

**BEFORE THE UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION**

Algonquin Gas Transmission LLC) Docket No. CP14-96

**PETITION FOR REHEARING OF COALITION OF ENVIRONMENTAL AND
COMMUNITY ORGANIZATIONS, IMPACTED LANDOWNERS AND
MUNICIPALITIES FOR REHEARING, OR IN THE ALTERNATIVE,
RECONSIDERATION OF ORDER ISSUING CERTIFICATE FOR ALGONQUIN
INCREMENTAL MARKET (AIM) PROJECT**

I. OVERVIEW AND CONCISE STATEMENT OF ERROR

Pursuant to the Natural Gas Act, 15 U.S.C. §717r(a) and Rule 713 of the Commission's Rules of Practice and Procedure, an informal and unincorporated coalition of environmental and community organizations, and impacted landowners and municipalities in New York, Rhode Island and Massachusetts¹ hereby file this timely request for rehearing of the Federal Energy Regulatory Commission's March 3, 2015 decision issuing a certificate to Algonquin Gas Transmission, LLC (Algonquin) pursuant to Section 7 (c) of the Natural Gas Act to construct and operate the Algonquin Incremental Market (AIM) Project, consisting of approximately 37.4 miles of pipeline and related facilities in New York, Connecticut and Massachusetts, and an additional 81,620 horsepower of compression at sites in New York, Connecticut and Rhode Island.² Located in close proximity to a nuclear power plant and an active quarry, the AIM project will endanger millions of residents in surrounding communities while forcing them to absorb the added burden of higher property insurance and diminished property values. The AIM pipeline segment – which runs through wetlands, streams, parkland

¹ Further description of the Intervenor is provided in Part III, *infra* and listed in the table attached as Exhibit 1.

² *Algonquin Gas Transmission LLC, Order Issuing Certificate and Approving Abandonment*, 150 FERC ¶61,163 (March 3, 2015) (“Certificate Order”)

and heavily forested terrain – will remove large swaths of trees and destroy habitat and recreational areas, while the six compressor station expansions will release toxic emissions and degrade regional air quality. Moreover, the Commission sanctioned these harms based on an incomplete record -- devoid of meaningful public participation required by the National Environmental Policy Act (NEPA) or outreach to lower income or minority communities, and lacking necessary state authorizations such as a Section 401 water quality certificate.

Compounding these errors, the Commission evaluated the AIM project as a stand-alone capacity expansion rather than as the gateway piece of a comprehensive infrastructure build-out comprised of two other geographically, functionally and temporally connected segments – the Atlantic Bridge and Northeast Access Project – which together span the East Coast from New York through Maine, transporting shale gas to the Northeast and eventually markets overseas. By failing to consider the entire project as a whole, or at least evaluate the cumulative impacts associated with these related developments, the Commission concealed the project’s environmental significance and failed to adequately analyze its environmental impacts, in violation of the National Environmental Policy Act.

For all of these reasons, the Commission’s Certificate Order is arbitrary and capricious, unsupported by substantial evidence and inconsistent with the “present or future public convenience and necessity” under the Natural Gas Act. Accordingly, the Commission must grant the Coalition’s request for rehearing. In addition, the Coalition urges the Commission to stay the certificate, or at least, Algonquin’s ability to commence tree removal or ground-breaking activity or invoke eminent domain until this rehearing request has been resolved.

II. STATEMENT OF ISSUES

Issue No. 1: Did the Commission's segmentation of review of the AIM project from the Atlantic Bridge Project PF15-12 violate (a) the National Environmental Policy Act, 42 U.S.C. § 4321 *et. seq.* and CEQ regulations by failing to consider geographically, functionally, temporally connected and dependent project units, (b) the public interest standard of Section 7 of the Natural Gas Act, 15 U.S.C. § 717f, by ignoring the impact of imminent future development on the public necessity and convenience of the AIM project and (c) the Commission's Certificate Policy Statement under which the Commission must find a need for the project.

Yes. The Commission violated NEPA and the CEQ regulations by segmenting review of the AIM project from the Atlantic Bridge Project, in light of record evidence – including common Project sponsors and customers, similar development timelines, overbuild of AIM facilities in anticipation of future expansion and the New York DEC's decision to treat the projects as a single unit which demonstrate a geographic, functional, temporal and interdependent relationship between the projects. Accordingly, the Commission should have treated the projects as a single unit for environmental review under *Delaware Riverkeeper Network v. FERC*, 753 F.3d 1304 (D.C. Cir. 2014).

Second, the Commission's failure to take into account the impact of the Atlantic Bridge Project on its evaluation of the public convenience and necessity of the AIM Project violates the Natural Gas Act and the requirement that the Commission consider the impact that future expansion may have for the cost or need of the immediate proposal. *City of Pittsburgh v. FPA*, 237 F.2d 741 (D.C. Cir. 1955).

Segmentation of the project is also incompatible with Commission's Certificate Policy Statement, *Certification of New Interstate Natural Gas Pipeline Facilities*, 88 FERC ¶61,227 (1999) which requires the Commission to find a need for the project, and discourages overbuilding and duplication of facilities. Without a big picture view of the

project as a whole, the Commission could not make the required findings under the *Certificate Policy Statement*.

Issue No. 2: Did the Commission violate the Clean Water Act, 33 U.S.C §1341(a)(1) (Section 401) by granting the certificate under the Natural Gas Act before several state agencies issued a Section 401 water quality certificate?

Yes. Section 401 of the Clean Water Act, 33 USC § 1341 makes state certification of compliance with water quality standards a condition precedent to grant of any federal license. As of March 2, 2015, the date the Certificate Order issued, New York, Massachusetts and Connecticut had not yet acted on Algonquin's respective applications for a water quality certificate. For that reason, the certificate must be vacated. *See City of Tacoma v. FERC*, 460 F.3d 53, 68 (D.C. Cir. 2006) (holding that "without a required [401 certification], FERC lacks authority to issue a license"), *S.D. Warren Co. v. Mn. Bd. Of Env'tl. Prot.*, 547 U.S. 370, 374 (2006) (preserving state authority to issue water quality license for federal project).

Issue No. 3: Did the Commission violate NEPA, CEQ regulations and EPA guidance by failing to consider the cumulative impacts of (a) reasonably foreseeable infrastructure, such as the addition of the Access Northeast Project; (b) Marcellus Shale development ; (c) greenhouse gas and climate change and (d) methane emissions and radon associated with the compressor station upgrades, pigging stations and other project facilities?

Yes. Under NEPA and the CEQ regulations, the Commission must consider cumulative impacts of reasonably foreseeable projects. Failure to do so is grounds for reversal. *Del. Riverkeeper Network v. FERC*, 753 F.3d 1304, 1307 (D.C.Cir.2014) (vacating Commission order based on conclusory statements dismissing cumulative impacts). Moreover, while the Commission requires demonstration of a causal connection between

pipeline facilities and Marcellus Shale development, the facts here -- including Algonquin's admission that one purpose of the project is to transport shale gas as well as overbuild (which will drive additional shale development) -- are proof of such a causal connection. *Central New York Oil and Gas Co*, 137 FERC ¶61,121 (2011), *reh'g. denied*, 138 FERC ¶61,104 (2012), *aff'd sub nom. Coalition for Responsible Growth and Resource Conservation v. FERC*, Docket No. 12-566 (2nd Cir. 2012) (CYNOG). (finding no causal connection between pipeline and shale extraction under facts of this case). Moreover, as EPA pointed out in its comments dated March 2, 2015 the Commission improperly eliminated consideration of fracking impacts from the DEIS based on an artificial – and unsupported – ten mile limit.

