeline will also significantly limit the Village s ability to develop additional wells to meet future water supply needs. Millennium claims that "virtually the entire Wellfield will remain available for future development."[190] Yet, Millennium seeks to

[189] *See* Village Supplemental Comments, Exhibit 1.

[190] Millennium Reply Brief at 63; *see also* Millennium Initial Brief at 74.

install the pipeline directly through the northern portion of Zone 1, which is the very area that the Village and Geraghty & Miller have identified as the most appropriate location for future well development. Millennium acknowledges that the pipeline setback requirements will prevent any drilling or other construction activities within 25 feet of the pipeline. Therefore, a 50-foot wide swath crossing the entire northern portion of the Wellfield would be permanently removed from any potential consideration for future well development.[191]

Most significantly, this "no well zone" the pipeline would impose on the Wellfield crosses the exact location that was identified as the best location for the development of new water wells. DOS notes that the Village s Engineer has raised serious concerns regarding the implications of the pipeline for the Village s well head development plans. As described by the Village:

> [T]he Village Engineer s primary conclusions are that: (a) growing demand for water will require the Village to build an additional high capacity well in the near future; (b) the most appropriate location for such an additional well is the northern portion of the Wellfield; (c) installation of the pipeline and its associated setback requirements would eliminate critical supply areas from consideration for future well development; and (d) test borings and a site-specific analysis by a hydrologist should be conducted to determine the extent to which the pipeline would affect the Wellfield and the Village s expansion plans.

Millennium questions the rationale for developing new wells in the northern portion of the Wellfield, and claims that it "has proposed to route the pipeline through the shallow zone in the northern part of the aquifer, not in the deeper zone in the southern end of the Wellfield where

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[191] Millennium Reply Brief at 63.

the greatest potential for future development exists."[192] In support of this notion, Millennium cites only to its own Initial Brief, which, in turn, cites to the LMS Study Addendum and the FEIS. However, neither of these documents contain any site-specific analysis of well development potential or other evidence that supports Millennium s claim. In contrast, the several Geraghty & Miller studies and the Village Engineer s memorandum all describe several specific reasons, based on site-specific data, why the northern end of the Wellfield is the most appropriate location for such future well development. The Geraghty & Miller report entitled, "Availability of Ground-Water Resources at the Croton-on-Hudson Well Field," dated August 1988, made very specific recommendations, based on the results of a detailed protocol of hydrogeologic studies, aquifer tests, flow models, and predictive simulations, that a new deep aquifer well should be developed in the northern portion of the Wellfield -- a location which is directly in the pipeline s path. Geraghty & Miller describe their recommendations and rationales as follows:

> The two upper wells should be taken out of service and replaced with one deep, large-diameter well located in the vicinity of Well OW-5 &. This recommendation is based on the following information: & (3) the geologic material encountered during the drilling of Well OW-5 appears to have excellent water-yielding properties; (4) the modeling analysis concluded that distributing pumpage within the well field would significantly increase the volume of water that could be obtained from the aquifer over the long term.[193]

Geraghty & Miller demonstrated, via actual bore and aquifer tests, that this northern Zone 1 location is a geologically suitable area for a new high-yield well. Its report advises against developing new wells in the south of the Wellfield, because higher yields would be achieved by

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192 Millennium Reply Brief at 63.

193 Geraghty & Miller (1988) at 45, Village Amicus Brief, Exhibit 8.

distributing the wells throughout the Wellfield, i.e., to the north and away from the existing wells in the south of the Wellfield. Follow-up work by the Village in 1992 led to the installation of Well 4 in the vicinity of the existing production wells, placing increased significance on the need to distribute future wells in the northern end of the Wellfield to ensure adequate yield, as recommended by Geraghty & Miller.[194]

In addition to distribution for yield purposes, other considerations also advise locating new wells in the area of the planned pipeline route. For example, the northern portion of the Wellfield is hydraulically upgradient from the more developed southern end of the Wellfield; therefore, installing new wells to the north would have the additional advantage of being protected from any releases or contamination occurring in the south, because contaminants would flow southward away from the well heads. [195]

In addition, soils in the northern end of the Wellfield are described as consisting of finer material, which serves as a more effective filter for surface water that recharges the aquifer through infiltration. This natural filtration process is critical for the Village, which presently does not have the facilities to conduct mechanical filtration of its water supply. Particularly as land uses within the watershed change and the risk of water contamination by Giardia lamblia, Cryptosporidium, and other pollutants rises, it will become increasingly important for the Village to identify and develop wells in the more finely filtered northern Wellfield, rather than to continue to rely on the coarser substrate in the south which is more prone to surface contaminant infiltration.

The location of any future wells should be based on actual site-specific studies.

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194 *See* Village Amicus Brief, Exhibit 7.

195 *See* Village Supplemental Comments, Exhibit 2 at 3.

Similarly, it is entirely unreasonable to blindly site the pipeline and preemptively eliminate whole sections of the Wellfield from any consideration for potential well development without first conducting test borings and hydrogeologic analyses to determine the actual extent of impact the pipeline and its setback requirements will have. The Wellfield is a critical natural resource that provides the Village s only viable source of drinking water. Activities that could potentially impact this water supply or limit the Village s ability to continue to rely on it for future water supply needs should not be permitted.

d. Impacts to Croton Riverbed, Wetlands, and Forest Cover

The pipeline would also adversely affect other natural resources in the Croton River Gorge and impair the area s function as an important riparian and wetland habitat. Installing the pipeline in the Gorge would require large areas of forest cover and vegetation to be cleared for the pipeline trench and associated work space. Tree clearing and disruption of the riverbed and wetlands in the Gorge will contribute to erosion, sedimentation, and increased turbidity in the Croton River and in the Croton River and Bay Significant Habitat immediately downstream.

These impacts will be greatly exacerbated if heavy rain events occur either during or after construction activities. The Croton River Gorge regularly floods during routine rain events, and the entire Gorge and Wellfield area become completely submerged in several feet of water during heavy storms or hurricane events. A major storm during pipeline installation operations would cause severe erosion in the cleared areas and release large quantities of sediment into the Croton River. Flooding would also increase the risk of releases of fuel, chemicals, and other hazardous materials, should the areas where equipment and materials are located become flooded. Restored tree and vegetative cover will take time to become established; storm events during this

post-construction period could also destroy restoration work and lead to increased turbidity.

3. Impacts to the Jane E. Lytle Memorial Arboretum

The proposed pipeline will also cut through the Jane E. Lytle Memorial Arboretum, a 20-acre nature preserve and public parkland owned by the Village of Croton-on-Hudson that is located in the northern corner of the Village immediately adjacent to the ConEd ROW. The Arboretum contains a high quality palustrine wetland (WO8CT), several intermittent streams that supply water to the wetland, a heavily forested buffer zone surrounding the wetland, and a diverse population of wildlife. It is the only wetland of this pristine quality in the Village of Croton-on-Hudson; as such, the Village has expended considerable resources to protect the area while making it accessible to the public for use as an environmental education facility.

The primary rationales for DOS objection to this segment of the pipeline were two-fold. First, constructing the pipeline through the Arboretum via open-cut trench would require clear-cutting of mature forest and ground cover, grading and trenching across the wetland and associated feeder streams, and the installation of a permanent treeless right-of-way. Mitigation measures notwithstanding, it is self-evident that these impacts will be ecologically severe, visually dramatic, and permanent. Second, DOS has not seen any documentation or other information indicating that Millennium has developed site-specific construction and mitigation plans in consultation with Arboretum representatives, as required by FERC. Such plans would be necessary for any meaningful assessment of Millennium s claims that "the project will result in no significant adverse impacts" to the Arboretum. To date, nothing Millennium has submitted in this proceeding has significantly altered either of these two critical findings.

Millennium instead suggests that two <u>possible</u> changes (which are not documented

anywhere as having been incorporated into the final site plan) effectively "resolve" all concerns about the Arboretum.[196] These are: (1) the "proposed" use of a narrower 50-foot wide construction right-of-way, and (2) moving the pipeline route roughly 35 feet toward the ConEd ROW, a change that NYSPSC said it "would not oppose," "if FERC determines that routing changes are necessary."[197]

Even assuming that both of these potential changes are incorporated into the final construction plan for the Arboretum, it is clear that the Arboretum will still sustain significant and permanent impacts, described above, in the area of the construction footprint, and furthermore, that an area of the Arboretum significantly larger than the pipeline footprint itself will also be indirectly impacted. This is due to the fact, not disputed by Millennium, that the northern boundary of the Arboretum adjacent to the ConEd ROW contains a thick stand of mature trees that currently serves as a critical buffer zone, shielding the wetland ecologically and visually from the ConEd ROW. Even if the pipeline route is moved closer to the ROW, but still remains within the Arboretum, this forested buffer will be clear cut, graded for construction workspace, and converted into a permanent treeless right-of-way for the pipeline.

DOS believes that the removal of this forested buffer will not only impact a larger area of the Arboretum than the pipeline footprint[198] but could also threaten the functional integrity of the

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[196] Millennium Reply Brief at 55-56.

[197] Millenium Exhibit 65. Letter from Lawrence G. Malone, NYSPSC, to David Boergers, FERC, dated June 19, 2001.

[198] DOS notes that Millennium and Croton-on-Hudson have advanced very different estimates of the total area of impact. The Village states, based on information from the Arboretum and O Brien & Gere, that the trenching and clearing of the forested buffer will result in direct and indirect impacts to as much as 25% of the entire area of the Arboretum. Millennium argues that the pipeline will have no significant impact (presumably, beyond the footprint of the permanent right-of-way). While the percentage area of impact appears to remain

wetland generally. Forested palustrine wetlands, such as the wetland in the Arboretum, are highly unique ecosystems that require tall stands of mature trees for protection from direct exposure to the sun and wind. The clearing and grading of one of the few remaining buffer zones around the wetland will disrupt this delicate habitat and threaten the viability of sensitive wetland plants, amphibians, birds, and other wildlife. Conversely, removing this forested buffer will encourage the growth of harmful invasive species such as the reed, Phragmites australis, which has already encroached into one portion of the Arboretum wetland that is exposed to the ConEd ROW without any forested cover.[199]

Finally, DOS also agrees with the Village that the pipeline will have adverse impacts on the scenic, recreational, and educational values of the Arboretum. Millennium attacks the notion that the pipeline will have new impacts to the scenic and recreational values of the Arboretum as "preposterous."[200] DOS believes it is amply self-evident that the permanent clearing of mature trees along the entire northern boundary of a previously untouched nature preserve -- exposing the interior of the Arboretum to direct views of the ConEd electric transmission towers -- will dramatically alter the scenic character and value of the Arboretum.

In conclusion, the record evidence in this proceeding demonstrates that the proposed pipeline route through the Village of Croton-on-Hudson will have significant adverse impacts on the Village s Wellfield and Arboretum. In light of these impacts, together with the availability of several routing alternatives, DOS urges the Secretary to find that the adverse impacts of the pipeline to these critical resources far outweigh the purported benefits of the pipeline.

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in dispute, for the reasons stated above, DOS maintains that it is not unreasonable to conclude that some level of impact beyond the "footprint" will occur.

[199] See Village Amicus Brief at 46.

[200] Millennium Reply Brief at 53.

III. DOS PROPERLY CONSIDERED THE POTENTIAL IMPACT OF THE PIPELINE TO THE BRYN MAWR SIPHON BECAUSE THE ENTIRE PIPELINE ROUTE, AS IT AFFECTS THE COASTAL AREA, IS SUBJECT TO REVIEW AND, MORE PARTICULARLY, BECAUSE AN IMPACT TO THE SIPHON MAY IMPACT OTHER AREAS IN THE COASTAL ZONE

In its Reply Brief, Millennium again claims (a) that the Secretary is without jurisdiction to consider the impacts of the pipeline on the Bryn Mawr Siphon, because the Siphon is not in the coastal zone, and (b) that, in any case, locating the pipeline adjacent to the Siphon would have no adverse effects on, nor pose any risk to, the integrity of the Siphon or to New York City s water supply. Millennium is wrong on both counts. As described in the DOS Initial Brief and detailed further below, this segment of the pipeline is properly before the Secretary, because the CZMA expressly requires a consistency determination for any federally-permitted activity that may impact the coastal zone, regardless of the whether the activity itself takes place within, or outside of, the coastal zone. The Siphon is an integral component of a public water supply system serving New York City and other communities within New York s coastal zone; impacts to the Siphon would, therefore, have very serious coastal implications. Second, the pipeline poses an unacceptably high risk to the structural integrity of the Siphon, thereby placing 40% of New York City s water supply in jeopardy. To date, Millennium has proffered no site-specific data or construction plans that adequately support its no impact assertion.

A. Coastal Affects of Constructing the Pipeline

Millennium proposes to construct its pipeline with a mere 1 1/2 feet of separation from the Bryn Mawr Siphon, a critical, high-pressure juncture in the Cat Skill Aqueduct which

supplies New York City with 40% of its drinking water. The Bryn Mawr Siphon forms an integral part of the infrastructure which runs through, and supplies water to, New York City and many other communities in the coastal zone. This water supply system serves nearly 9 million people and supports significant economic development activities in the region. The integrity of the Siphon is of particular concern, because it is a fragile underground conveyance point which was constructed of cement enclosing a steel pipe over 90 years ago. If the pipeline were to rupture in the vicinity of the Siphon, the result of such a failure would be catastrophic. Failure of the Siphon would cause an immediate release of one million gallons of water and a total volume of between 10 and 20 million gallons. In addition to crippling New York City s water supply infrastructure, this huge volume of rushing water would erode the footings of electric transmission lines and wash out portions of the Sprain Brook Parkway. The risk of such an incident would be particularly high during construction activities, but the potential for pipeline rupture due to accident or intentional sabotage[118] would also pose an ongoing, permanent risk to the Siphon.