The CEQ's recent guidance document on greenhouse gas emissions further reinforces the Commission's obligation to consider the cumulative impacts of Marcellus Shale Production. Specifically, CEQ directs agencies to take into account emissions from activities that have a reasonably close causal relationship to the Federal action, such as those that may occur as a predicate for the agency action (often referred to as upstream emissions) and as a consequence of the agency action (often referred to as downstream emissions) should be accounted for in the NEPA analysis. Finally, cumulative impacts of methane and radon must also be considered, a point also raised by the EPA Comments. *Id.*

Issue No. 4: Given alternatives such as remediating pipeline leakage, or relying on renewables combined with predictions of declining demand for gas -- did the Commission fail to demonstrate a need for the project as required by the Certificate Policy Statement?

Yes. The Certificate Policy Statement requires the Commission to determine a need for a specific pipeline in order to issue a certificate. Here, there is no need for this

particular project in light of reports of declining demand for gas and the logical alternatives that the Commission completely ignored, such renewable resources or remediation of gas leakage – a process which could increase efficiency and gas delivery. *See also* Notice of Proposed Policy on Cost Recovery Mechanisms for Modernization of Natural Gas Facilities, 140 FERC ¶61,147 (2014) (offering rate incentives to pipelines that choose to identify and repair these leaks to increase efficiencies).

Issue No. 5a: Did the Commission violate NEPA by failing to provide meaningful opportunity to comment on unavailable environmental submissions?

Yes. As Exhibit 6 shows, even though the deadline for comment on the Draft Environmental Impact Statement (DEIS) was established as September 29, 2014, Algonquin continued to supplement the record well beyond that date, and even past the January 23, 2015 issue date of the Final Environmental Impact Statement (FEIS).

Issue No. 5b: Did the Commission violate NEPA by failing to review and analyze significant air and significant water issues and impermissibly delegating review to state agencies, such as the New York State Department of Environmental Conservation?

Yes. Instead of analyzing and assessing Clean Air Act and Clean Water Act issues, FERC decided - impermissibly and illegally - to delegate decisions to the New York State Department of Environmental Conservation's permits review. *See also Idaho v. ICC*, 35 F.3d 585 595 (DC Cir 1994) (holding that reliance on judgment of other agencies is in fundamental conflict with purpose of NEPA).

Issue No. 6: Does Environmental Condition 16 violate NEPA by failing to explicitly require the preparation of supplemental environmental review in the event that an alternative method of crossing the waterbody is needed?

Yes. NEPA and the CEQ regulations require the preparation of a Supplemental Environmental Impact Statement (“SEIS”) whenever: “(i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” 40 C.F.R. § 1502.9(c)(1). Here, the Commission’s Environmental Condition 16 addresses the possibility that an alternative method of crossing the body will be necessary and requires the submission of an “alternative crossing plan” before construction. Certificate Order at 61. However, the Condition does not explicitly require environmental review to analyze the potential environmental impacts of the plan. This omission violates NEPA. The EIS considered only the HDD method, which has environmental impacts that differ from other waterbody crossing methods that could be employed if HDD is unsuccessful. FEIS at 2-36. As a result, if Algonquin proposes the use of an alternative crossing method, or proposes to attempt an HDD crossing at a different location, NEPA requires FERC to prepare an Environmental Assessment to determine whether that proposed change constitutes a “substantial change[] in the proposed action that [is] relevant to environmental concerns” and, if it does, to prepare an SEIS. Environmental Condition 16 therefore be revised to require Algonquin and FERC to comply with these environmental review procedures in the event that a failed attempt at the Hudson River crossing requires changes in the project.

Issue No. 7: In concluding that the AIM project will not result in increased safety impacts at the Indian Point nuclear facility, did the Commission (a) fail to address expert testimony as required by the CEQ regulations; (b) fail to support its findings with substantial evidence and (c) notwithstanding its obligation to make findings regarding safety, improperly and prematurely rely on inconclusive safety findings by

the Nuclear Regulatory Commission, which are still evolving?

Yes. Section 1502.24 of the CEQ regulations require an agency to insure the professional integrity of the EIS, which among other things, demands a response to expert input, which the Commission failed to do. *See, e.g., Western Watersheds v. Kraayenbrink*, 632 F.3d 472, 492 (9th Cir. 2010). In addition, Section 717r of the Natural Gas Act requires the Commission to support its findings with substantial evidence. Here, the Commission's conclusions regarding safety, a critical issue, lack substantial evidence and cannot be sustained. *Washington Gas Light v. FERC*, 532 F.3d 928 (D.C. Cir. 2008) (remanding Commission order where substantial evidence does not support conclusion that safety concerns can be addressed before project's in-service date). Nor can the Commission pass the buck, and claim reliance on NRC's similarly unsupported findings to satisfy its obligations under the Natural Gas Act. *See Bangor Hydro v. FERC*, 78 F.3d 659 (D.C. Cir. 1996) (vacating Commission decision requiring licensee to comply with Department of Interior fishway prescriptions lacking in evidentiary support). Finally, even after the Commission's decision, facts continue to emerge that cast doubt on the NRC's initial findings. Because evidence in the record, as well as previously unavailable evidence submitted as part of this rehearing request cast significant doubt on the safety of Indian Point given the proximity of the pipeline, the Commission's order presents too great a safety hazard to satisfy the public interest. Accordingly, the Commission must reverse its order, and continue to consider information that casts doubt on the NRC's conclusions.

Issue No. 8: In concluding, under Environmental Justice requirements, that the AIM project fulfilled its community involvement obligations and will not result in any disproportionately high or adverse environmental and human health impacts on

minority or low-income communities, or Indian tribes, did the Commission fails to support its finding with substantial evidence?

Yes. The absence of any meaningful notice deprived the public of an opportunity to comment. The absence of and meaningful analysis of the AIM Project's impact on population health and other environmental justice issues failed to provide the requisite "hard look" at the proposed pipeline's impact on minority populations. A full analysis of alternative routes and the differential health impacts needs to be provided as part of a rehearing process.

Issue No. 9: Did the Commission fail to support various findings with substantial evidence including its finding that (a) the compressor stations will not adversely impact air quality, (b) the project will not diminish property values or increase the cost of homeowners' insurance [other catchalls]

Under Section 717r(a) of the Natural Gas Act, the Commission must support factual findings with substantial evidence. Here, the Commission's conclusions that the project will not adversely impact air quality or property values are unsupported by substantial evidence in the record and as such, cannot be sustained.

Issue No. 10 - Is the Commission Barred From Conferring Eminent Domain Powers on Algonquin Regarding New York Parkland Until a Full Environmental Review has been Completed?

Yes. The Commission failed to address many environmental issues related to New York Parkland, which makes it impossible to estimate damages or value of the property for purposes of just compensation and eminent domain. As such, the Commission should not allow the exercise of eminent domain?

Issue No. 11 – Did the Commission err by failing to hold a hearing to resolve disputed

issues of material fact?

Yes. The Commission must hold a hearing to resolve disputed issues of material fact. *Cajun Electric v. FERC*, 298 F.3d 173, 177 (D.C. Cir. 1994). Here, the record overflows with issues of materials fact, ranging from whether AIM will support gas export to whether the project is overbuilt to dozens of disputes over the extent of environmental harm.

Issue No. 12: the certificate, or at a minimum, prohibit all tree-removal and ground-breaking activity, and use of eminent domain pending resolution of all pending petitions for rehearing, and issuance of required state permits?