The CZMA makes clear that a project s impact outside the coastal zone that affects resources within the coastal zone is a relevant consideration in assessing a project s consistency with the Coastal Zone Management Act[119]. Therefore, Millennium s argument that Bryn Mawr Siphon issues are not properly before the Secretary, merely because Bryn Mawr Siphon is located

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[118] [I]n light of the September 11, 2001 terrorist attacks, Governor Pataki has created the Office of Public Security to assess the vulnerability of critical infrastructures to terrorist attacks and to develop a comprehensive, Statewide anti-terrorism strategy. Concurrently, the Department of Public Service has established the Security Assessment Team to assess utility efforts to maintain system reliability and security. New York State Energy Plan (2002) p.3-154

[119] 16 U.S.C. §1451 *et seq.*

outside the coastal zone, is erroneous and contrary to the express language of the CZMA. The pipeline poses a significant risk to the integrity of the Siphon, which impacts could imperil the water supply of New York City and other communities located within the coastal zone. Cutting off this key water supply line would require these coastal communities to obtain drinking water from other sources and would have severe impacts on natural resources and economic activities throughout the coastal region. In this way, the pipeline would have direct impacts at a location outside the coastal zone, thereby giving rise to significant adverse effects on land and resource uses within the coastal zone. The Catskill Aqueduct s vulnerability to the Millennium Pipeline is thus germane to a determination of the Pipeline s consistency with the state s coastal management plan.

The Millennium Pipeline forms one continuous facility as it traverse in and outside the state s Coastal Area and its routing is subject to one FERC authorization. DOS reviewed the proposed pipeline route for its impacts on the New York City water supply at the Bryn Mawr Siphon and New York City s water supply. DOS determined that its location in the vicinity of the Bryn Mawr Siphon would be inconsistent with the State s CMP and with New York City s Local Waterfront Revitalization Program. Similarly here in this proceeding, the pipeline s impacts on Bryn Mawr Siphon and New York City s water supply may properly be considered by the Secretary.

B. The Pipeline Threatens the Integrity of the Catskill Aqueduct at the Bryn Mawr Siphon.

Millennium asserts that the Pipeline does not pose a reasonably foreseeable risk of adverse impact on the Siphon or the Aqueduct.[120] The Record shows this to be wholly untrue:

[120] Millennium Reply Brief at p. 70.

the City of New York has documented the *precise risks* that it *actually foresees* from a Pipeline crossing in this area, namely the potentially catastrophic loss of 40% of the City s drinking water supply and a potentially even greater loss to other Westchester municipalities.[121]

In its Reply Brief, Millennium makes several misleading statements about its proposal to build the pipeline across the Catskill Aqueduct at the Bryn Mawr Siphon. Most notably, Millennium states that the engineering design concerns respecting the Aqueduct crossing have been fully addressed. [122] Millennium makes this assertion even though it has never developed an engineering design of how its pipeline would cross the Bryn Mawr Siphon. In more than three years of work on its pipeline project, Millennium has proffered no more than a conceptual sketch, dated August 10, 1999, of its proposed crossing, which appeared in FEIS.[123]

Because Millennium has never calculated the force of a pipeline explosion at the Bryn Mawr Siphon, Millennium has not and cannot demonstrate that a 2 foot separation between the pipeline and a critical public water supply aqueduct of the nation s largest city protects this vital coastal resource. In addition, without an analysis of the forces of a pipeline blast, it is impossible to assess the adequacy of the concrete barrier, columns and special steel pipe that Millennium proposes to rely on to shield the Aqueduct.[124] Thus Millennium has no basis to state that its pipeline will not adversely affect the Bryn Mawr Siphon of the Catskill Aqueduct.[125]

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[121] Public Comments Of The City Of New York Department Of Environmental Protection, November 13, 2002 at p. 2.

[122] Millennium reply brief, pp. 72-73 (*emphasis added*).

[123] Millennium Final Environmental Impact Statement, volume I, p. 5-64. This conceptual sketch showed the pipeline at 1.5-feet above the Catskill Aqueduct.

[124] Millennium Reply Brief, pp. 70-71.

[125] Millennium Reply Brief, p. 70.

As related by City officials,[126] Millennium s field survey of the Bryn Mawr Siphon, conducted in January 2003 by its consultant, Baker Engineering, showed that the Bryn Mawr Siphon is as perilously close as 1.71 feet below the ground, with most values showing the siphon two to three feet below the ground. The purported extraordinary safety measures that Millennium proposes to ensure pipeline integrity [127] cannot be found anywhere in the Record except for Millennium s own brief. Millennium s citation to its admittedly conceptual crossing plan is another stark example of Millennium missing the point. Millennium proposed crossing each of the three New York City aqueducts, some more than once, for a total of five aqueduct crossings.[128] With select mitigation, DEP found four of the five crossings to be acceptable based on the conceptual crossing plan. However the Bryn Mawr is markedly different because of an inconceivably small two foot separation distance and because nowhere along the pipeline route is there a crossing of infrastructure so critical to the economic, environmental and public health of the City of New York and the region &. [129] Millennium s hypothetical engineering techniques are *not* part of the Record before NOAA. In the existing Record, there is absolutely no evidence & proving that [any] proposed modifications eliminate risk to the Aqueduct. [130] None of Millennium s 78 exhibits provide a shred of evidence that the measures proposed at the Bryn Mawr crossing would adequately protect the Aqueduct. It is simply not enough to merely propose construction measures. Millennium has failed in the most

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[126] Mark P. McIntyre, Assistant NYC Corporation Counsel, Environmental Law Division to William L. Sharp, New York Department of State March 24, 2002.

[127] Millennium Reply Brief at p. 70.

[128] Public Comments Of The City Of New York Department Of Environmental Protection, November 13, 2002 at p. 2.

[129] Id.

[130] Id.

basic requirement to prove that such measures are adequate. [131]

C. Chronology of Recent Developments

In its Order dated September 19, 2002, FERC urged the City to recommence discussions with Millennium about conducting engineering studies on the distance of the siphon from the proposed pipeline. By letter dated October 17, 2002, Christopher O. Ward, Commissioner of the NYC Department of Environmental Protection (DEP) advised Millennium Project Manager Richard E. Hall, Jr. that:

> Although DEP still maintains its reservations regarding the proposed pipeline route, and, through its staff and consultants, continues its assessment of the risks regarding the Bryn Mawr crossing, we now believe that it is acceptable and appropriate to allow Columbia Gas to perform investigative work at the Bryn Mawr crossing, as originally contemplated by our Permit No. 9691. We believe this will facilitate acquiring additional information which will aid both Columbia Gas and DEP.

By letter dated January 7, 2003, the NYC Law Department submitted comments to NOAA regarding this consistency appeal. The City mentioned that Millennium had recently conducted a field survey of the Bryn Mawr Siphon.

> Some have questioned whether Millennium s inspection indicates that the City has acquiesced to the pipeline crossing the Catskill Aqueduct at the Bryn Mawr Siphon. I write to state that the City remains opposed to the pipeline crossing the Bryn Mawr Siphon, where Millennium has proposed an inadequate separation distance between the pipeline and the aqueduct. Millennium s proposal is unacceptable because the construction and operations of a major gas pipeline so close to the Catskill Aqueduct would pose a danger to 40 percent of the City s water supply. The City s position that the pipeline poses a risk to the Aqueduct is supported by the U.S. Army Corps of Engineers. The City believes that an alternate crossing, adequately set back from the Catskill Aqueduct, is available to Millennium and should be selected.[132]

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[131] Id.

[132] Exhibit 44. Letter from Mark P. McIntyre, Assistant NYC Corporation Counsel, Environmental Law Division to Molly Holt, Attorney, NOAA, dated January 7, 2002.

On February 21, 2003, Millennium and Corps representatives met with NYCDEP officials to discuss a process the parties should follow to develop an acceptable pipeline route across the Catskill Aqueduct. As related by the City Corporation Counsel,[133] Millennium stated its preference that the pipeline be built across a bridge straddling the Bryn Mawr Siphon. The bridge s height above the siphon would be based on Millennium s calculation of the force of a pipeline blast in the siphon area. It should be recognized that an important limit on the bridge s height, however, is the Con Edison transmission towers, which support major power lines that cross 18 feet in the air above the siphon area. The Con Edison power lines effectively limit the height of any bridge Millennium might propose to construct in the siphon area to four or five feet above the ground, which would place the pipeline six feet to 10 feet above the three siphon pipes. This distance however is insufficient to protect the region s public water supply from the effects of a pipeline construction accident, failure, or terrorist act.

Millennium places great emphasis on the yet-to-be-completed review of the Bryn Mawr crossing by Corps that it hopes will provide engineering techniques that will adequately protect the Aqueduct. [134] But Millennium ignores the fact that the Corps has *already* found that the Bryn Mawr crossing poses an inherent security risk that could not entirely be eliminated through design modifications. [135]

In its Reply Brief, Millennium contends that the environmental and safety related issues

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[133] Mark P. McIntyre, Assistant NYC Corporation Counsel, Environmental Law Division to William L. Sharp, New York Department of State, March 24, 2002.

[134] Millennium Reply Brief at 73.

[135] Public Comments Of The City Of New York Department Of Environmental Protection, November 13, 2002 at p. 2.

regarding the Bryn Mawr Siphon are well under control. Millennium assures the Secretary that it will find undiscovered solutions to problems - engineering or otherwise - where it does not now have answers. It claims that it will work closely with the Corps and NYCDEP to find a solution to the Bryn Mawr Siphon problem even though NYCDEP represented that it disagrees with Millennium's Siphon crossing plans.

This week Deputy Commissioner Michael A Principe, Ph.D. made it clear to Millennium representatives that there is no agreement to cross the Siphon and the City believes there are reasonable alternatives to such a crossing. Addressing Richard Hall, Millennium s Project Manager, he stated:

> ... Millennium prefers to build its pipeline across the Catskill Aqueduct at the Bryn Mawr Siphon. In your letter to Mr. Rutkowski, you further stated that crossing the Aqueduct at other locations beyond the Bryn Mawr Siphon is infeasible.
>
> DEP remains opposed to building the Millennium Pipeline over the Bryn Mawr Siphon. Whether it is built on the ground surface or 5 feet above the earth, its proximity to the Catskill Aqueduct imperils the water supply of the City of New York. Despite several years of effort, Millennium has never presented DEP with any engineering analysis that demonstrates that a pipeline could be built safely across the Bryn Mawr Siphon.
>
> DEP prefers that the Millennium avoid the Bryn Mawr Siphon area altogether and build the pipeline along the New York State Thruway. DEP prefers this location because the Aqueduct in this area is a pressure tunnel, built in bedrock, and located approximately 95 feet below the Thruway. A natural gas pipeline built at land surface just beneath the Thruway in this area would pose less [risk] to the City s water supply.
>
> At last month s meeting, Millennium stated that the Thruway alternative was not feasible. DEP believes the pipeline can be built along the Thruway and, unlike the Bryn Mawr Siphon, would not imperil the integrity of the Catskill Aqueduct. DEP is ready to assist Millennium in developing this alternative. [136]

[136] Exhibit 45. Letter of NYCDEP Deputy Commissioner Michael A Principe, Ph.D. to Richard Hall (March 31, 2002).

New York City has made it clear that crossing the Bryn Mawr Siphon is not a viable option and believes that the Thruway alternative -one of the alternative identified by DOS - would allow it to accomplish its routing objectives.

In the choice between obtaining competitively-priced natural gas and the public safety of its drinking water supply, New York City has followed the plain choice of protecting the water supply of the nation s most populace city.

IV. REASONABLE ALTERNATIVES ARE AVAILABLE WHICH WOULD PERMIT THE PROJECT TO BE CONSISTENT WITH THE ENFORCEABLE POLICIES OF THE COASTAL MANAGEMENT PROGRAM

Millennium bears the burden of proving that its proposed route, although inconsistent with New York s Coastal Management Program, should be permitted. Millennium is charged with documenting to the Secretary of Commerce that "[t]here is no reasonable alternative available which would permit the activity to be conducted in a manner consistent with the enforceable policies of the management program." Since there are numerous reasonable alternatives available to Millennium to achieve its objectives, the Secretary should find that Millennium has failed to prove this Element. DOS categorically states that all the alternatives it has identified are reasonable, available and consistent with New York s Coastal Management Program.

The Korea Drilling decision[137] sets forth the obligations of the parties with respect to the description of alternatives (1989):

[137] Decision and Findings in the Consistency Appeal of Korea Drilling Co., Ltd. from an Objection by the California Coastal Commission, U.S. Secretary of Commerce at 10 (January 19, 1989).

> 15 C.F.R. § 930.64(b)(2) requires a State, at the time it objects to the consistency certification for a proposed activity, to describe any alternatives that would be consistent with its management program. The regulation serves two purposes. First, it gives the applicant a choice: adopt the alternative (or, if more than one is identified, adopt one of the alternatives) or, if the applicant believes all alternatives not to be reasonable or available, either abandon the proposed activity or appeal to the Secretary and demonstrate the unreasonableness or unavailability of the alternatives. Second, it establishes that an alternative is consistent with a State's program because the State body charged by the Act with determining consistency makes the identification of the alternative.
>
> Thus, the Act and its implementing regulations charge the State with interpreting its own management program and applying it to a proposed activity to determine its consistency. Since determining consistency is the State's responsibility, and since that determination is within the State's control, the State should be and is allocated the burden of describing consistent alternatives. If the State describes one or more consistent alternatives in its objection, the burden shifts to the appellant. In order to prevail on Element Four [now Three], the appellant must then demonstrate that the alternative(s) is unreasonable or unavailable.

The State has identified numerous reasonable and available alternatives that would be consistent with the Coastal Management Program. In the DOS decision, three reasonable and available alternatives were identified and in the State s Initial Brief, five alternative river crossings and nine approaches were extensively described, any of which are consistent with the CMP and would allow the pipeline to reach its destination and be significantly less destructive of coastal resources and uses than the route chosen by Millennium. Indeed, Millennium s own route would not meet the CZM regulatory criteria for a reasonable alternative.