Yes. Irreparable harm –such as taking of property, destruction of trees, wetlands and habitat – will result if Algonquin is allowed to move forward with the project pending the Commissions resolution of this petition for rehearing, and issuance of a water quality certificate by New York DEC. A stay will preserve the status quo and therefore, is in the interest of justice. *Virginia Petroleum Jobbers v. FERC*, 259 F.2d 921 (D.C. Cir. 1958) (listing factors considered in issuance of stay, including whether absence of stay will preclude future relief).

III. THE PARTIES

The AIM project spans four states – New York, Connecticut, Rhode Island and Massachusetts, impacting hundreds of communities and millions of residents along the way. Not surprisingly, the Certificate Proceeding attracted approximately 50 intervenors. Now, more than half of these intervenors seek rehearing, in their respective individual capacity as well as part of an informal, unaffiliated coalition organized to raise common challenges to the Commission’s Certificate Order.

Under Section 717r(a) of the Natural Gas Act, parties aggrieved by a Commission Order may seek rehearing. Here, all of the organizations, municipalities and

individuals joining in this petition for rehearing are parties, having been granted intervention, and are aggrieved for the reasons described in their respective motions to intervene. The parties joining this petition include: the Community Watersheds Clean Water Coalition, Jessica Porter, Sierra Club Lower Hudson Chapter, Food & Water Watch, Stop the Algonquin Pipeline Expansion (SAPE), Better Future Project, Capitalism versus the Climate, Fossil Free Rhode Island, Phil Barden, Eunice Carlas, Paul Dunn, Margaret Sheehan, Paul McIrney, Marla Rivera, Jan White, Mary McMahon, Robert and Audrey Brait, Dan McCann, William and Robin Cullinane, Linder Sweeney, Walter Partridge, Reynolds Hill, Inc. Keep Yorktown Safe, New York, City of Peekskill, New York, Pramilla Malick, Paul Nevins and Rickie Harvey.³ In addition to joining this petition, some of the intervenors have filed separate rehearing requests to address specific issues unique to their interests.

IV. FACTUAL BACKGROUND


A. Algonquin's Application for the AIM Project

On February 28, 2014, Algonquin filed its application to construct the AIM Project. The project is comprised of 37.4 miles of pipeline and related facilities in New York, Connecticut and Massachusetts, as well as the addition of 81,620 horsepower of compression at six stations in New York, Connecticut and Rhode Island. Certificate Order P.4 –P.5. According to Algonquin, the AIM project will provide 342,000 dekatherms (Dth) per day of firm transportation service from an existing recipient point in Ramapo, New York to various points in New England.

³ A full description of each party's interest is set forth in Exhibit 1, attached.

At the time that Algonquin filed its AIM application, planning for the Atlantic Bridge was already underway, with an open season launched on February 4, 2014.⁴ Like the AIM Project, the Atlantic Bridge Project would also provide shippers with an opportunity to obtain firm transportation from Ramapo to delivery to New England. In fact, Spectra, Algonquin's corporate parent, described the Atlantic Bridge project as an "extension of the AIM concept."

Algonquin Incremental Market Expansion




Compliments of Spectra Energy

5

Spectra - Atlantic Bridge

- Extension of AIM concept.
- Unitil Precedent Agreement for 100 MMscf per day.
- Potential 300 MMscf per day.
- In-Service 2H 2017



Atlantic Bridge Open Season

6

The Atlantic Bridge Open Season closed on March 31, 2014. Four months later, by letter dated June 2014, Spectra outlined for the New England States Committee on Electricity (NESCOE) its Atlantic Bridge expansion plans,⁵ and on July 1, 2014, formally announced the Access Northeast pipeline which would "complete the AIM/ Atlantic

⁴ Spectra Open Season Announcement for Atlantic Bridge Project, online at <http://www.spectraenergy.com/content/documents/Projects/Atlantic-Bridge-Open-Season.pdf>; see also Exhibit 2, Timeline of Spectra's development of Northeast infrastructure.

⁵Spectra Letter to NESCOE (June 27, 2014), online at http://www.nescoe.com/uploads/Spectra_EnhancingElectricReliabilityinNE_27Jun2014.pdf; See also Exhibit 2 (Table of Spectra Development).

Bridge.”⁶ As shown on the slide below, gas from Marcellus entering the system would flow north via AIM and Atlantic Bridge, eventually making its way through Northeast Access and into Canada for export via an LNG terminal.



By the time the Commission released the draft EIS on August 12, 2014, it was apparent that the AIM project was merely the first piece of a far larger and more expansive project than described in Algonquin’s application. Indeed, by September 2014, Spectra was already marketing all three projects in a proposal to the Maine Public Utilities Commission.⁷

⁶ See Exhibit 2, Timeline; also *Spectra Atlantic Project to Pipe Marcellus to New England* (January 2015).

⁷ See Spectra Proposal submitted to Maine Public Utilities Commission (September 29, 2014), online at

B. Environmental Review

Meanwhile, having hastily filed the AIM application in February 2014, presumably to avoid overlapping with the Atlantic Bridge and Northeast Access projects, not surprisingly, Algonquin's application was woefully incomplete – particularly for a project that had gone through a six-month pre-filing process. Over the next six months, Algonquin responded to several staff requests for additional information and submitted supplemental filings once or twice a month, up until the Commission's notice of a Draft Environmental Impact Statement ("DEIS") released on August 12, 2014. Certificate Order ¶ 53. During this February to August 2014 time frame, Algonquin did not take steps to amend its certificate application for the AIM project to include both Atlantic Bridge and Northeast Access projects, even though, by this time, it was known that they would be developed.

Like Algonquin's project application, the DEIS was riddled with data gaps.⁸ For some of the missing information, the Commission allowed Algonquin to file it after the September 29, 2014 deadline for comments on the DEIS, thus depriving parties of a

http://www.spectraenergy.com/content/documents/Projects/NewEngland/Maine_Public_Uilities_Commission_Proposal_FINAL.pdf.

⁸ As described in SAPE's letter of September 29, 2014, gaps included (1) insufficient analysis of impacts to vernal pools in New York (Section 4.4.3.2); (2) Non-saturated wetlands not identified (Section 4.4.4); (3) Compensatory Mitigation Plan not prepared (Section 4.4.5); (5) Tree survey of Harriman State Park not complete (Section 4.6.1.5); (6) Alternatives for the Hudson River crossing not prepared (Section 4.4.3); (7) Final plans for the Catskill Aqueduct crossing not developed (Section 4.3.2.1); (8) Plans for to address trench dewatering not developed (Section 4.3.2.6); (9) Survey for the presence of the Indiana bat not complete (Section 4.7.1.2); (10) Survey for the presence of the northern long-eared bat not complete (Section 4.7.1.3); (11) Incomplete information on impacts to migratory birds (Section 4.7.2); (12) Incomplete information on impact to bald eagles (Section 4.7.3); (13) Survey for the presence of Timber Rattlesnakes not complete (Section 4.7.5.1); and (14) NYSDOS approval of consistency assessment for Hudson Crossing (Section 4.8.4.1).

meaningful opportunity to participate. In fact, as Exhibit 6 shows, the bulk of Algonquin's submissions were made *after* the DEIS comment deadline leading commenters to ask the Commission to prepare a supplemental DEIS (which the Commission refused to do). Notwithstanding the minimal evidence in the record, the DEIS concluded that the project -- if constructed and operated in accordance with staff's recommended conditions, and yet-to-be-issued state water and air quality permits -- would not have significant environmental impacts.

On January 23, 2015, the FEIS was released, reaching largely the same conclusions as the DEIS, still without adequate information, and based on assumptions that Algonquin would incorporate the measures required in state water quality certificates. *See, e.g.*, FEIS at 5-6; *see also* Certificate Order P. 73. The FEIS also found that the AIM project was not improperly segmented because it had stand-alone value to meet the needs of precedent customers and because Algonquin had not yet filed applications for a certificate for the Atlantic Bridge or Access Northeast Project. FEIS 1-5. Even after the FEIS issued, Algonquin continued to file supplemental information. *See* Exhibit 6 Table.

C. Indian Point Issues

Just as the scope of Spectra's proposal has evolved throughout the proceeding, so too did issues related to the impact of the AIM project on the Indian Point station a nuclear powered generating facility owned by Entergy and located in the Village of Buchanan, New York. Unfortunately, neither the Certificate Order, nor the environmental reviews that preceded it fully convey the severity of the risks associated with the AIM project due to its proximity to the nuclear station.

At present, Algonquin's existing pipeline right-of-way crosses through the Indian Point property on the east side of the Hudson River Crossing. Significantly, the AIM project proposes a new right-of-way which includes installation of a high pressure 42-

inch pipeline across the Hudson River, south of the existing right-of-way. This is a significant change as it has the potential more than double existing capacity and substantially increase risks to surrounding residents. This segment of the pipeline would still include construction right-of-way within the Indian Point facility property, and the east side of Algonquin's proposed HDD crossing of the Hudson River would include a staging area also located on the Indian Point property. All told, the AIM Project would cross the Indian Point property for a total of 2,159 feet from about mileposts MPs 4.4 to 4.9. The Project would require about 2.4 acres of new permanent easement on the IPEC property, along with 1.9 acres of temporary workspace.

The Indian Point lands that would be crossed by the Project are located just 1,600 feet from the nuclear reactors and just 105 feet from vital structures that are necessary to prevent core damage and the major release of radioactive materials to the environment. The proposed AIM Project alignment within the Indian Point property would be located outside the facility's primary security zone. *See* FEIS 4-162 (describing Indian Point facility).

Alarmed by the AIM proposal, Paul Blanch, a professional engineer with more than 45 years of nuclear safety and operation experience formally requested the Nuclear Regulatory Commission (NRC) to perform an analysis to ensure the safety of the addition of a 42 inch pipeline in the vicinity of Indian Point. (See Exhibit 3, Indian Point Documents, Statement of Facts, Table at 1).⁹ Mr. Blanch did not receive a response.

On August 21, 2014, Entergy, the plant operator, submitted its Final Safety Analysis to the NRC and withheld details under 10 CFR 2.390 for security concerns, concluding that the 42-inch pipeline would not jeopardize the safety of Indian Point.

⁹ *See* Exhibit 3, Statement of Facts re: AIM Gas Project and Indian Point.

Entergy's conclusions relied on assumptions that (1) gas flow could be terminated within three minutes in the event of a rupture and that (2) based on a three-minute release, the maximum impact radius would be 1195 feet. (2) *Id.* The Commission has relied on Entergy's report though as discussed below, in *Park V.F.*, *infra*, analysis by experts cast doubt on the accuracy of Entergy's safety conclusions.

Meanwhile, Algonquin continued to move forward with the AIM project. The Commission released the DEIS in August 2014, which inaccurately found that because of the distance of the proposed Project from the Indian Point facility, the route would not pose any safety hazards. On September 27, 2014, Mr. Blanch filed comments to FERC criticizing the DEIS conclusions and urging the Commission have a Hazards Analysis performed by an independent qualified party with oversight by legislators and residents. Mr. Blanch emphasized that failure of the gas line could:

Result in a total loss of cooling to the reactor cores and 40 years of inventory of spent fuel. There are no provisions within the area to combat this event until valves are remotely closed from the company's facility in Houston, Texas. In the meantime, the energy released from a ruptured line in one hour would exceed the energy released from one of the atomic bombs dropped on Japan in 1945.

Following Mr. Blanch's comments, in October 2014, Congresswoman Lowey wrote to the Commission, requesting a safety assessment related to Indian Point. In November 2014, the Town of Cortlandt submitted an analysis by pipeline safety expert Richard Kuprewicz, who criticized Entergy's Safety Evaluation,¹⁰ particularly its assumption of a three-minute response time in the event of a rupture. Mr. Kuprewicz recommended "a more thorough and truly independent safety analysis of the 42-inch pipeline and its possible rupture effects." Kuprewicz Letter (November 3, 2014) at 9.

¹⁰ See Cortlandt Comments (November 2014), submitting Kuprewicz Analysis (November 3, 2014).

Notwithstanding all of these comments, the Commission did not change its conclusions regarding the safety of Indian Point in the FEIS, steadfastly insisting that the NRC's confirmatory analysis of the Entergy Safety Evaluation was acceptable. FERC's FEIS p. 5-17 states, "The NRC concluded that a breach and explosion of the proposed 42-inch diameter natural gas pipeline would not adversely impact the safe operation of the IPEC facility." Nor did the Commission explore the considerable hazards – such as an incident on the order of the atomic bomb – that Mr. Blanch described in his comments. After the FEIS was issued, on February 9, 2015, New York Senators Schumer and Gillibrand sent letters to the Commission, again raising the safety issues and calling for an independent risk assessment of the pipeline project next to Indian Point.

D. Issuance of the Certificate

On March 3, 2015, the Commission issued the Certificate Order. Among other things, the Certificate Order rejected requests for a supplemental EIS (Certificate Order ¶ 55), adopted the Nuclear Regulatory Commission's (NRC) determination that the AIM project would not create safety risks at Indian Point (*Id.* ¶¶ 106-07) (with no mention of letters from senators or any of the expert reports), denied improperly segmenting review of the AIM project from Atlantic Bridge (*Id.* ¶¶ 108-10) and refused to conduct a cumulative impacts analysis of Marcellus Shale development (*Id.* ¶¶ 112-30).

E. Post-Certificate

In the 30 days since the Certificate issued, the record still continues to evolve. Algonquin continues to supplement information provided, without opportunity for comment. *See* Exhibit 6, Table. At the end of February 2015, the NRC granted Mr. Blanch's FOIA request, which revealed that the NRC had improperly relied on the ALOHA analysis to evaluate project safety. In addition, the FOIA request released an NRC Petition Review Board hearing held January 28, 2015 with Messrs. Blanch and

Kuprewicz as witnesses regarding safety issues related to the AIM project and Indian Point. *See* Exhibit 3, Statement of Facts and attached transcript. Finally, in March 24, 2015, a congressional committee held a hearing on AIM and safety at Indian Point. *See* Hearing, online at <https://www.youtube.com/watch?v=umWpVZTqoJE>. At a minimum, these new facts cast doubt on the adequacy of the NRC review, and demand that the Commission must reconsider its findings in light of this evolving situation.

V. APPLICABLE LEGAL STANDARD OF REVIEW

When granting a certificate under Section 7 of the Natural Gas Act, the Commission must find that “the proposed . . . construction . . . to the extent authorized by the certificate, is or will be required by the present or future public convenience and necessity.” 15 U.S.C. § 717f(e). Significantly, the certificate applicant “must bear the burden of proving that the public interest will be served.” *Michigan Consol. Gas Co. v. Fed. Power Commission*, 283 F.2d 204, 214 (D.C. Cir. 1960). All findings by the Commission must be supported by substantial evidence and demonstrate a rational connection between the facts found and the choice made. *ANR Pipeline v. FERC*, 771 F.2d 507, 517 (D.C. Cir. 1985) (noting substantial evidence requirement), *Western Resources v. FERC*, 9 F.3d 1568, 1575 (D.C. Cir. 1993) (reversing Commission order that failed to “comport with reason and logic”).