For a proposed alternative to be "available", the proponent of the proposed project must be able to implement the alternative and the alternative must achieve the primary or essential

purpose of the project.[138] An alternative may be available if it changes in the "location" or "design" of a proposed project to make it consistent with the state's Coastal Management Program, while achieving the applicant s primary purposes. Each of the alternatives described in the State s Initial Brief is available to allow Millennium to cross the Hudson River to transport gas to the Consolidated Edison interconnect in Yonkers, New York.

To determine whether a proposed alternative is "reasonable," the Secretary must consider the differences in environmental impacts and cost between the alternative and the proposed project. A proposed alternative is "reasonable" if the environmental advantages of the alternative outweigh the increased cost of the alternative over the proposed project.[139]

Some of the alternatives proposed by DOS will be comparable in price to Millennium s proposed route. Others may be relatively higher due to engineering, safety and technical operations but these should not inhibit the ability of Millennium to proceed. The expense must be considered in light of the overall cost of the project and the expected long term returns.

In the Southern Pacific Transportation decision,[140] the Secretary considered a proposal to rehabilitate a railroad bridge over the Santa Ynez River. California objected and proposed, as an alternative, that if the proposed bridge were redesigned to retain the Los Angeles embankment at its existing location and to eliminate all channelization, the project would be consistent.

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[138] Decision and Findings in the Consistency Appeal of Virginia Electric and Power from an Objection of North Carolina (VEPCO Decision) May 19, 1994 at 38; Decision and Findings in the Consistency Appeal of Carlos A. Cruz Colon (Cruz Colon Decision), September 27, 1993, at 6.

[139] Decision and Findings in the Consistency Appeal of Yeamans Hall Club from an Objection by the South Carolina Coastal Council, August 1, 1992 at 6.

[140] Decision and Findings in the Consistency Appeal of Southern Pacific Transportation Company to an objection from the California Coastal Commission, September 24, 1985.

Southern Pacific complained, *inter alia*, that the alternative was unreasonable because it would require the company to spend an additional $750,000 in the construction costs and an additional $20,000 per year in maintenance costs, rendering the project economically infeasible and producing no environmental benefit.

The Secretary found that

> based on the Administrative Record that Appellant has the financial resources or access to the financial resources to pay the $750,000 additional construction costs associated with the longer bridge and the annual increased maintenance cost of $20,000. Thus, I find that the longer bridge alternative is feasible and available to Appellant.

While finding the alternative was economically feasible, the Secretary concluded after balancing that the alternative was not reasonable because it did not produce environmental benefits greater than the applicant s proposed rehabilitation project with mitigation measures.

Unlike the situation in Southern Pacific Transportation, DOS s alternatives are both reasonable and available. In terms of overall cost of the alternatives to the Millennium Project, each alternative is within the range of pipeline construction for lines of this length. Furthermore, DOS's alternatives result in direct and substantial environmental benefit to coastal resources and uses, unlike Millennium's proposed route which causes substantial and pervasive damage to the unique Haverstraw Bay Significant Coastal Fish and Wildlife Habitat and threatens the public water supplies of the Village of Croton-on-Hudson and New York City which serve over 9 million people.

According to cost estimates provided by Millennium: The estimated total cost of the facilities to be constructed by Millennium is $683.6 million, including AFUDC, as set forth in Exhibit K. The net cost of the facilities to be acquired by Millennium from Columbia is $21.2

million, as set forth in Exhibit S. Millennium intends to finance the total required capital cost, exclusive of AFUDC, of $677.8 million with equity contributions and project-financed debt. [141]

Once operational, Millennium will be in a good position to finance any of the alternatives. The Millennium Pipeline is a limited partnership, with one general partner and four limited partner which are major U.S. and Canadian energy firms. Columbia Gas Transmission Corp. will be the largest limited partner, developer and operator of the pipeline. Other limited partners are TransCanada PipeLines USA Limited, Westcoast Energy Ltd., and MCNIC Millennium Company Inc. a business unit of MCN Energy Enterprises Inc., which is a holding company for DTE Energy Company. [142] Their respective ownership interests are as follows:

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[141] See Application of Millennium Pipeline Company LLP, at Docket No. CP98-150-000 (filed Dec. 22, 1997), Exhibit K Millennium Pipeline Company LLP Cost of Facilities.

[142] According to Millennium s application:

Columbia Gas Transmission Corp. (http://www.columbiagastrans.com) operates a 12,500-mile interstate natural gas pipeline network, providing storage and transportation for customers in 10 U.S. states. The company is a unit of NiSource, Inc.

TransCanada (http://www.transcanada.com) is a leading North American energy company. It is focused on natural gas transmission, power, and gas marketing services, complemented by employees who are expert in these businesses. The company's network of approximately 38,000 kilometres (23,500 miles) of pipeline links the Western Canada Sedimentary Basin to North America's fastest growing markets. TransCanada transports the majority of western Canada's natural gas production, with 60 per cent of total volume delivered to the United States. TransCanada's common shares trade under the symbol TRP on the Toronto and New York stock exchanges.

Westcoast Energy Inc. (http://www.westcoastenergy.com) is one of the largest corporations in the North American natural gas industry. Through its $9.5 billion integrated enterprise, Westcoast provides energy products and services to 1.4 million customers in Canada and the United States. Headquartered in Vancouver, British Columbia, the company's interests include natural gas gathering and processing, pipelines, storage, distribution, power generation, energy services and international energy ventures.

MCNIC Millennium Company Inc. a business unit of MCN Energy Enterprises Inc. a holding company for DTE Energy Company. DTE is diversified energy holding company with markets and investments throughout North America. MCN Energy Enterprises Inc. is an integrated energy

Millennium Limited Partners	Ownership Interest
Columbia	47.025 %
MCNIC	10.395 %
TransCanada	20.790%
Westcoast	20.790 %

Millennium is expected to generate significant revenues from its new venture, enabling it to pay for an alternative which is consistent with the Coastal Management Program. In its Application, Millennium identified eight shippers which have signed exclusive precedent agreements to purchase 66% of the natural gas transported; most of the shippers are located on the west back of the Hudson River. Millennium plans to recoup its costs through revenue and depreciation. In its Application, Millennium stated that: Millennium proposes to recover all costs associated with this transportation service through a reservation charge. [143] Millennium

company with assets of $ 4.4 billion and revenue of $2.1 billion. See MCN s website at http://www.dteenergy.com/investors/pdfs/aboutDTE6-7.pdf

[143] As indicated by Millennium in its open season procedures, the illustrative 100% load factor rates were $ .54 per Dth for 10-year contracts, $ .50 per Dth for 15-year contracts, and $ .47 per Dth for 20-year contracts. Such rate structure was designed to encourage shippers to enter into long-term arrangements. Based upon the results of the open season and the latest estimated costs of the project, the following rates are proposed:

100% Load Contract Term	Factor Rate

also proposes to depreciate its facilities over a 20-year period. Millennium proposes depreciation rates consistent with the levelized cost of service associated with the 15- and 20-year contracts, and straight-line depreciation for the 10-year contracts. Millennium proposes that it be provided regulatory asset treatment for the difference between its straight-line and levelized depreciation expense. A return on equity of 14% is proposed, while the cost of debt capital is estimated to be 7.5%. Based on a 65% debt - 35% equity capital structure, the overall rate of return will be 9.775%.

Millennium designed its pipeline route to utilize easements to be acquired from Columbia and existing utility corridors for 86% of the overland route. As such, Millennium has been spared the usual expenses, legal and engineering, associated with condemnation. Outside the Columbia easement, Millennium can well expect to incur the typical engineering and construction costs, together with condemnation expenses, to install a pipeline traversing topographically difficult terrain in the lower Hudson River Valley.

Millennium should not be spared the reasonable expense of selecting an alternative pipeline route which preserves the coastal environment, the New York City water supply and the

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10-year	.5353
15-year	.4989
20-year	.4745

The 10-year rate is based upon a conventional cost of service in the first year of operation. In order to recognize the benefits created by longer term commitments from the shippers, Millennium will derive rates for the 15- and 20-year contracts at lower levelized rates. Specifically, the 15-year rate is based on a levelized cost of service over the initial 10 years of the 15-year contracts and the 20-year rate is based on a levelized cost of service over the initial 15 years of the 20-year contracts.
Shippers under the 10-year contracts and new shippers that obtain firm service after the projects' in-service date will pay a non-levelized rate. Millennium's maximum interruptible transportation rate will be equal to the 100% load factor derivative of the maximum non-levelized firm rate. The rates and their derivation are set forth in Exhibit P.

Village of Croton on Hudson s well field. Any of DOS s alternatives will allow Millennium to achieve that objective.

A. Reasonable and Available Alternative Crossings of the Hudson River and Associated Alternatives to/from the West and East Points of Each Crossing

In its decision and Initial Brief, DOS identified reasonable and available alternatives that would allow Millennium to construct the pipeline in a manner that is consistent with the CMP, and avoid adverse impacts to critical resources in New York's coastal area.

These alternatives are not ones that were suggested for the "first time."[144] Rather, DOS took a closer look at routing alternatives that were presented in the FEIS, but dismissed, in favor of Millennium's destructive route across the Haverstraw Bay Significant Coastal Fish and Wildlife Habitat. Our evaluation of these alternatives, in consultation with the NYS Department of Transportation, the NYS Office of Parks, Recreation and Historic Preservation, the NYS Public Service Commission, and the Palisades Interstate Park Commission, show that they offer Millennium routing options that could supplant its current inconsistent proposal.

Millennium contends that it reviewed available data and conducted field visits to determine that the only river crossing route available was through Haverstraw Bay. DOS has not only presented reasonable, feasible, and available alternatives, but our expert consulting engineers, O Brien & Gere Engineering, Inc., through analysis of a substantial body of the most up-to-date information and field assessments have identified additional options which belie Millennium's claim that no alternatives exist. Our expert's analysis clearly demonstrates that Millennium is wrong in stating that the "main constraint was an inadequate on-shore staging area

[144]Millennium Reply Brief at 82

on both banks of the River" and that "workspace and human-related congestion" are insurmountable constraints, resulting in only one route across the Hudson River.

O Brien & Gere Engineering, Inc., is an internationally recognized engineering consulting firm, with extensive experience in pipeline design, routing, and construction. Among its industrial, commercial and institutional clients located throughout the United States and its territories as well as in foreign countries are: Consolidated Edison, Mountain Energy, Niagara Mohawk Power Corp., Rochester Gas & Electric, Sithe Energy, Texas Eastern Gas Pipeline Company, the Department of Energy, the Department of Defense, and the Environmental Protection Agency.[145]

Throughout its review of the Millennium Pipeline project, DOS has attempted to identify options and solutions that would allow the project to proceed. In contrast, Millennium has focused on finding problems. A close reading of the alternatives presented by DOS, supplemented by the efforts of O Brien & Gere to further enhance the options available to Millennium, will demonstrate that New York's critical coastal resources do not need to be damaged or significant public water supplies threatened in order to achieve Millennium's corporate objectives.

1. Tennessee Pipeline Right-of-Way River Crossing

The southernmost Hudson River crossing identified in DOS's Initial Brief is along or near the Tennessee Pipeline right-of-way. The river crossing is about 1.3 miles long. Installation of the pipeline in this area by directional drilling under Piermont Marsh, trenching in open waters, or by lay barge, in a manner that does not destroy the integrity of Piermont Marsh, would not be

[145] Exhibit 46. Resume of Harold Till, P.E. O Brien & Gere Engineers, Inc., and O Brien & Gere Engineers, Inc., Statement of Experience

inconsistent with the CMP. The feasibility of installing a pipeline crossing at this location in the river is demonstrated by the construction of the Tennessee Pipeline, about 50 years ago.

a. Route 1: Palisades-Rte. 45 to Thruway; Palisades-Thruway to Rte. 340 Tennessee River Right-of-Way River Crossing Tennessee Pipeline Right-of-Way to Saw Mill River Parkway

This route follows the Palisades Interstate Parkway right-of-way south from Millennium s proposed crossing of the Palisades Interstate Parkway at Route 45 to its intersection with the Tennessee Gas Pipeline. From a landing on the east bank of the river, as noted in our Initial Brief, the Millennium Pipeline could follow the Tennessee right-of-way or make adjustments along existing public road rights-of-way. The pipeline could rejoin its proposed route at the Saw Mill River Parkway.

Millennium wrongly asserts, first, that this is DOS's preferred alternative and second, that this alternative is not available or reasonable. Neither is correct. DOS is presenting reasonable and available alternatives to the inconsistent route proposed by Millennium; we place no priority on any alternative. Contrary to Millennium's contention, this route is available and constructable. In addition, O Brien & Gere, DOS's expert pipeline engineering consultants, in examining this routing alternative, identified a minor modification that further enhances this southern crossing alternative. This modified route is feasible, available, and reasonable, yet was apparently overlooked or ignored by Millennium and its interdisciplinary team on their "exhaustive" survey of the 17 miles stretch of the Hudson River. O'Brien & Gere estimated a difficulty factor of 2.1, which results in a net increase of only $5 million. For a project of this magnitude and with the corporate resources available, as noted previously, this increased cost is reasonable. It also avoids permanent adverse impacts to the Haverstraw Bay Significant Coastal Fish and Wildlife

Habitat.

In its effort to dismiss this alternative, Millennium seeks to push construction efficiency in the guise of safety and purposefully creates a worst-case scenario, ignoring accepted and available construction methods and creative, sensitive siting of the pipeline. For example, Millennium: claims a 75 foot wide work area is needed; pushes the pipeline corridor to the outer edge of the eastern right-of-way of the Palisades Interstate Parkway closest to homes; claims that extensive clear-cutting is necessary; and projects damage to the road surface.

DOS and its expert engineering consultants, after consulting with the NYS Department of Transportation and the Palisades Interstate Park Commission staff, conducting field surveys, and analyzing parkway plans, have determined that Millennium can install the pipeline in an environmentally and visually sensitive manner and in accordance with appropriate and safe construction practices along the Palisades Interstate Parkway.