An agency’s action under NEPA is governed by the arbitrary and capricious standard. *Delaware Riverkeeper*, 753 F.3d at 1313; *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 376 (1989) (applying standard to review of decision not to prepare supplemental EIS). Simple, conclusory statements are not enough to fulfill an agency’s duty under NEPA, and the agency must comply with “principles of reasoned decisionmaking, NEPA’s policy of public scrutiny, and [the Council on Environmental

Quality's] regulations." *Delaware Riverkeeper*, 753 F.3d at 1313, citing *Found. on Econ. Trends v. Heckler*, 756 F.2d 143, 154 (D.C.Cir.1985).

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V. ARGUMENT

A. The Commission Unlawfully Segmented Review of the AIM Project from the Atlantic Bridge Project, and Failed to Consider the Impact of Future Construction on the Future and Convenience of the AIM Pipeline.

1. The Commission segmented the projects in violation of NEPA even though the record shows a geographic, functional and temporal relationship between the projects.

The CEQ regulations implementing NEPA require that an EIS include: (1) connected actions, including those that are “interdependent parts of a larger action and depend on the larger action for their justification;” (2) cumulative actions, “which when viewed with other proposed actions have cumulatively significant impacts;” and (3) similar actions, “which when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating their environmental consequences together.” 40 C.F.R. § 1508.25(a). The purpose for the rule against segmentation is to “prevent an agency from dividing a project into multiple actions, each of which individually has an insignificant environmental impact, but which collectively have a substantial impact.” *Wilderness Workshop v. BLM*, 531 F.3d 1220, 1228(10th Cir. 2008) (emphasis added); *Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 969 (9th Cir. 2006). In other words, the anti-segmentation rule prevents applicants and agencies from thwarting their NEPA obligations by chopping projects into smaller components in order to avoid considering their collective impact and to “conceal the environmental significance of the project or projects.” *Hammond v. Norton*, 370 F. Supp. 2d 226 (D.D.C. 2005).

An agency “impermissibly ‘segments’ NEPA review when it divides connected, cumulative, or similar federal actions into separate pieces under consideration.”

Delaware Riverkeeper Network 753 F.3d 1304, 1313. In *Delaware Riverkeeper Network*, the court found that the Commission had unlawfully segmented environmental review of four separate proposals by the same pipeline companies to upgrade different sections of the same line. In concluding that the projects were “inextricably intertwined” as part of the same pipeline, the court relied on facts showing a physical, functional and temporal nexus between the four proposals – such that [t]he end result is a new pipeline that functions as a unified whole thanks to the four interdependent upgrades.” 752 F.3d at 1308-1309. Accordingly, the court found that the Commission should have considered the separate units as part of a single environmental review.

Here, the Commission improperly segmented the AIM project from the Atlantic Bridge Project given the physical, functional and temporal nexus between the two projects. The AIM and Atlantic Bridge projects involve expansion of the same Algonquin pipeline in the same geographic area: New York, Connecticut, Rhode Island, and Massachusetts. Both projects will provide shippers an opportunity to obtain firm service at Ramapo for delivery to New England, will transport shale gas from Marcellus and are intended by Algonquin to “balance local distribution company (LDC) demand” in New England.¹¹

¹¹ Spectra Comments to New England States Committee on Electricity (June 27, 2014), online at http://www.nescoe.com/uploads/Spectra_EnhancingElectricReliabilityinNE_27Jun2014.pdf.

The projects are also temporally connected. Algonquin filed its application for the AIM project on February 28, 2014 – midway through its open season for the Atlantic Bridge Project which had launched February 1, 2014.¹² And not coincidentally, the Atlantic Bridge Project initiated its pre-filing on January 30, 2015, just a week after the Final EIS for the AIM project was released. Moreover, the projects would have overlapped even more closely if Algonquin – instead of filing a deficient application requiring on-going supplementation over a period of six months – had held off a few months and submitted a complete application.

Finally, the AIM and Atlantic Bridge Project are functionally interdependent. A report prepared for the Town of Cortlandt by Richard Kuprewicz, a highly regarded pipeline expert described that Algonquin's replacement of a 26-inch pipeline with a 42-inch pipeline overcompensated for the upstream half of the project, but ignored serious constraints on the lower portion. Accordingly, Kuprewicz concluded that:

The attempt to replace segments of the 26-inch pipeline segment with a 42-inch pipeline across Cortlandt are not in sync with the claimed increased gas demands identified in the current AIM FERC filing and subsequent DEIS. *The operator appears to be positioning for further expansions on the Algonquin system and there are still serious bottlenecks on the looped system between the Stony Point and Southeast Compressor Stations that should have been included in this FERC application.*¹³

¹² See Algonquin Open Season for Atlantic Bridge Project, online at <http://www.spectraenergy.com/content/documents/Projects/Atlantic-Bridge-Open-Season.pdf>.

¹³ Town of Cortlandt Comments (November 21, 2014), submitting Report of Accufacts (November 3, 2014).

In addition, Mr. Kuprewicz observed that the gas velocities downstream of Cortlandt but upstream of the Southeast Compressor Station were well beyond 60 feet per second – some of the highest Mr. Kuprewicz had ever encountered in reviewing pipeline proposals. Mr. Kuprewicz concluded that “such high gas velocities suggest further pipe replacement projects are needed or forthcoming.”¹⁴ Moreover, the presence of the high velocities also shows that the AIM project lacks any “independent utility” as a stand-alone project – since without further replacements, the high velocities will result in significant safety projects that would ultimately render the project inoperable.

The Commission ignored Mr. Kuprewicz’s expert analysis, choosing instead to rely solely on Algonquin’s submissions.¹⁵ According to the Commission, these submissions showed certain parts of Algonquin’s system operating at maximum capacity, and therefore, Mr. Kuprewicz’s claims of “overbuild” were unfounded. But the Commission missed the point: Mr. Kuprewicz did not claim that upgrades were not required, but rather that Algonquin had overcompensated on one portion of the system, leaving the second portion in serious need of upgrade and suggesting that the projects had been segmented. For that reason, Mr. Kuprewicz recommended that the Commission review the AIM project in conjunction with Algonquin’s other expansions in order to determine the safest and most effective approach.

The Commission’s reliance on Algonquin’s representation that the projects are not connected runs afoul of *Delaware Riverkeeper* and other precedent governing

¹⁴ *Id.*, Accufacts Report at 7.

¹⁵ See Certificate Order, P.46 (rejecting Mr. Kuprewicz’s segmentation argument based solely on “Flow diagrams and information **provided by Algonquin...**” (emphasis added)). At the very least, the differences between the analysis by Mr. Kuprewicz and Algonquin should have necessitated an evidentiary hearing to resolve these disputed material facts. See, Part V.J *infra*.

segmentation. In *Delaware Riverkeeper*, the pipeline claimed (far more plausibly than Algonquin does here) that when it started the project, it was not aware that it would follow up with three more phases. No matter, held the court, because:

the important question here is whether FERC was justified in rejecting commenters' requests that it analyze the entire pipeline upgrade project once the Northeast Project was under review and once the parties had pointed out the interrelatedness of the sequential pieces of pipeline which were, in fact, creating a complete, new, linear pipeline.

Delaware Riverkeeper, 753 F.3d at 1318.