Millennium indicates that it considered the eastern side of the Parkway would be used to install the pipeline. O Brien & Gere, during its field surveys, observed that the western right-of-way was generally wider, offering greater separation from adjacent land uses. Rather than pushing the pipeline away from the road to within 25 feet of the edge of the right-of-way, and toward adjoining land uses, it can be installed closer to the edge of pavement. This could be done within 30 feet of the roadway in many areas, avoiding unnecessary intrusions into the outer edges of the right-of-way and vegetated areas. New York State DOT "Requirements for the Design and Construction of Underground Utilities Installations Within the State Highway Right-of-Way require that longitudinal carrier pipes be installed outside the area of live load influence of the travel lanes and shoulder, unless there is no reasonable alternative (Par. 3.03.10), which is

generally six feet for a six foot deep trench.

Where there are steep areas adjacent to the roadway, the pipeline could be constructed on backslopes farther from the roadway, maintaining vegetation on slope areas adjacent to the roadway and providing a buffer between the Parkway and the adjacent areas. Where there are bridge overpasses, a review of highway plans indicates that some abutments contain steel pilings driven beneath the footings. O Brien & Gere notes that boring, approximately ten feet back from the pilings to install the line, should not present any technical problems.

Millennium worries about the impact of heavy construction equipment on subsurface utilities and road infrastructure. Typically, asphalt pavements constructed over a suitable base to normal State highway construction standards are not damaged by occasional traffic from trucks carrying the construction equipment. The New York State DOT personnel state that snow plows are used for clearing snow from the road and heavy construction equipment is transported over the roadway for maintenance when necessary.

The load bearing capacity of bridges crossing the parkway will need to be evaluated before allowing certain construction equipment to cross. This is a normal requirement for planning any construction mobilization. Equipment loads that are under the maximum size and load limitations for travel on State maintained roads, that do not have specific weight restrictions posted, can travel without a permit. Carriers of over weight loads, which would include large construction equipment, are required to obtain overweight/oversize permits from the road authority. Equipment that exceeds the rated capacity of bridges would not be allowed to travel on certain roads. The procedures for traveling on roads and bridges crossing the Palisades Interstate Parkway are no different from any other State road that will be used in other areas

along the project route. Any damage to the roadbed, shoulder, or drainage infrastructure along the Parkway as a result of construction, is a potential in other locations where Millennium proposes to locate parallel to roads in Westchester County or at other locations where access is required at a public crossing. Millennium and its contractor would be responsible for restoration of any damage, if some damage does occur.

A 75 foot wide work area and clear cutting of 99 acres of forest is not needed. Lesser right-of-way widths are commonly used in residential and environmentally sensitive areas. In fact, using accepted construction methods, the pipeline can be built in a work area as narrow as 30 feet, although additional working width would normally be used at road, stream, and utility crossings if boring or additional depth was required. Millennium, itself, demonstrated in a typical cross-section detail for construction between mile 404.0 and 413.5 along a bike path, that a corridor of lesser width is contemplated to protect sensitive uses.

Contrary to Millennium's statement, the pipeline can be safely built in a narrower corridor using drag-section construction. O Brien & Gere finds it is feasible to use this method in conjunction with boring under cross roads for construction along the Parkway within a 30 foot corridor.[146] This method would result in an initial clearing of 39.5 acres, less than half of that claimed by Millennium. Further, once the work is completed, the corridor can be restored so that only ten feet of cleared land over the center of the pipeline is maintained, rather than the 50 to 75 feet stated by Millennium for aerial survey clearance and maintenance activities.[147] All but

[146] Exhibit 47. Typical Right-of-Way Cross-Sections, Palisades Interstate Parkway and Typical Drag Section, Palisades Interstate Parkway, O'Brien & Gere Engineers, Inc., March 2003.

[147] Aerial surveillance of pipeline corridors, requiring greater maintained cleared width, are cost effective for frequent monitoring of the line during construction, but there are other methods of monitoring the pipeline following construction, including more frequent patrols

13 acres would be revegetated.

Millennium's own Environmental Construction Standards state that it will work cooperatively with appropriate government agencies in an effort to minimize the impacts of right-of-way maintenance in water bodies, wetlands, and other environmentally sensitive areas. Based on Millennium's own evaluation of the historic significance of the Parkway, these special standards should apply. These standards, which are based on FERC mandated procedures, allow for annual maintenance of only ten feet centered on the pipeline and subsequent selective cutting of trees 15 feet tall within 15 feet of the pipeline.

Millennium has failed to demonstrate that a route along the Palisades Interstate Parkway is not reasonable, feasible, and available. Millennium s assertion that ...the environmental and human impacts would be severe and profound is without merit and can be addressed through appropriate construction techniques and siting. Therefore, contrary to Millennium s assertions, the pipeline could in fact be constructed in the Palisades Interstate Parkway right-of-way, south to the Parkway s intersection with the Tennessee pipeline right-of-way.

Millennium raises no concern with routing from the Palisades Interstate Parkway to the Tallman State Park.

To reach the Tennessee crossing, the Millennium Pipeline would enter Tallman State Park. Millennium continues to maintain that a 75 foot work corridor is required in Tallman State Park, resulting in deforestation of ten acres in the park. DOS has demonstrated in the discussion of the Palisades Interstate Parkway, that the pipeline can be safely installed within a 30 foot work area. Use of more sensitive construction techniques should be applied in Tallman State Park, as

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and damage prevention programs including one-call centers.

Millennium proposes for the bike path segment. Restoration can occur for all but a ten foot wide corridor.

Contrary to Millennium's claim, there is adequate useable work space to allow construction of the Millennium pipeline along the Tennessee right-of-way to the river. O Brien & Gere has determined that a cleared area, suitable for a directional drill staging area, exists on the south side of the Tennessee right-of-way. There in no technical reason that prevents the proposed pipeline, if installed by directional drilling from a staging area on the south side of the Tennessee pipeline right-of-way, from crossing under the Tennessee lines in a drilled section. The Tennessee lines will be at a relatively shallow depth since they were installed in an open trench excavation. A drilled installation could pass under the lines with ample clearance to avoid conflict with the existing lines. O Brien & Gere notes that a similar horizontal directional drilling project was completed by Environmental Crossings, Inc., in the New York City area.

Millennium contends that there would be destruction of the State-designated Piermont Marsh Significant Coastal Fish and Wildlife Habitat. Millennium has stated:

> Contrary to the NYSDOS brief...there is no area available for staging on the west shore. Thus a staging area would have to be created, which would involve filling in and trenching at least one acre of previously undisturbed wetland. [148]

The irony of Millennium's concern over Piermont Marsh is apparent. Throughout its Initial and Reply Briefs, Millennium refuses to acknowledge the significant and permanent damage to the Haverstraw Bay Significant Coastal Fish and Wildlife Habitat that would result from a pipeline crossing, yet with regard to the Piermont Marsh, Millennium feigns distress. DOS, not Millennium, is the expert agency responsible for significant coastal habitat protection.

[148]Millennium Reply Brief at 90

A crossing of Haverstraw Bay, in the manner proposed by Millennium, is far more devastating, severe, and profound. Disturbances to Piermont Marsh that would destroy valuable habitat or significantly impair it are avoidable.

Use of directional drilling and proper entry site management practices associated with pipeline installation could avoid potential negative impacts to marsh, provided that the critical marsh surface layer is not impaired and that construction in the river beyond the marsh does not result in impairments or alterations of water quality, tidal regime or materials exchange. Such activities should allow the natural functioning of the marsh, which supports the protected fish and wildlife resource values, to continue undiminished.

The State's Piermont Marsh habitat narrative also recognizes that there exists the potential for restoration of some ecosystem functions of the habitat, through removal of invasive plant species and reestablishment of marsh and/or shallow open water habitat in areas currently in a degraded condition [in this context, degraded refers to a level of ecosystem function less than expected from undisturbed marsh]. Installation of a pipeline, in such a way as to restore some ecological functions while not diminishing current values, might be possible on some selected portions of the site.

As indicated above, Millennium is wrong in stating that there is no staging area and that filling the habitat is inevitable. O Brien & Gere identified a cleared area on the west side of the river that can be used as a staging area for directional drilling down the escarpment and under Piermont Marsh. Directional drilling under the escarpment and marsh avoids blasting and erosion of the embankment on the west side of the river and any trenching, other excavation, or filling of Piermont Marsh. Drilling fluids can be managed to avoid significant unacceptable

impacts through commonly accepted best management practices. From the exit of the directional drill in the river, the pipeline could be trenched across the river.

Even though DOS has demonstrated that ample staging area for directional drilling under Piermont Marsh is available, if a staging area were necessary in the marsh, Millennium fails to mention that following construction, the fill can be removed and the habitat restored and enhanced.

In addition, if directional drilling were not used to cross Piermont Marsh, the pipeline could be installed as noted in DOS's Initial Brief by using an open stream channel to the north of the Tennessee pipeline trench, which exists despite Millennium's comment that "there is no evidence of any permanent channel within the immediate construction area in the vicinity of Piermont Marsh. [149] This response by Millennium is a blatant misrepresentation of the facts. Millennium is well aware of the open water stream channel[150] through the marsh because it was pointed out to Millennium during a field inspection of the area between representatives of Millennium and DOS in November, 2002.

In its Initial Brief, DOS states:

> The impact assessment included in the habitat documentation for this area indicates that the elimination of marsh or shallow water areas, through dredging or filling, would result in a direct loss of valuable marshes constituting important fish and wildlife habitats. However, the impact assessment for the area also indicates that limited habitat management activities, including expansion of open water areas in the marsh, may be designed to maintain or enhance populations of certain fish or wildlife species. To avoid the destruction of valuable fish and wildlife habitats in this area or otherwise impairing the habitat, the pipeline could be trenched in this open water cut or channel during the appropriate season.[151]

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[149] Millennium Reply Brief at 91.

[150] Exhibit 48. Photo Sheet, Tennessee Right-of-Way/River Crossing and Piermont Marsh.

[151] DOS Initial Brief at 88.

The eastern section of this route is challenging. Acquisition of additional right-of-way would be required in "The Landing" subdivision. Installation of the pipeline is technically feasible in the "Legend Hollow" subdivision without condemnation using a combination of construction methods, including boring, stovepipe installation, and drag sections provided that a less than 25 foot offset is used and an additional temporary construction right-of-way is obtained.

In its field evaluation, O Brien & Gere examined these issues and, unlike Millennium and its consultant, looked for routing and engineering solutions.

Modification to Eastern Alternative Route to the Saw Mill River Parkway

O Brien & Gere has developed a reasonable and minor modification in the vicinity of the alternative that enhances this route and avoids these challenges.[152] The Millennium Pipeline would come ashore on the east bank of the Hudson River approximately one-quarter (1/4) mile north of Wickers Creek and the Tennessee pipeline right-of-way. The pipeline would follow a route along the north side of Mercy College through a parking lot. The upland route along the east side of the river s edge could be bored or directionally drilled under the railroad right-of-way, eastward to an area under a parking lot. There is sufficient room in and near the parking lot for a staging and construction area. Based on the opinions offered by two directional drilling contractors contacted by O Brien & Gere, directional drilling through the rock formation on the east bank at the Mercy College parking lot and exiting through the sedimentary formations in the river bed is feasible. A detailed geotechnical investigation is required for design of the bore. Construction activity in this area would take approximately six weeks, and could be seasonally timed to avoid interference with other uses of the area during the busiest seasons. This route

[152] Exhibit 49. Dobbs Ferry Alternate Alignment, O'Brien & Gere Engineers, Inc., March 2003.

continues east from the parking lot. The line can be bored diagonally across the intersection of Broadway and Langdon to the church property and then laid parallel to Broadway along open property frontage to Route 9, under Route 9, to the Ardsley Country Club golf course area, and eastward from that area to Millennium s proposed route.[153] This modification is reasonable, feasible, and available. It is consistent with the CMP.

In its overview of this alternative route, Millennium relies, as it does in other parts of its brief, on hyperbole a classic tactic to muddle, alarm, and cover for not having facts. Millennium claims that there are "a vast number of residences that would be permanently subjected to increase noise and aesthetic conflicts," and that "there is simply no work space."[154] DOS has shown that impacts along the Palisades Parkway can be avoided and minimized. There is work space available at the Tennessee Pipeline crossing for directional drilling. O'Brien and Gere has identified a minor modification to the eastern alternative that addresses all issues raised by Millennium, and DOS concurs. Therefore, this route is feasible, available, and reasonable. This route is consistent with the CMP.

b. Route 2: Palisades-Rte 45 to Thruway; Route 304 to Tennessee ROW Tennessee Right-of-Way River Crossing Tennessee Pipeline Right-of-Way to Saw Mill River Parkway

This route begins at Millennium's proposed crossing with the Palisades Interstate Parkway. It follows the Parkway right-of-way to its intersection with Route 304 south to its intersection with the Tennessee Pipeline right-of-way. The Millennium Pipeline would then follow the existing Tennessee right-of-way into New Jersey and back into New York along the existing Tennessee right-of-way river crossing. On the east side of the river, it would follow the

[153] Exhibit 50. Photo Sheet. Tennessee River Crossing Eastern Approach Minor Route Modification, March 2003.

[154] Millennium Reply Brief at 92

modified route identified by O Brien & Gere from a landfall approximately one-quarter (1/4) mile north of the Tennessee pipeline Wickers Creek route, eastward to Millennium s proposed route along the Saw Mill River Parkway.

This route is available, feasible, and reasonable, and is consistent with the New York CMP. Millennium has not demonstrated otherwise.

As DOS has demonstrated for the Route 1 alternative, the pipeline can be constructed and maintained along the length of the Palisades Interstate Parkway right-of-way. It is not Millennium s prerogative to decide whether any of the ...environmental and human impacts... along this route are acceptable or not in governmental decision-making; that is the responsibility of government.