Furthermore, courts recognize that project applicants understandably have a vested interest in prompt issuance of permits and therefore, may be inclined to portray a project as an independent unit to evade review and expedite the permit process. *See Florida Wildlife Fed'n*, 401 F. Supp. 2d at 1316, 1298 (S.D. Fla. 2005) (“...the concept of “independent utility” should not be manipulated to avoid significance or “troublesome” environmental issues, in order to expedite the permitting process.”) For that reason, courts impose a heavy burden on agencies to undertake independent analysis of an applicant’s proposed plans instead of accepting its own characterization at face value.

In *Hammond v. Norton*, 370 F.Supp. 2d. 226 (D.D.C. 2005), a federal court vacated BLM’s decision to limit the scope of its EIS to the northern segment of a petroleum pipeline proposed by Williams that would interconnect in Bazelon, New Mexico to a second segment to be owned by Equilon that would run to Odessa, Texas. Originally, Williamsn and Equilon had proposed the project as a joint venture which was later disbanded when BLM indicated that a single EIS would be required for the entire pipeline. Relying on representations by Williams that it could readily access petroleum for customers even if the Equilon segment was not built, BLM concluded that the two

segments were independent and that the Williams' section was properly evaluated in a separate EIS.

The court disagreed, chastising BLM for unquestioningly accepting Williams' self-serving statements in the face of the project's origins as a joint venture as well as evidence showing limited alternative supply options other than Equilon. The court concluded:

In light of BLM's failure to seek substantiation of Williams' self-serving and unreliable statements about its petroleum supply arrangements in Bloomfield despite the [parties' joint venture] history of the Aspen project...the Court concludes that BLM acted arbitrarily and capriciously in concluding that the Williams pipeline had independent utility and that the Equilon pipeline was not a connected action under 40 CFR §1508.25(a).

Hammond, 370 F.Supp. 2d. 226 at 251.

As in *Hammond*, Algonquin's claim that the AIM and Atlantic Bridge Project are independent units is belied by record evidence to the contrary. Just as the record in *Hammond* showed that the project had originated as a joint venture spanning from New Mexico to Texas, here, presentations and press releases by Spectra, Algonquin's corporate parent, show that the AIM and Atlantic Bridge projects have been planned as a single unit.

Moreover, just as the pipeline in *Hammond* pulled the plug on its joint venture to evade environmental review, so too, Spectra chose to move forward incrementally to reduce project opposition. As Spectra's President of Transmission and Storage, Bill Yardley acknowledged in an interview with *Platt's*:

You can do it [build a new project] incrementally so you don't have to build the entire BCF all at once. And we think that it's the best solution for what the region really wants to see. And I think you end up with - well, I know you end up with a lot less potential opposition if you do that.¹⁶

¹⁶ See *Platt's Online* (August 3, 2014), online at <http://www.plattstv.com/video/new-england-seeks-more-gas-supplies-august-3/3706671906001>.

Not only is the Commission's treatment of the AIM and Atlantic Bridge Project as two separate and independent projects unsupported by the evidence, it is also unsupported by another participating agency. In comments filed October 6, 2014, the Corps of Engineers (New England Region) wrote:

In particular, we note that some of the same facilities for AIM including the Southeast, Oxford, Cromwell Jt, Chaplin Compressor Stations and the Cromwell 36-inch loop will be modified and/or extended to accommodate the new project. Our review of the NEPA document indicates that The DEIS contains little detail as it pertains to the Atlantic Bridge Project and its relationship to the AIM project. It is unclear as to whether the Atlantic Bridge Project is fundamentally just an expansion of the AIM facilities.

To sum, substantial evidence in the record shows a physical, functional and temporal relationship between the AIM and Atlantic Bridge Project. Moreover, the AIM project has no independent utility on its own given the presence of such high velocities resulting from the overbuild that the AIM project would be left with dangerously high velocities – a safety problem exacerbated further by proximity to a nuclear facility. Moreover, the Corps determined that the AIM and Atlantic Bridge projects were sufficiently related such that they should be considered in a single EIS. Only the Commission – improperly resting on Algonquin's self-serving submission – reached a different conclusion. The Commission erred in segmenting review of the AIM and Atlantic Bridge Project, and thus, must grant rehearing and prepare another EIS that evaluates the projects as a single unit.

2. The Commission violated the public interest standard of the Natural Gas Act by ignoring the impact of imminent future development on the public necessity and convenience of the AIM project.

Independent of NEPA, the public interest standard of the Natural Gas Act also requires that the Commission evaluate projects in context and with an eye to the future,

rather than in a vacuum. Indeed, the D.C. Circuit found that the Commission failed to consider the “present and future convenience” as required by the Natural Gas Act when it ignored a future development that the project sponsor had not included in its application. *City of Pittsburgh v. FPC*, 237 F.2d 741 (D.C. Cir. 1955).

In *City of Pittsburgh*, a pipeline sought approval under the Natural Gas Act to abandon a segment of pipeline, and transfer customers to another line. During the hearing, the company noted that “very shortly after” approval of the abandonment, it planned to file for authorization to expand its facilities – but that the future expansion was outside the scope of the proceeding. Several intervenors objected, and argued that the company’s future expansion had a bearing on the “public convenience and necessity” of the abandonment – because approving the abandonment might later increase the cost of expansion. Commission refused, explaining that it could not consider the future expansion because it was not included in the company’s application. But the court reversed, ruling that “The exclusion of evidence relating to future expansion and the refusal to consider future expansion in determining the public convenience and necessity were erroneous.”

Here, the future development of the Atlantic Bridge Project has a bearing on the Commission’s review of the AIM project. For example, by reviewing the AIM project in a vacuum, without taking the future Atlantic Bridge Project into account, the Commission ignored the likelihood that the development of both projects may be more costly, less efficient or duplicative, and therefore inconsistent with the public convenience.

City of Pittsburgh stands for another important principle as well: the Commission, *not the applicant*, drives the certificate process. In *City of Pittsburgh*, the court refused to abide the Commission’s failure to evaluate the future expansion because the project sponsor did not include it in the application. Yet, here the Commission follows lockstep

to Algonquin's marching orders, treating the AIM and Atlantic Bridge Project as separate effectively because Algonquin said so. The Commission's approach does not pass muster under *City of Pittsburgh*.

3. Segmentation Prevented the Commission From Making Required Findings Under the Certificate Policy Statement.

The Commission's Certificate Policy Statement is intended to advance the goal of ensuring adequate competitive pipeline alternatives while avoiding the possibility of overbuilding, unnecessary environmental disruption and unneeded exercise of eminent domain. *Certificate Policy Statement*, 88 FERC ¶61,227 (1999) at 2. To this end, the Commission must determine whether there is a need for the project and whether the project is subsidized by captive customers. When as here, a project is segmented, the Commission cannot make these findings. If it can only review one piece of a project in a vacuum, it cannot determine whether there will be overbuild, or whether a need remains for portions of one segment if another segment is added. Piggybacking one segment on top of another also makes it nearly impossible for the Commission to review whether ratepayers are paying for benefits that they receive from added infrastructure, or if they are subsidizing shareholder profits achieved through LNG export and spot market sales. A holistic review of all pieces of an interconnected project is the only way for the Commission to balance the benefits and burdens of the pipeline as required by the *Certificate Policy Statement*.

B. The Commission Violated the Clean Water Act, 33 U.S.C §1341(a)(1), by Granting a Certificate under the Natural Gas Act Before the New York DEC Issued a Section 401 Water Quality Certificate.

The AIM Pipeline will cross 102 water bodies (FEIS, ES-2) and therefore, must obtain a water quality certificate under Section 401 of the Clean Water Act, 33 USC §1341 from the impacted states – in this case, New York, Connecticut and

Massachusetts. According to Table 1.3-1 of the FEIS, Algonquin applied for 401 water quality certificates from New York DEC on April 10, 2014, from Connecticut DEEP on March 28, 2014 and Massachusetts DEP on April 11, 2014. None of these three required water quality permits had issued as of March 3, 2015 when the Commission awarded Algonquin a certificate for the AIM project.

Section 401 makes state certification of compliance with water quality standards a conditional precedent to issuance of any federal license. Specifically, Section 401 states in relevant part that:

Any applicant for a Federal license or permit to conduct any activity, including but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters shall provide the licensing or permitting agency a certificate from the State in which the discharge originates....*No license or permit shall be granted until the certification required by this section has been granted or waived.*

The meaning of this provision is plain: “States are required by § 401 of the Act to provide a water quality certification before a federal license or permit can be issued for any activity that may result in a discharge into intrastate navigable waters.” *PUD No. 1 of Jefferson County v. Washington Dept. of Ecology*, 511 U.S. 700, 707 (1994) (emphasis supplied).

This sequencing, in turn, affects the ability of a federal agency like FERC to issue licenses and permits. As this court noted in *City of Tacoma v. FERC*, 460 F.3d 53, 68 (D.C. Cir. 2006): “FERC’s role is limited to awaiting, and then deferring to, the final state decision... FERC . . . has an obligation to determine that the specific certification ‘required by [section 401] has been obtained,’ and without that certification, FERC lacks authority to issue a license” (emphasis supplied).

Here, there is no dispute that Algonquin was required to obtain a Section 401 water quality certificate from New York, Connecticut and Massachusetts, and failed to

do so prior to the Commission's issuance of the certificate. Accordingly, the Commission lacked authority to issue Algonquin a certificate for the AIM project.

The fact that the Commission's certificate contains a condition (Appendix B, ¶9) prohibiting Algonquin from seeking approval to commence construction until it receives all required federal authorizations does not cure the Commission's statutory violation. The Commission lacks authority under Section 7 to modify the strict requirements of Section 401. That Congress intended the Commission to abide by the Clean Water Act is clear from Section 717b(d) of the Natural Gas Act, which expressly preserves states' permitting authority under the Clean Water Act, Clean Air Act and Coastal Zone Management Act.

Although the Commission has a long-standing practice of issuing so-called "conditioned certificates" to circumvent the requirements of Section 401, this questionable practice is currently on review in *Gunpowder Riverkeeper v. FERC*, now pending before the United States Court of Appeals for the District of Columbia Circuit.¹⁷ Oral argument was held on February 20, 2015, so a ruling that may impact the outcome of this case is imminent. For that reason alone, the Commission should stay this proceeding pending a decision in *Gunpowder Riverkeeper v. FERC*.

C. The Commission Violated NEPA and CEQ Regulations by Failing to Consider Cumulative Impacts.

The Commission's regulations implementing NEPA require it to identify the "cumulative effects resulting from existing or reasonably foreseeable projects." 18 C.F.R. §380.12(b)(3). The CEQ regulations define cumulative impacts as those which result from:

¹⁷ *Gunpowder Riverkeeper v. FERC*, Docket No. 14-1062 (D.C. Cir., filed April 18, 2014).

the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency or person undertakes them. Cumulative impacts can result from individually minor by collectively significant actions taking place over a period of time.

40 C.F.R. §1508.7.

As discussed below, the Commission failed to consider cumulative impacts as contemplated by NEPA and these implementing regulations.

1. The Commission did not consider the cumulative impacts of reasonably foreseeable infrastructure.

In *Delaware Riverkeeper*, the court determined not only that the Commission had improperly segmented four different project proposals, but also that it failed to consider the cumulative impacts of each segment. As the court explained, a meaningful assessment of cumulative impacts must identify:

(1) the area in which the effects of the proposed project will be felt; (2) the impacts that are expected in that area from the proposed project; (3) other actions — past, present, and proposed, and reasonably foreseeable — that have had or are expected to have impacts in the same area; (4) the impacts or expected impacts from these other actions; and (5) the overall impact that can be expected if the individual impacts are allowed to accumulate." *Grand Canyon Trust v. FAA*, 290 F.3d 339, 345 (D.C. Cir. 2002).

The court found that the Commission's conclusory statement that the project "is not expected to contribute to cumulative impacts" failed to satisfy the NEPA.

Here, the Commission's review of the cumulative impacts of the AIM, Atlantic Bridge and Northeast Access projects was abbreviated, and its findings conclusory, notwithstanding that the scope and impacts of all three projects were reasonably foreseeable and expected to have a larger impact if the individual actions are allowed to accumulate. See Exhibit 2, Table of Spectra Project Development. For example, the Atlantic Bridge Project – which had concluded its open season six months before the Commission issued its DEIS – could add up to 600,000dekatherms per day (Dth/ day)

of additional capacity, almost twice the size of the AIM action.¹⁸ Meanwhile, a third Spectra pipeline expansion – known as the Access Northeast Project – threatens to more than double the capacity provided by the Proposed AIM action and the Atlantic Bridge Project, and will interconnect with an LNG terminal to export gas overseas. Spectra states that Access Northeast will “complement Spectra Energy’s Algonquin and Maritimes pipelines by up to 1,000,000 Dth/day of natural gas per day.”¹⁹ The DEIS even acknowledges that if construction schedules for AIM and the Atlantic Bridge project were to overlap, that there could be cumulative impacts on air quality, wetlands and habitat and noise. *See* DEIS 4-272 (“If the Atlantic Bridge Project gets constructed, air emissions during operation of compressor stations would overlap with the operational air emissions of the AIM Project.”)

The FEIS, as well as the Certificate Order simply ignore these realities. The FEIS goes so far as to take the position that the Atlantic Bridge project may not even happen (there are frequent references to “if it is actually built...” – even though the Atlantic Bridge project was already in open season when Algonquin filed its AIM application. Moreover, neither the DEIS nor the FEIS mention the Access Northeast Project – even though Spectra’s own presentations show that the project, as well as the potential for LNG export of shale gas overseas – is one of the financial drivers of Spectra’s

¹⁸ *See* Spectra Energy Corp. letter to New England States Committee on Electricity, Feb. 10, 2014, http://www.nescoe.com/uploads/Spectra_CommentonGasLevel_Revised_10Feb2014.pdf (last accessed Sept. 15, 2014).

¹⁹ *See* Spectra Energy, Spectra Energy and Northeast Utilities Announce New England Energy Reliability Solution, <http://www.spectraenergy.com/Newsroom/News-Archive/Spectra-Energy-and-Northeast-Utilities-Announce-NewEngland-Energy-Reliability-Solution/> (last accessed Sept. 24, 2014); also Exhibit 2 (Table of Project Development).

infrastructure development.²⁰ Likewise, the Commission's conclusion that no impacts will result due to minimal project overlap and "carefully developed resource protections" for the AIM project is not based on evidence, and begs the question. After all, how can the Commission develop adequate protections for the AIM project if fails to take into account harm to the same resources that will be caused by Atlantic Bridge? In short, the Commission's cumulative impacts analysis of expected and foreseeable infrastructure development does not satisfy *Delaware Riverkeeper* and NEPA requirements.