Millennium states in its Reply Brief that "...approximately 40 acres of forest would have to be removed" along the Palisades Parkway right-of-way,[155] and among the factors Millennium claims render Route 2 infeasible "... are...severe impacts to the PIP from tree removal..." and "... permanent noise and visual impacts to residences adjacent to the PIP right-of-way..."[156]

As DOS has demonstrated in its discussion of the Route 1 alternative, it is not necessary for Millennium to clear cut and subsequently permanently maintain a 50 to 75 foot wide clear cut right-of-way along the Palisades Interstate Parkway. The pipeline can be installed in a 30 foot corridor. Careful siting of the pipeline closer to the edge of pavement and revegetating all but a ten foot on center clearing will reduce impacts. As a result, the "..severe impacts to the PIP from tree removal" and "...permanent noise and visual impacts to residences adjacent to the PIP right-

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155 Millennium Reply Brief at 93.

156 Id. at 94.

of-way," are hyperbole by Millennium. In fact, the noise and visual effects of constructing the pipeline along this route would be no different than any similar pipeline construction or heavy construction project adjacent to forested roadways, including other parkways, and residential areas. Therefore this segment of this route is available, constructable, feasible, and reasonable.

From the intersection of the Parkway with Route 304, this alternative route follows Route 304 south to its intersection with the Tennessee Pipeline right-of-way. Millennium states that constructing the pipeline along the east side of Route 304 "...would be difficult, as it is heavily trafficked and bordered by businesses,"[157] and that "[I]n some cases it appears that there are permanent structures situated near, if not on top of, the existing pipeline."[158]

Mostly open right-of-way exists along a stretch of the Route 304 corridor running approximately three miles, from the Parkway to a point approximately one-half mile north of the New York State Thruway. The intersection of Route 304 with the Tennessee pipeline right-of-way is a very short distance, no more than a few hundred feet, south of the state boundary line.

On the east side of this approximately three-mile corridor there is generally about 40 to 50 feet of highway right-of-way, narrowing in some places to 30 feet in width off the roadway. In one area along this right-of-way, for a distance of 50 feet along the roadway, there is a narrow open and unrestricted part of the right-of-way measuring approximately 12 feet in width between the roadway and a retaining wall. Even this relatively narrow space can accommodate the pipeline, and while construction may be more difficult than elsewhere along this route, there are installation methods available for this short distance along Route 304 or the Tennessee pipeline right-of-way.

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157 Id. at 93.

158 Id.

Traffic may be temporarily disrupted to varying degrees while the pipeline is constructed in this area. However, such disruptions do not render this part of the route "not constructable," "not available," and "not reasonable" as Millennium claims. Further, there are legal remedies to address right-of-way encroachments.

On the west side of Route 304 along this approximately three mile stretch, the right-of-way is generally 40 to 50 feet wide.

All of the preceding right-of-way clearances do not include ten foot wide shoulders that exist on both sides of the roadway. There is clearly sufficient space within which the pipeline could be constructed.

The last one-half mile of this route to the state line is bordered primarily by commercial development, and the right-of-way is narrower, approximately 15 feet to 20 feet wide on both sides of the roadway, to the edge of the ten feet wide roadway shoulder. That right-of-way and shoulder area provides sufficient space for construction, operation, and maintenance of the pipeline.

For perspective, a temporary disruption in traffic in this area is less significant than the risks of placing the pipeline within two feet of the Bryn Mawr Siphon, that provides 40% of the New York City's water supply, or across the Haverstraw Bay Significant Coastal Fish and Wildlife Habitat. This relatively minor and temporary traffic disruption is not so significant that the pipeline should not be routed along this or other routes identified by DOS that do not have significant adverse effects on coastal resources and uses, and that are consistent with the CMP.

Millennium raises concerns about the routing into New Jersey. There is no reason why the pipeline route cannot go through New Jersey. While this route may be more difficult than

Millennium's preferred route, it can be done and is, therefore, available as an alternative. Lake Tappan can be crossed by directional drilling or other accepted means. The pipeline can be constructed along existing electric rights-of-way, as Millennium has planned elsewhere along its proposed route in New York. The Millennium pipeline can be constructed so that it parallels the existing Tennessee pipeline in close proximity to it. There are no regulatory standards that prohibit gas pipelines from paralleling one another in close proximity or prohibiting common use of pipeline and electric utility corridors. The possible need to purchase additional right-of-way is not a bar to an alternative route, as it is a means for the Millennium pipeline to acquire the necessary right-of-way. In fact, FERC can condemn any necessary right-of-way for the Millennium pipeline along this route. Therefore, this portion of the route is feasible.

As discussed under Route 1, DOS has demonstrated that the eastern routing issues raised by Millennium can be dealt with effectively through the minor route modification identified by O Brien & Gere. Therefore this segment of the alternative route is feasible, reasonable, and available.

Millennium has failed to demonstrate that the alternative route is unconstructable or otherwise infeasible. The pipeline can be constructed, maintained, and operated along this route, and it is therefore available and reasonable given all relevant circumstances. This route is also consistent with the CMP.

c. Route 3: CSX Right-of-Way Bowline to Rte. 303; CSX Right-of-Way Snake Hill Road to Palisades; Palisades Thruway to Rte. 340; Tennessee Right-of-Way River Crossing; Tennessee Right-of-Way to Saw Mill River Parkway

This route would follow the CSX right-of-way from Bowline in Haverstraw south to the Palisades Interstate Parkway. It would follow the Parkway south to the existing Tennessee right-

of-way river crossing. On the east side of the river, it would follow the modified route as identified by O Brien & Gere.

Millennium has not presented information that refutes that this alternative is feasible, reasonable, and available. This alternative is consistent with the CMP.

Millennium asserts that 15.5 acres of clear cutting would be required for a route along the Palisades Interstate Parkway.[159] DOS has clearly demonstrated that the extent of clear cutting and permanent maintenance of a cleared right-of-way actually would be significantly less than Millennium claims to be required. Consequently, the longer term effects described by Millennium are different and lesser; they are not permanent, severe, and profound as characterized by Millennium. This segment of the route is available, feasible, and reasonable, and it is consistent with the CMP.

Millennium opines that this route is "fatally flawed" and unconstructable "...due to numerous locations along the CSX railroad where workspace or right-of-way is not available for use. Constructing the pipeline through this route would be difficult but these difficulties are not fatal flaws, nor do they make the route unconstructable. The tunnel under Hook Mountain that the CSX railroad right-of-way runs through is occupied by one rail line, and is 11 feet wide. While the pipeline could not be physically constructed in the tunnel within the tunnel right-of-way without stopping trains along that route, it can, as Millennium notes, be constructed over Hook Mountain.

Millennium states that routing the pipeline around the railroad tunnel under Hook Mountain "...would involve permanent and unsightly scar visible from the Hudson River."[160]

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[159] Id. at 95.

[160] Id. at 96.

This assertion by Millennium is unfounded and obviously based on Millennium's own design of a worst case route across Hook Mountain.

There is an existing right-of-way over the tunnel on top of Hook Mountain that is cleared of mature forest canopy.[161] The pipeline could follow this cleared corridor. In the alternative, the route could be designed so the cleared area would be parallel to Hudson River along the west side of the mountain. Trees and other vegetation east of cleared area could buffer views from the river and the opposite shore. By constructing on west side of mountain below its highest elevations, there would be no permanent and unsightly scar visible from the Hudson River. [162] As is clear throughout its Reply Brief, had Millennium invested any effort in creative analysis of route planning and siting or creativity in construction methodologies, the issues it raises would be avoided or the impacts minimized.

While DOS has demonstrated that the visual impacts to Hook Mountain claimed by Millennium can be avoided, it should be noted that unlike other areas farther north in the Hudson River Valley, Hook Mountain State Park and its vicinity are not included within a State-designated Scenic Area of Statewide Significance (SASS). DOS conducted a rigorous and public evaluation of the Hudson River Valley as a basis for designation of six Scenic Areas of Statewide Significance throughout the valley. To be designated a SASS, an area must meet criteria regarding visual characteristics, values, and qualities, similar to the environmental factors used to evaluate and designate Significant Coastal Fish and Wildlife Habitats. Hook Mountain and its vicinity did not rise to the level of scenic importance as other areas, and therefore the

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[161] Exhibit 51. Photo Sheet. Hook Mountain: Cleared Right-of-Way over Railway Tunnel.

[162] Millennium Reply Brief at 96.

significance of visual effects in this area, and the area itself, are not accorded the same type and level of protection as are the SASS areas.

DOS has demonstrated that the eastern routing issues raised by Millennium can be dealt with effectively through the minor route modification identified by O Brien & Gere, discussed under Route 1.

Route 3 is feasible, reasonable, and available and Millennium has failed to demonstrate otherwise.

d. Route 4: Thruway-Algonquin Right-of-Way Kakiat County Park to Palisades-Thruway Intersection; Palisades-Thruway to Route 340; Tennessee Right-of-Way River Crossing; Tennessee Pipeline Right-of-Way to Saw Mill River Parkway

Using this route, the Millennium Pipeline would interconnect with the Algonquin Pipeline right-of-way near Kakiat County Park and follow that right-of-way south to the New York State Thruway right-of-way. It would follow the Thruway right-of-way east until it intersects with the Tennessee Pipeline at Thruway Exit 13. At Exit 13, it would follow the Palisades right-of-way to Route 340 and the Tennessee Pipeline right-of-way. It would then follow the Tennessee right-of-way across the river. On the east side of the river, it would follow the modified route as identified by O Brien & Gere.

This route alternative and the modification are feasible, available, and reasonable, and are consistent with the CMP. Millennium fails to demonstrate otherwise.

Millennium persists in its claims that deforestation of the alternative routes is inevitable and its overblown estimate of clear cutting is again evidenced in stating that 30 acres of forest would be removed in Harriman State Park. DOS has demonstrated that a 75 foot wide work corridor is not necessary, that permanent clearing of 50 to 75 feet is not required, and that the

area could be reforested for all but a ten foot corridor centered over the pipeline.

Millennium claims that blasting and permanent grading would re required. Again, the effects of these activities in the areas designated in the DOS alternative route are recoverable through restoration of vegetation, careful consideration of on-site pipeline routing, and sensitive construction techniques.

Millennium does not dispute that routing along the south Thruway right-of-way is possible. The most significant concern raised is that traffic would be stopped in "several lanes for approximately 30 minutes a day" because it "appears that blasting would be required."[163] It then goes on to note that "approval would have to be obtained from DOT."[164] This is simply a regulatory requirement for work that disrupts traffic, which is very common along the Thruway and other heavily used State roadways. The work could be conducted during off-peak hours. While a temporary inconvenience for motorists, it does not make the alternative unavailable or infeasible.

Millennium provides no information indicating whether blasting would in fact be required to make space for the pipeline, nor does Millennium provide any other information demonstrating that other means of constructing the pipeline in these areas is not physically possible. As it has for other parts of this and other routes, Millennium alludes to worst case scenarios without discussion of the facts and available construction methods and minor routing deviations to overcome construction and routing difficulties.

Millennium claims that trees would be removed resulting in loss of screening for adjacent residences and noise impacts. DOS has shown that Millennium has made a practice of stating

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[163] Id. at 97.

[164] Id.

the worst case scenario with regard to maintaining trees and other vegetation and that accepted construction and siting techniques can be used to maximize tree retention. The effects on nearby residents along the highly trafficked Thruway, in comparison to all other existing and future visual characteristics and noise levels resulting from traffic and development along the Thruway, would be negligible after construction of the pipeline. Another overlooked option is for Millennium to construct sound barriers as has been done elsewhere to mitigate any impacts.

Millennium has not demonstrated that the pipeline cannot be constructed along the Thruway. Millennium claims "An existing fiber optic cable is located on the north side of the highway ROW and occupies most of the existing space, therefore making it necessary to use the south side of the ROW."[165] Millennium provides no information indicating where the fiber optic cable is in relation to the existing roadway and outermost edges of the right-of-way or "...steep slopes, rock faces, and confined spaces...." Given the expansive width of the roadway shoulder, right-of-way and other space adjacent to the Thruway right-of-way, a fiber optic cable does not occupy considerable space, and does not physically preclude construction of a pipeline adjacent to it along the length of this route on either the north or south sides of the Thruway.

Millennium's last assertions regarding this route are an attempt to demonstrate, without substantiation, and contrary to on-the-ground circumstances, that there are no reasonably available routes through Suffern. Millennium clouds the facts by stating "...the portion of this alignment passing through Suffern lies in heavily trafficked, narrow streets. The Thruway is elevated through Suffern on bridges and vertical retaining walls... A location to gain access to the Thruway from Suffern local streets on the proposed route do not exist," and concludes incorrectly

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[165] Id.

that a route in this area "...is neither reasonable, nor available."[166]

Nowhere and no time did DOS suggest using any specific local streets in this area, nor is it necessary to use local streets for the pipeline route. DOS does agree that portions of the Thruway are elevated and on bridges and retaining walls in parts of Suffern, but it is not necessary to construct the pipeline "on" the Thruway roadbed and bridges and retaining walls in this area. Instead, there is considerable undeveloped space, on the order of hundreds of acres on either side of the Thruway in Suffern, through which the pipeline could be routed and constructed alongside the Thruway corridor. This area has other major utilities traversing it between the Ramapo area and Suffern. The pipeline can be constructed through this area. The pipeline therefore does not have to be constructed along local streets as alluded to by Millennium, and a route through this area is available and reasonable.

Route 4 is feasible, reasonable, and available and Millennium has failed to demonstrate otherwise.

e. Route 5: Thruway-Algonquin Right-of-Way Kakiat County Park to Palisades-Thruway Intersection; Route 304-Tennessee Right-of-Way; Tennessee Right-of-Way River Crossing; Tennessee Pipeline Right-of-Way to Saw Mill River Parkway

Using this route, the Millennium Pipeline would interconnect with the Algonquin Pipeline right-of-way near Kakiat County Park and follow that right-of-way south to the New York State Thruway right-of-way. It would follow the Thruway right-of-way east until it intersects with the Tennessee Pipeline near Exit 13. It would then follow the Route 304 right-of-way south to intersect with the Tennessee Pipeline right-of-way and follow that to the river crossing. On the east side of the river, the alternative would follow the modified route as

[166] Id. at 98.

identified by O Brien & Gere.

Millennium claims "[F]or essentially the same reasons as those set forth for Routes 2 and 4, Route 5 is also not feasible from a design, construction, operation, and maintenance perspective", and is rendered "...unreasonable and unavailable." [167]

This route is feasible from a design, construction, operation, and maintenance perspective. As DOS has shown in its analyses of Millennium's responses for Routes 2 and 4, the perceived obstacles along the Thruway, the Palisades, the western river approach through Tallman State Park, and the eastern approaches to the Saw Mill River Parkway, can all be addressed through careful siting, use of accepted construction methods for more narrow corridors, directional drilling, substantial revegetation, and a modified eastern routing connection overlooked or ignored by Millennium in its field work.

Millennium offers nothing more substantive in its Reply Brief other than a reference to the "Baker Report, at 14," to support its claim that "[T]hus, impacts and constructability constraints...," referring to Millennium's unsubstantiated claims regarding overall portions of this route, "...are all pertinent to Route 5, and render it unreasonable and unavailable."

Millennium repeats its contention that the segment of the route using the Route 304 right-of-way is not reasonable. As DOS has demonstrated in its discussion of Route 304, there are no insurmountable obstacles that render this segment unavailable or unreasonable. There are accepted engineering and construction methodologies that will permit construction of the pipeline.

As DOS demonstrated for Routes 2 and 4, it is physically possible to construct the

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[167] Id. at 98.

pipeline along Route 304 and the Tennessee Pipeline right-of-way. DOS has shown that an eastern route to the Saw Mill River Parkway is likewise constructable. Route 5 is an available and feasible route, and is consistent with the CMP. Millennium has failed to demonstrate otherwise.

2. Route 117 River Crossing

In its Initial Brief, DOS demonstrated that a river crossing at Nyack Beach State Park, which was summarily dismissed by Millennium and FERC, to a landing on the east side of the Hudson River in the vicinity of Rockwood State Park and Phelps Memorial Hospital was a reasonable, feasible, and available alternative.[168] Millennium fails to show otherwise in its Reply Brief.

a. Route 6: CSX Right-of-Way Bowline to Rte. 303; Route 117 River Crossing; Rte. 117 Phelps Memorial Hospital to Saw Mill River Parkway

This alternative deviates from the proposed Millennium route near Bowline where it could follow the CSX right-of-way and over northern Hook Mountain, south to Route 303 and Nyack State Park. From Route 303, the alternative route goes north and eastward through undeveloped land to follow the southernmost part of Hook Mountain along the Hook Mountain State Park boundary to the Marydell Camp/Nyack Beach State Park area. It then crosses the Hudson River to the southern boundary area of Rockwood Hall State Park where it would proceed east along the boundary of the Phelps Memorial Hospital and the park to Route 117. It would then follow the Route 117 right-of-way east to Millennium's proposed route, with a deviation to avoid damage to the critical Bryn Mawr Siphon.

[168] DOS Initial Brief at 93-96.

Millennium contends that the pipeline cannot be constructed "through the quarry."[169] DOS never proposed routing the pipeline through the quarry. Millennium further states that slight deviations around the quarry ... would unacceptably place the pipeline in several severe side slope areas."[170] Again, Millennium fails to fully explore options before claiming that an alternative is not feasible. The pipeline can be constructed around the quarry along Snake Hill Road. There is between 75 and 100 feet of space between Snake Hill Road and the toe of the slope leading to the quarry within which the pipeline could be constructed.

On the east side of the quarry, some leveling of land might be necessary, but there is sufficient area between the roadway and the quarry to locate the pipeline. Geological mapping of the area shows that the quarry site is composed of the Palisade Diabase, a durable volcanic rock often used as a construction material. This material would form a stable base for the pipeline and locating the pipeline in this area and in this material would not cause slumping of the quarry wall if portions were leveled.

This alternative route gains access to the Hudson River at Nyack State Park. Millennium raises issues with routing through the park that reflect its continued refusal to apply available construction and siting solutions. The issues revolving around Nyack State Park are spurious. Millennium states that the park would have to be closed for several months. Obviously, the work can be timed to avoid peak use seasons. Any damage to the access road can be repaired. Staging does not need to occur in the parking lots. Construction can be staged in the vicinity of the access road and reach the river by continuing straight down the embankment, avoiding the hand-laid wall along roads. Following installation of the pipeline, this area can be restored. Any

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169 Millennium Reply Brief at 99.

170 Id.

damage to the seawall is repairable, as is damage to the stone walls, which are in need of restoration.

Millennium notes "difficulty" in boring to cross under the railroad tracks on the eastern shore of the river.[171] It does not contend that the boring is not feasible. Millennium's noting that blasting may be needed along the Route 117 right-of-way similarly does not render this alternative "not constructable."[172]

As are all other alternatives identified by DOS, this is a feasible, available, and reasonable alternative that is consistent with the CMP. Millennium fails to demonstrate otherwise.

3. Lovett Power Plant River Crossing

A third possible river crossing to the north of the Haverstraw Bay habitat is located in the vicinity of the Lovett Power Station on the west side of the river to a quarry one-half mile south of the Consolidated Edison site on the east bank of the river. From this point, it would follow the utility right-of-way to connect with Millennium's more southerly proposed routing, with deviations to avoid the Croton-on-Hudson well field, a primary source of drinking water for the Village and surrounding area. DOS's Initial Brief noted that there are at least two ways to approach this crossing. Millennium has not demonstrated that a crossing in this area and its alternative approaches are not feasible, reasonable, and available.

a. Route 7: CSX Right-of-Way Bowline to Lovett; Lovett Power Plant River Crossing; Electric Transmission Right-of-Way Indian Point to Rte. 9

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171 Id. at 100.

172 Id.

To the west of the Bowline Plant, the Millennium Pipeline could add an extension to follow the CSX right-of-way north to the Lovett Power Plant.

Millennium claims that this route "...fails to be a viable alternative due to a multitude of construction constraints and environmental impacts."[173] Millennium again resorts to hyperbole in describing the characteristics of the alternative in order to support its preferred route across the Haverstraw Bay Significant Coastal Fish and Wildlife Habitat, without regard for the pervasive damage to the habitat and its resources. Millennium has not demonstrated that the so-called construction constraints cannot be addressed by routing adjustments, grading, cutting, fitting, drilling under, blasting, routing around physical objects, or employing accepted construction techniques to extend the pipeline north to a Hudson River crossing outside the Haverstraw Bay Significant Coastal Fish and Wildlife Habitat.

Millennium cites constraints along the CSX rail line. The width of the CSX right-of-way and the space within it occupied by rail lines differ along the length of the rail line. This segment of the railroad, which is not electrified and is not used to transport rail passengers, was originally constructed as a single track railroad. A second track was added along portions of it, and was subsequently removed in many areas. While there would be different types and degrees of difficulty associated with constructing the pipeline in narrow portions of the right-of-way occupied by two tracks, and within or along the railroad right-of-way where existing tracks run through narrow areas, Millennium has not shown that the constraints cannot be addressed by modified construction techniques such as shoring trenches with sheet piling, offsite staging, removal of right-of-way easement encroachments, or strategic removal of or boring or drilling

[173] Id.

through rock or other physical obstructions. DOS notes that the American Railway Engineering and Maintenance right-of-Way Association Manual for Railway Engineering Standards indicates that pipelines can be constructed near railroad tracks, 25 feet from the center line of the nearest parallel track and buried at least six feet deep when they are constructed within 50 feet of railroad tracks.

The alternative route passes through Stony Point State Park. Millennium states that it would be necessary to widen the rock cut and destroy the historic bridge at the park's entrance in order to locate the pipeline in the corridor. There is a solution to Millennium s extreme approach. The rock supporting the bridge and in the immediate area of the entry can remain. The pipeline can be drilled through this rock. The pipeline route could also be slightly adjusted to avoid the entryway.

Millennium states that a crossing at Lovett is "probably not feasible,"[174] but that a "marginally adequate staging area might be available at the Tilcon quarry immediately south of Lovett."[175] Millennium states that there is no route available through the Tilcon site, but the pipeline does not need to run through the quarry. DOS's consulting engineers' field survey shows that it can be routed around the quarry on the western side of the quarry in the vicinity of Route 9 northward for about 4,000 feet.

O Brien & Gere have also identified a routing modification that would take the pipeline from the western side of the quarry to an intersection with Buckberg Road , then proceed in a westerly direction following another power line approximately 4,300 feet through mostly forested land, then connect with the Algonquin right-of-way south of Buckberg Mountain, and

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174 Id. at 101.

175 Id.

then use the Algonquin River crossing.

Contrary to Millennium's statement that, on the east side of the river, "crossing of State Route 9 is infeasible,"[176] O Brien & Gere have evaluated this section and have shown that a crossing is difficult, but possible.[177] In evaluating crossings in this area, O'Brien & Gere consulted NYS Department of Transportation Route 9 highway right-of-way and infrastructure plans and as-built specifications.

The Consolidated Edison power line right-of-way intersects Route 9 and the adjacent rail line at a very small angle, making the overall crossing approximately 1,500 to 2,000 feet long. At the Montrose crossing location, the roadway is well above the railroad grade and in a rocky embankment with Montrose street crossing over the rails and under Route 9. The railroad can be crossed by conventional boring from the western side at the northern end of a small wetland. The exit pit for the bore will have to be reduced in size due to the road embankment on the east side of Route 9. With permission from the railroad, the line could be installed along the eastern side of the track approximately 25 feet from the rails south to the Montrose Station Road. An additional bore will be required to cross Montrose due to the bridge abutment and intermediate columns supporting the road. The line can run parallel to the rails to about 400 feet south of Montrose Station Road. Another bore, or possibly a micro-tunnel machine will be required to make a perpendicular crossing through rock under Route 9 at this location to reconnect with the Consolidated Edison right-of-way.

Millennium has failed to demonstrate that this alternative is not feasible, reasonable, and available. Physical constraints that make construction more difficult or require more

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[176] Id. at 102.

[177] Exhibit 52. Route 9 Crossing, O'Brien & Gere Engineers, Inc., March 2003.

sophisticated methodologies, do not render this route not constructable. Industrial or other dischargers of pollutants into the air or water are required to use sophisticated methodologies or more difficult means of reducing or eliminating certain levels of pollutants to meet national and State air or water quality objectives in certain areas. Like these other industries, Millennium can use more sophisticated construction techniques to site this pipeline in a manner that is consistent with the CMP.

b. Route 8: Electric Transmission Right-of-Way Bowline to Lovett; Lovett Power Plant Crossing; Electric Transmission Right-of-Way Indian Point to Rte. 9

This route alternative would begin in Garnerville, west of the Bowline facility. Millennium could add a pipeline extension from Bowline northward along the Orange and Rockland right-of-way to the Lovett facility. The river crossing and the eastern route connection to rejoin Millennium's proposed route is the same as Route 7, above.

Relying only on a visual survey, Millennium claims the route alternative is not buildable due to co-located electric towers, an existing gas pipeline, and encroaching subdivisions. As DOS has noted previously, illegal encroachments on a utility right-of-way can be remedied and do not render an alternative infeasible.

There is a 16 inch pipeline that appears to run between the transmission towers at Old Route 210. Consolidated Edison indicates that its practice to address requests for use of right-of-way on a case-by-case basis. Millennium has offered no proof that the specific requirements of Orange and Rockland or the location of existing lines and other underground installations associated with the power lines make this route infeasible. The right-of-way is approximately 100 feet wide, and the pipeline could be located between the towers in an area not occupied by

the 16 inch line.[178]

The only criteria specified for separation of co-located pipelines is found in 49 CFR Part 192, Transportation of Natural and Other Gas By Pipeline: Minimum Federal Safety Standards, which provides that the minimum clearance from any other underground structure not associate with the transmission line is 12 inches in any direction. Underground clearance requirements for a specific pipeline operator may be greater than 12 inches depending upon the operator's Operation and Maintenance Procedures. FERC standards do not recommend a specific spacing between pipelines.

O'Brien & Gere not that pipelines have, for many years, been designed and installed with clearances of less than 25 feet where right-of-way constraints have made it necessary or prudent to do so. Construction techniques, including trench shoring would be required to a greater extent in certain areas as the line separation is reduced. When there is insufficient space to place spoil between the lines, or to operate equipment safely over an existing line, the spoil may be placed on the working side and spread to allow equipment to work over the spoil storage area. In some cases the spoil may have to be transported to a separate storage site and returned when the pipe is in place. The drag section technique is routinely used in urban areas where right-of-way width is limited. In this method, the spoil from the trench excavation can be placed on the working side of the trench and spread evenly to allow the trackhoes and sideboom tractors to walk over it. The pipe section is welded up in the rear where the pipe has already been installed and backfilled then lifted and walked forward and lowered onto the trench. The trench must deepened and widened where the new section is welded on.

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[178] Exhibit 53. Photo Sheet, Orange and Rockland Right-of-Way, March 2003.

Installation of a pipeline between or in close proximity to electrical transmission line towers is possible by using industry standards, special design, and construction safety procedures, as well as the cooperation of the utility company. Such installations are becoming more common in congested areas. The technology exists to construct and maintain the line safely. Construction in the right-of-way may require boring to install the pipe in the space between the adjacent towers. The Standard Recommended Practice-Mitigation of Alternating Current and Lightning Effects on Metallic Structures and Corrosion Control Systems published by NACE is a standard for the design and installation of the protective systems.

As noted in the discussion of Route 7, instead of proceeding to the Lovett crossing, the pipeline could also cross the river at the Algonquin crossing by leaving the Orange and Rockland right-of-way at Buckberg Road.

DOS has refuted Millennium's contention that the eastern potions of this alternative are not constructable in the above discussion of Route 7. O'Brien & Gere estimated a difficulty factor of 2.1, which results in a net increase of $14.6 million. For a project of this magnitude, and with the corporate resources available, as noted previously, this increased cost is reasonable. It also avoids permanent adverse impacts with the Haverstraw Bay Significant Coastal Fish and Wildlife Habitat.

Route 8 is a feasible, available, and reasonable alternative and Millennium has failed to demonstrate otherwise. The alternative is consistent with the CMP.

4. Electric Transmission Right-of-Way Crossing

This fourth river crossing lies just north of the Lovett Power Station crossing and south of the Algonquin Pipeline right-of-way crossing. As noted in our Initial Brief, this crossing was not

assessed in the project FEIS. [179] The pipeline could come ashore about one and one-half miles south of the LaFarge site at the Consolidated Edison site. Millennium has not demonstrated that it is not a feasible, available, and reasonable alternative.

a. Route 9: Palisades Algonquin Right-of-Way, South Mountain to Lovett; Electric Transmission Right-of-Way River Crossing; Electric Transmission Right-of-Way Indian Point to Rte. 9

This route alternative would intersect with Millennium's proposed route in the vicinity of South Mountain, using the Palisades Interstate Parkway right-of-way north to the Algonquin right-of-way. It would follow the Algonquin right-of-way to Route 9W and proceed south to the electric transmission right-of-way crossing. On the east side of the river, the pipeline would follow the electric transmission lines near Buchanan, and follow that right-of-way to Millennium's proposed route in the Town of Cortlandt.

Millennium claims that this alternative is "unconstructable and entails significant adverse impacts to the PIP; thus is not an available or reasonable alternative."[180] Millennium refers to its discussion of Route 1 to support this contention. However, Millennium later notes that "...this portion of the route along the PIP appears to be constructable..."[181]

DOS has clearly refuted Millennium's far-fetched assessment of possible impacts to the Palisades Interstate Parkway which result from its exaggerated construction and siting requirements. DOS and O Brien & Gere have shown that the pipeline can be constructed in a manner that avoids or minimizes impacts through siting, accepted construction techniques, and revegetation of all but a ten foot corridor over the pipeline. Where Millennium would

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179 DOS Initial Brief at 100

180 Millennium Reply Brief at 103.

181 Id. at 104.

unnecessarily and permanently denude 33 acres, DOS has shown that only about 13 acres would be affected using a more conservative and constructable working corridor of 30 feet, and only 4.4 acres would be left permanently open. With careful siting and restoration of vegetation, impacts on adjacent uses would be minimized.

Contrary to Millennium's claim,[182] there is room to install the pipeline in the Algonquin right-of-way corridor between the Algonquin line and the electric transmission line in areas where the pipeline and power lines run parallel. O Brien & Gere's field review of The Cliffs at Stony Point subdivision determined that there are seven relatively new homes in close proximity to the Algonquin lines immediately east of Palisades Parkway. The homes are set back sufficiently from the right-of-way to allow installation of a new line along the edge of the Algonquin right-of-way. The line can be installed in a reduced width corridor (30 feet) adjacent to the homes using drag sections.[183]

As an alternative, O Brien & Gere note that following the electrical transmission lines south to the Parkway from the point where it splits off on the eastern side of the Stony Point subdivision would allow a greater distance from the homes. The route could be used with the cooperation of Algonquin to lessen the spacing between lines from 25 feet to 15 feet in congested areas and crossing over the right-of-way at several locations to avoid cutting slopes below homes. There appears to be ample room to lay pipe between the Algonquin line and the electric transmission lines in areas where the pipeline and power lines run parallel.

Millennium states that "[T]he western approach is difficult, however. Workspace is

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[182] Id. at 105.

[183] Exhibit 54. Photo Sheet, Algonquin Right-of-Way, "Cliffs at Stony Point," March 2003.

limited, and a narrow road and railroad must be crossed at water s edge. A significant amount of grading would be required in this area."[184] Millennium has not demonstrated the western approach is infeasible or unavailable; it is merely "difficult." Other portions of Millennium's proposed route through developed areas surely also present difficulties that Millennium's engineers have resolved, when it served their interest to do so.

DOS has refuted Millennium's opinion that the eastern portion of the alternative route is not feasible in the discussion of Route 7. Millennium concedes that "[T]he approach to the eastern shore has adequate workspace, and the transition from the river through the shoreline and to landfall is good."[185] DOS identified this route as one that had not been considered in the FERC FEIS and one which would be consistent with the CMP. DOS wholeheartedly agrees with Millennium in this instance. This area is an alternative crossing of the Hudson River.

Route 9 is a feasible, available, and reasonable. It is consistent with the CMP. Millennium has failed to demonstrate otherwise.

5. Algonquin Right-of-Way River Crossing

The Algonquin right-of-way crossing is the northernmost crossing alternative. As noted in DOS's Initial Brief, this route not only avoids the highly sensitive Haverstraw Bay Significant Coastal Fish and Wildlife Habitat, it also has the advantage of traveling adjacent to existing rights-of-way for about 99% of its route.[186] Millennium fails to demonstrate that this crossing and its east and west approaches are not feasible, reasonable, and available.

a. Route 10: Palisades Algonquin Right-of-Way, South Mountain to Lovett; Algonquin

184 Millennium Reply Brief at 104
185 Id. at 104.
186 DOS Initial Brief at 101

River Crossing; Algonquin Right-of-Way to Electric Transmission Right-of-Way (Buchanan) to Town of Cortlandt

This alternative intersects with Millennium's proposed route in the vicinity South Mountain. The alternative uses the Palisades Interstate Parkway right-of-way to the Algonquin Gas Pipeline right-of-way, as described in Route 9. It follows the Algonquin right-of-way to the river. On the east side of the river, the alternative route would follow the electric transmission lines at Buchanan, as described in Routes 7, 8, and 9. Millennium has not shown that this alternative is not feasible, available, and reasonable.

A river crossing at the Algonquin right-of-way is technically feasible. The west shore river entry can be made by directional drilling, provided that the underlying soil is found to be suitable for directional drilling. Millennium has not demonstrated that the underlying materials cannot be directionally drilled. Drilling can proceed from a site immediately south of the Algonquin crossing, continuing below the road and railroad tracks and exiting in the river. A site roughly 120 feet by 120 feet can be prepared with some grading into the hillside.[187] The remainder of the crossing can be excavated to a landing point on the east bank of the river approximately centered on the abandoned quarry on the Consolidated Edison property. The lay barge method similar to that proposed by Millennium for Haverstraw Bay can be used for laying the open trench section and preparation of the drilled section. The eastern shore approach slopes gradually from the quarry to the water line. The pipeline can be routed around the south side of the old quarry and back north to reconnect with an existing Consolidated Edison power line right-of-way.

[187] Exhibit 55. Photo Sheet. Algonquin right-of-Way River Crossing Staging Area, March 2003.

O'Brien & Gere estimated a difficulty factor of 2.1, which results in a net increase of $19.4 million. For a project of this magnitude, and with the corporate resources available, as previously noted, this increased cost is reasonable. It also avoids permanent adverse impacts to the Haverstraw Bay Significant Coastal Fish and Wildlife Habitat.

DOS has refuted Millennium's opinion that the western and eastern portions of the alternative route is not feasible in the discussion of Route 7 and Route 9. This alternative is feasible, available, and reasonable, and Millennium's arguments do not show otherwise.

VI. DOS PROPERLY CONSIDERED THE ALTERNATIVE TO TERMINATE THE PIPELINE AT BOWLINE

In its decision, DOS identified terminating the pipeline at Bowline as an available alternative. In addressing DOS s alternative to terminate the pipeline at Bowline on the west side of the Hudson River, Millennium indicated in its Initial and Reply Briefs that the alternative was not reasonable or available because the primary and essential purpose of the line is to serve the New York City market to address critical natural gas needs in New York City, and without the connection to New York City the pipeline would be uneconomic.

The Millennium pipeline would bring natural gas imported from Canada along an existing pipeline route across the State, until its terminus in Haverstraw. It would replace a 24 inch pipe in the existing Columbia Pipeline right-of-way with 36 inch pipe, thus increasing its capacity to serve new and existing customers. Three hundred ninety miles of the 420 mile long pipeline would be replaced or constructed on the west side of the Hudson River. FERC s Order points out that the majority of Millennium's precedent agreements are with gas marketers on

the west side of the Hudson River, already served by the Columbia Pipeline.[188]

Millennium states that FERC, in the FEIS dated October 2001, noted that the NYSPSC had supported the project because of the need for more gas pipeline infrastructure to meet New York City s energy requirements. In September 2002, the New York State Energy Plan assessed New York s natural gas needs. One of the Energy Plan s conclusions, in assessing natural gas pipeline capacity to meet electric generation needs in the downstate area until 2005, was:

> If no post-2003 pipeline expansion projects are built, the existing gas and oil systems will be adequate to meet all generation scenarios.[189]

While the Energy Plan notes that [T]he demand for natural gas is expected to expand significantly, and that [M]ore pipeline capacity will be needed to meet the increased demand, it also noted that a total of 11 projects that have been proposed or are operational to serve the New York City market.[190]

In the Reply Brief, Millennium repeats its argument that without the portion of the project from Bowline on the west side of the river, across the Hudson River through Haverstraw Bay and through Westchester County to New York City, the project would not be commercially viable, because building 390 miles of pipeline to deliver 50% of the pipeline s capacity would not permit the recovery of costs.

As DOS pointed out in its Initial Brief:

On page 3-1in the FEIS, FERC notes that if Millennium were not approved, Columbia s

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188 FERC Order at paragraph 67.

189 State Energy Plan p. 3-177.

190 With the departure of the Independence pipeline project, 10 active pipeline projects are proceeding.

> aging Line A-5 would have to remain in service and possibly undergo testing and replacement. It further notes, [I]n all probability, the aging Line A-5 would need to be entirely replaced over time, requiring continued construction along its 222-mile length. ... If the Millennium project were not constructed, Columbia stated that it would continue to monitor Line A-5 for safety and reliability, and would use additional integrity measures as necessary for the monitoring, including hydrostatic testing, smart pigging, inspection digs, and pipe replacement. Millennium s venture into the New York City market appears to meet a corporate financial goal of offsetting the maintenance or replacement costs for Columbia s existing pipeline serving western New York.

Millennium has an available alternative which will allow it to sell the remainder of its pipeline capacity and finance the maintenance or replacement of Columbia s lines. This alternative has the additional benefit of satisfying Millennium s desire to transport natural gas from Canada into the United States to serve the Northeast market. The Northeast market can be served by Millennium without crossing the Haverstraw Bay to reach New York City.

The primary purpose of the Millennium pipeline is to transport gas to customers. Millennium has focused on expansion into the New York City market, which the State Energy Plan has demonstrated will have sufficient capacity until 2005. While Millennium may wish to enter the New York City market, Millennium will be able to service its current customer base on the west side and other customers in the Northeast even if it were to terminate the pipeline on the west side of the river. It would also be able to offer additional natural gas alternatives to consumers in western New York. In fact, Columbia Pipeline recently acquired an Orange and Rockland pipeline spur, which enables it to serve the power facility at Bowline Point. Millennium has not appeared to have fully explored the potential for sale of the 350,000 dk/day that are targeted for New York City to an expanded market at a hub which serves the greater Northeast. This is an option that would introduce new gas supplies, albeit imported from a foreign nation, to the Northeastern United States and allow for protection of critical and

sensitive natural resources, fulfilling a national coastal management objective.

At least 50% of Millennium s 700,000 decatherm capacity is committed to Columbia s existing customer base and by precedent agreement with shippers on the west side of the Hudson River. Millennium could use the remaining 50 % capacity serve the Northeast markets by constructing a spur in western New York that will link up with the market center with the Ellisburg-Leidy Northeast Hub in Pennsylvania, one of the largest natural gas storage area in the western hemisphere.[191] The Ellisburg-Leidy Northeast Hub is one of nation s the principal gas marketing hubs. This relatively convenient hub provides distribution facilities serving the New York City/New England market.[192] While Millennium s pipeline across the Hudson only serves the New York City metropolitan area, a connection to Leidy is really the developing market center not only for New York City, but for the whole Northeast. In establishing the spur, the pipeline could make use of existing utility corridors and rights of way in western New York or other pipelines could expand their other capacity. To mitigate revenues lost from transporting natural gas longer distances to New York City while upgrading the Columbia line on the west

[191] According to Dominion Transmission, Inc., which operates the world's largest underground gas storage system totaling nearly 900 Bcf of capacity in four northeastern states Ohio, West Virginia, Pennsylvania and New York: The Leidy pool, located in north central Pennsylvania, has a capacity of 102 Bcf and operates at a maximum pressure of 4200 pounds per square inch (Psig). Leidy is the second highest naturally pressured gas reservoir in North America. Located adjacent to the Leidy pool, our wholly-owned Greenlick pool is the highest naturally pressured reservoir in North America and operates at a maximum pressure of 4240 Psig. See, http://www.dom.com/about/gas-transmission/storage.jsp

[192] Transcontinental Gas Pipeline Corporation, Pacific Enerchange Tennessee Gas Pipeline, Dominion Transmission Incorporated, CNG Leidy Hub Inc. Company, Columbia Gas Transmission Company, Texas Eastern Transmission, LP (Duke) and National Fuel Gas Supply Corporation all have pipeline connections to the Leidy hub.

side of the Hudson, Millennium could construct a downsized line to the west side of Hudson River. The cost per mile to construct the Hudson River will be much less than if Millennium constructed its original proposal, involving over 30 miles under the Hudson River and through Westchester County, thus helping the overall economics of the project. Therefore all of Millennium s goals can be achieved: sale of its residual capacity; service of the New York City metropolitan area market; and the provision of gas to the Northeast. Additionally, once complete, it would create a direct link between Dawn, Canada and Leidy, both thriving market centers. Finally, Millennium would benefit since siting infrastructure in the congested Northeast is often a costly process and land acquisition costs are high.

V. DOS PROPERLY CONSIDERED THE POTENTIAL IMPACT OF THE PIPELINE TO THE VILLAGE OF CROTON-ON-HUDSON WELLFIELD AND ARBORETUM

In the event the Secretary finds that the pipeline must be routed along the ConEd Offset/Taconic Parkway Alternative, DOS urges the Secretary to find that there are reasonable realignments and alternative construction methods that would reduce or eliminate the adverse impacts to the Croton-on-Hudson Wellfield and Arboretum. Implementing these realignments would, in DOS opinion, allow the project to proceed in a manner consistent with the CZMA with respect to the Croton-on-Hudson segments of the pipeline. These realignments and alternative methods, were described in DOS Initial Brief and detailed fully in the Village s Amicus Brief and O Brien & Gere report, which descriptions DOS incorporates herein for the purposes of specificity.

A. Wellfield Alternatives

In addition to the larger re-routing alternatives discussed above, there are two minor realignment alternatives through the Croton River Gorge that would serve to reduce the most serious areas of impact to the Wellfield by routing the pipeline around the Zone 1 wellhead protection area. Although the use of a route alternative that would avoid the Croton River Gorge altogether would be preferred by DOS, these minor realignments should be considered in conjunction with the use of a route alternative that places the pipeline on the ConEd Offset/Taconic Parkway Alternative route within Croton-on-Hudson.

The Village s engineering consultant, O Brien & Gere, identified two realignments for this area: one route that would circumvent the Wellfield by passing to the northeast of Zone 1, and another route that would cross the Croton River to the southwest of Zone 1. Millennium curtly dismisses both of these realignments with little or no analysis, based largely on Millennium s presumption that the taking of any action to avoid Zone 1 would be unjustified due to the lack of any tangible environmental benefit. Millennium Reply Brief at 112. As described in detail elsewhere in this brief, the Wellhead Protection Program, pursuant to which this Zone 1 area was designated, is a well-established federal and state statutory program designed to protect critical drinking water resources. For Millennium to dismiss outright the value of protecting such a designated area as lacking any tangible benefit is grossly self-serving, and is also consistent with the manner in which Millennium and FERC have similarly dismissed the importance of significant habitat, the coastal zone and, indeed, every protected area that happens to stand in Millennium s way.

Nothing in Millennium s Reply Brief indicates that these realignments are not feasible. Millennium states that the northeast realignment would require installation of the pipeline down

the steep side slopes of the Croton River Gorge, but does not state unequivocally that it would not be possible to construct the pipeline in this area. Indeed, the current route would require Millennium to build across steep slopes not only in the Gorge but throughout Westchester County, and Millennium provides no indication of why merely moving the route a small distance to the north of Zone 1 presents such an insurmountable challenge. Millennium also argues that FERC and NYPSC have sought to limit crossing under the Consolidated Edison power lines, but such crossings are not prohibited, were not viewed as a significant impediment by O Brien & Gere, and should in any case be a relatively simple task given the increased height of the power lines as they cross the Croton River Gorge.

Millennium s arguments against the realignment that would route the pipeline to the southeast of Zone 1 are similarly unpersuasive. Millennium cites the narrow and winding nature of the roads, and the closure of these roads for weeks or months. Here again, Millennium does not state that it would be impossible to use this realignment, only that it might cost more, for example, to use manufactured bends, or that it would inconvenience local residents for a period of time. These are not valid or convincing reasons for rejecting an alternative that would serve to avoid the risk of serious impacts to the water supply for the entire Village of Croton-on-Hudson.

B. Arboretum Alternatives

The preferred alternative for the Arboretum would be for Millennium to implement one of the other route alternatives described herein that would re-route the pipeline entirely outside of the upland portions of Croton-on-Hudson. However, in conjunction with the use of the ConEd Offset/Taconic alternative, the Secretary should consider realignments which would move the

pipeline route further to the north and entirely outside of the forested portions of the Arboretum, thus minimizing the level of direct and indirect impacts to the Arboretum and wetland. Millennium should be required to place the pipeline completely within the Consolidated Edison right-of-way, either to the south of the Consolidated Edison electrical transmission towers, or to the north of the towers and entirely within the right-of-way. NYSPSC has already indicated a willingness to move the pipeline closer to the Consolidated Edison power lines, suggesting that the former realignment should be possible. Placing the pipeline to the north of the transmission towers and entirely within the right-of-way was the basis of Millennium s original proposed route to FERC. As such, Millennium cannot now argue that such a route would be impossible. Millennium did not respond to either of these potential realignments in its Reply Brief.

O Brien & Gere also indicates that Millennium could cross under the Arboretum using the horizontal directional drilled (HDD) method of construction. This would place the pipeline 20 to 40 feet below the surface for a distance of 1,000 feet, thus avoiding any disturbance to the surface of the Arboretum. Millennium cites apparent staging area limitations associated with this method, and also makes vague reference to concerns purportedly expressed by Consolidated Edison and NYSPSC regarding the use of the HDD method of installation in this area. If Millennium has actually investigated the availability of staging areas and consulted with Consolidated Edison or NYSPSC regarding the use of HDD to cross the Arboretum, Millennium should submit the documentation of these investigations to the record. The information submitted to date, however, does not provide an adequate basis for rejecting the availability of a construction method that would avoid, in DOS opinion, the primary adverse impacts of the open cut trench method to the Arboretum and its wetland.

VI. THE THRUWAY ALTERNATIVE WILL AVOID THE BRYN MAWR SIPHON

At a meeting on February 21, 2003, Millennium, NYCDEP and the U. S. Army Corps of Engineers representatives reportedly discussed three alternate pipeline routes which avoid the Bryn Mawr Siphon and one beneath the Bryn Mawr Siphon.[193] The four alternate crossings are: 1) the New York State Thruway alternative which connects to the FERC-approved route south and east of the Catskill Aqueduct, which in this location is a pressure tunnel; 2) a second New York State Thruway route where the pipeline would cross the Thruway above the Bryn Mawr Siphon and proceed along the western side of the Thruway for an extended distance; 3) a crossing at Palmer Road; and 4) a tunnel 100 feet below the Bryn Mawr Siphon.

According to a recent letter from NYCDEP Deputy Commissioner Michael A Principe, Ph.D., the City prefers the first New York State Thruway alternative among the alternatives which avoid the Siphon.[194] The City is adamantly opposed to any type of crossing of the Bryn Mawr Siphon. Specifically, the City said:

> DEP remains opposed to building the Millennium Pipeline over the Bryn Mawr Siphon. Whether it is built on the ground surface or 5 feet above the earth, its proximity to the Catskill Aqueduct imperils the water supply of the City of New York. Despite several years of effort, Millennium has never presented DEP with any engineering analysis that demonstrates that a pipeline could be built safely across the Bryn Mawr Siphon.
>
> DEP prefers that the Millennium avoid the Bryn Mawr Siphon area altogether and build the pipeline along the New York State Thruway. DEP prefers this location because the Aqueduct in this area is a pressure tunnel, built in bedrock, and located approximately 95 feet below the Thruway. A natural gas pipeline built at land surface just beneath the

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193 Telephone conversation between Mark P. McIntyre, Assistant NYC Corporation Counsel, Environmental Law Division and William L. Sharp, Principal Attorney, New York Department of State March 24, 2002.

194 See Exhibit 45. Letter from NYCDEP Deputy Commissioner Michael A Principe, Ph.D. to Richard Hall, Jr. Acting Facility Project Manager, Millennium Pipeline Project, dated March 31, 2002.

Thruway in this area would pose less [risk] to the City s water supply.

> At last month s meeting, Millennium stated that the Thruway alternative was not feasible. DEP believes the pipeline can be built along the Thruway and, unlike the Bryn Mawr Siphon, would not imperil the integrity of the Catskill Aqueduct. DEP is ready to assist Millennium in developing this alternative.

Under the Thruway Alternative, the pipeline would cross under the New York State Thruway, proceed down its west side for approximately 350 feet , and then cross back under the Thruway, avoiding the Bryn Mawr Siphon entirely. The Thruway alternative is approximately 650 feet long. In this area, immediately southwest of the Bryn Mawr Siphon, the Catskill Aqueduct is a pressure tunnel, built in bedrock, 95 feet below the land surface. If the pipeline route were modified to follow this Thruway alternative, the pipeline would be 90 feet above the Aqueduct, and pose no risk to the City s water supply. As this alternate pipeline route would protect the City s water supply, the Thruway alternative is consistent with the state s Coastal Management Program.

In its Reply Brief, Millennium contends that the Thruway alternative is unavailable because of alleged physical and technical constraints.[195] These are self-serving assertions that Millennium has not supported with engineering drawings and analysis. The Thruway alternative is both an available and reasonable alternative to the Bryn Mawr Siphon.

The Thruway alternative is available because Millennium, despite its assertions to the contrary, can route its pipeline along the Thruway alternative. Millennium cites three reasons for the alleged unavailability of the Thruway alternative. First, it contends that the proximity of a

[195] Millennium Reply Brief, p. 116.

rock wall on the Thruway s western edge prevents Millennium from building a receiving pit.[196] Millennium fails to explain why it cannot remove a portion of the rock wall to create enough room for a receiving pit on the Thruway s west side. Second, Millennium asserts that the Thruway alternative is unavailable because it requires a bore length of 600 feet when it contends that the maximum bore length is only 250 feet.[197] Even if Millennium can demonstrate why the maximum bore length is limited to 250 feet, it has not explained why Millennium cannot dig a sufficient number of shafts along the Thruway alternative so that no bore section exceeds 250 feet. Finally, Millennium contends that Thruway alternative is not available because it allegedly cannot bend its pipeline, after it crosses under the Thruway a second time, to reconnect to the FERC-certified route because of an apartment complex and the Con Edison transmission tower. Yet, Millennium has produced no engineering drawings or calculations to support its assertion. DOS firmly believes a pipeline can be laid around the apartment complex and Con Edison transmission tower and reconnect to the FERC-certified route just east of the Bryn Mawr Siphon. The Thruway alternative is available because it can be built and achieves Millennium s essential purpose of delivering natural gas to the New York City metropolitan region.

The Thruway route is also a reasonable alternative to the Bryn Mawr Siphon. By eliminating the threat to Catskill Aqueduct of building the pipeline over the Bryn Mawr Siphon, the Thruway route would safeguard the City s water supply and thus offer a significant environmental benefit. But the incremental cost of safely crossing the Catskill Aqueduct by building along the Thruway route is not a significant one when measured against the pipeline s total construction cost or Millennium s anticipated project revenues. The incremental

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196 Millennium Reply Brief, p. 115.

197 Id. at p. 115.

construction cost of diverting the Millennium pipeline under the New York State Thruway is minor when measured against the environmental benefit of removing a serious threat to the integrity of the nation s largest municipal water supply. The Thruway alternative is an available and reasonable alternative that, unlike the Bryn Mawr Siphon route, is consistent with state s coastal management plan. The Secretary should order Millennium to develop the Thruway alternative.

VII. THE MILLENNIUM PIPELINE IS NOT NECESSARY IN THE INTEREST OF NATIONAL SECURITY

The second statutory ground for override of a state objection to a proposed activity is to find that the activity is "necessary in the interest of national security."[198] To make this finding, the Secretary must determine that "a national defense or other national security interest would be significantly impaired if the activity were not to go forward as proposed."[199] Additionally, the Secretary must seek and accord considerable weight to the views of the Department of Defense and other federal agencies in determining the national security interests involved in the project although the Secretary is not bound by such views.

Secretary of Defense Donald Rumsfeld responded to the Secretary s request for comments, through his George Dunlop, Deputy Assistant Secretary of the Army (Civil Works). In that letter, the DOD did not mention any national security interests which would be served by Millennium Pipeline. In fact, DOD made it clear that it has concerns about the Millennium pipeline route. To quote from that letter, the Department of Defense s

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198 16 USC 1456(c)(3)(A),(B);(d).

199 15 CFR 930.122 (emphasis added).

> ... concerns are similar [to] concerns being expressed by the New York Department of State (DOS) regarding the environmental impacts of the proposed Hudson River crossing. Additionally, the District Engineer noted that alternatives recommended by DOS that would avoid the necessity for crossing the Hudson River could largely address his concerns.

The Department of Defense did not view the Millennium Pipeline as implicating the nation s security. It should also be noted that the new Department of Homeland Security did not submit any comments during the public comment period on this issue, possibly because that agency did not see national security implications.

Secretary of Commerce consistency decisions make clear that general statements from federal agencies about national security, without more specific information, will not be considered.[200] Millennium attempts to make a national security argument based upon the staff comments from the Energy Department. At one point in its comments, DOE staff argued that the national security of the country would be helped by the Millennium project because it provides a domestic natural gas supply.

It is important to again recognize that Millennium will be importing natural gas from Canada into the United States. Millennium s project would not reduce but in fact would increase our dependence on important gas supplies from foreign nations and would increase the nation s trade deficit. It would not advance our national security interests.

In order to decide Ground II, the Secretary must give considerable weight to the views of the DOD and based on DOD s comments, the Secretary should not override on the grounds of national security.

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[200] Id. See also Decision and Findings in the Consistency Appeal of Amoco Production Company from an Objection by the Division of Governmental Coordination of the State of Alaska, U.S. Secretary of Commerce (July 20, 1990) at 56-58.

As noted in DOS s Initial Brief, to date, the Secretary has not relied on national security grounds to override a state objection including those involving production of natural gas supplies.[201] The Millennium Pipeline, which proposes importing natural gas from a foreign nation, is not the kind of activity that would qualify for such consideration.

VIII. CONCLUSION

The DOS objection was timely because it was issued within the time period agreed upon by DOS and Millennium. Millennium s appeal on the issue of timeliness should be rejected.

Millennium s Federal consistency appeal should be dismissed on the merits because the project is neither consistent with the objectives or purposes of the CZMA, nor necessary in the interests of national security.

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[201] Id.