2. The Commission did not consider Marcellus Shale development.

The CEQ regulations require the Commission to consider indirect impacts of proposed actions. Indirect impacts are caused by the proposed action and occur later in time or farther removed in distance than direct project impacts, but are still reasonably foreseeable. 40 C.F.R. §1508.8(b). In the FEIS, the Commission stated that it would not study Marcellus Shale impacts, finding that they were located more than ten miles from the project. FEIS 4-290.²¹ Subsequently, in the order issuing a certificate, the Commission added that effects associated with shale gas development are not sufficiently causally related to the AIM Project to warrant a detailed analysis, nor are the potential environmental impacts foreseeable as required by the CEQ regulations.

Certificate Order P. 128, *citing Central New York Oil and Gas Co. LLC*, 137 FERC ¶61,121

²⁰ See Table 2 (Exhibit of Spectra Project Development), with links to various sources describing the interrelationship between the projects.

²¹ In its comments filed March 2, 2015, EPA explained that the FEIS' reference to ten-mile limit for consideration of cumulative and indirect impacts is not "in and of itself" the standard under NEPA. The Commission does not appear to have adopted the 10-mile rationale as a basis for refusing to consider cumulative impacts, and therefore, we do not discuss this point further.

at ¶¶81-101(2011), *order on reh'g*, 138 FERC ¶61,104 at PP 33-49 (2012), *petition for review denied, sub nom, Coalition for Responsible Growth v. FERC*, 485 Fed. Appx. at 475-75.

Under the Commission's own "causal connection test," the cumulative impacts of Marcellus Shale drilling should have been studied. In that regard, CYNOC is distinguishable; there, the Commission found that the pipeline did not depend upon Marcellus gas and that shippers would receive gas only from other sources. *See CYNOC*, 137 FERC ¶61,121 at 88- 90. Here, Spectra marketed the open season for the AIM project by touting its potential to transport shale gas to New England markets, and even promoting the pipeline with a map showing a prominent yellow arrow labeled "Marcellus supply" pointing towards the pipeline.²²



Similarly, Spectra's Open Season information for the Atlantic Bridge project states:

Natural gas production in the Marcellus and Utica regions is currently at approximately 14 Bcf/d, and Algonquin is well connected to this supply through approximately 3 Bcf/d of existing pipeline interconnections on

²² *See* Comments of Bill Yardley, Spectra Vice President (describing that AIM will connect new Marcellus supply), online at <http://www.pipelineandgasjournal.com/spectra-energy-holds-open-season-aim-project>.

pipelines with a capacity in excess of 10 Bcf/d. Algonquin and Maritimes are uniquely positioned to deliver these supplies of natural gas to end use markets through their extensive existing city gate footprint and connections to a significant percentage of the ISO New England (ISO-NE) power generation fleet. **The Atlantic Bridge Project would provide greater access for these abundant supplies from regional production to flow into the New England States and Maritime Provinces.**²³

Algonquin's public statements about the availability of capacity will also stimulate additional drilling, since suppliers would now have the means to transport gas to market – particularly to lucrative foreign markets. These facts establish a sufficient causal connection between Spectra's AIM pipeline and related infrastructure expansion and Marcellus drilling. Given the causal connection between the pipeline and shale extraction, the Commission erred failing to consider the cumulative impacts of shale development as part of the FEIS.

Not only did the Commission deny a causal and foreseeable connection between shale gas extraction and the proposed pipeline, but it imposed an artificial ten-mile range on its review of cumulative impacts. EPA criticized the Commission's practice, arguing that "geographic proximity is not in and of itself the standard for NEPA's requirement to consider impacts that have a reasonably close causal relationship to the proposed federal action."²⁴

Moreover, courts reject this approach as well. For example, in *LaFlamme v. FERC*, 852 F.2d 389 (9th Cir. 1988), the Ninth Circuit criticized the Commission's environmental analysis of the impact of a hydroelectric project on the river basin where it would be sited, finding that the EIS was unduly limited to "assessing the impact of only that project's diversion dams and other proposed facilities in that

²³ Spectra Open Season for Atlantic Bridge, online at http://www.nescoe.com/uploads/Spectra_CommentonGasLevel_Revised_10Feb2014.pdf (emphasis added).

²⁴ EPA Letter to FERC (March 2, 2015) at 5.

project's area," rather than analyzing the cumulative effect that other projects outside the area might likewise have on the basin. *LaFlamme v. FERC*, 852 F.2d 389, 401 (9th Cir. 1988). The court remarked that the Commission's environmental analysis failed to encompass broad consideration of reasonably foreseeable past, present and future impacts as required by NEPA, and accordingly, remanded the Commission order. Here too, the Commission cannot constrain its analysis to focus on just the AIM project, or just impacts within an artificial radius, but must undertake a robust cumulative impact analysis that includes the effects of the project on Marcellus shale extraction activities.

3. The Commission did not consider greenhouse gas and climate change.

Recent guidance issued by CEQ on December 19, 2014 instructs federal agencies to consider greenhouse gas emissions and climate change as part of environmental review.²⁵ Specifically, CEQ directs agencies to take into account emissions from activities that have a reasonably close causal relationship to the Federal action, such as those that may occur as a predicate for the agency action ("upstream emissions") and as a consequence of the agency action ("downstream emissions").

The FEIS failed to take existing CEQ guidance into account in evaluating the environmental impact of the release of greenhouse gas (GHG) emissions. The FEIS claims that emissions from production are not "reasonably foreseeable." It argues that the development of the Marcellus shale drives the amount of production, rather than the addition of pipelines to carry the gas to market, and it cannot anticipate how this growth will occur.

²⁵ CEQ Draft Guidance, online at https://www.whitehouse.gov/sites/default/files/docs/nepa_revised_draft_ghg_guidance_searchable.pdf.

The Commission's argument is backwards. The whole point of the project in question is to provide additional capacity to get gas to market. Without a market, and a means to getting the gas to market (be it truck, rail or pipeline), the gas will remain in the ground.

The 2010 CEQ Guidance, available to the Commission, provided a number of suggestions on methods it might apply to calculate the emissions.²⁶ One way to calculate the amount of additional gas that will be produced in this case is to start with submissions by the applicant of added capacity created by the pipeline, and then factor in the anticipated project lifetime. The range of GHG leakage rates from production wells has been established in a series of studies, enabling the simple calculation of likely GHG emissions.²⁷ Based upon this calculation, the social cost of the added GHG emissions can then be calculated and included in the evaluation.²⁸

²⁶ 2010 CEQ Guidance at 4.

²⁷ Howarth and Ingraffea, *Climate Change*, May 2011, <http://www.acsf.cornell.edu/Assets/ACSF/docs/attachments/Howarth-EtAl-2011.pdf>, concluded that somewhere between 3.6 percent and 7.9 percent of the methane from fracking wells was escaping into the atmosphere as it's made its way from underground to end user. In April, Howarth published a review of all the data sets so far, and they showed that his original numbers were pretty likely correct: Up to 5 percent of the methane probably leaks out before the gas is finally burned." Many more studies are due to come out this year. <http://insideclimatenews.org/news/20150107/frackings-methane-leakage-be-focus-many-studies-year>

²⁸ In commenting on the SDEIS of the Keystone XL project, the EPA, referring to the 2010 CEQ guidance, provided some suggestions on factors that should be take into consideration in conducting such an analysis, *e.g.*, the project lifetime and the social cost of such emissions:

. . . recognizing the proposed Project's life time is expected to be at least fifty years, we believe it is important to be clear that under at least one scenario, the extra GHG emissions associated with this proposed Project may range from 600 million to 1.15 billion tons CO₂-e, assuming the lifecycle analysis holds over time (and using the SDEIS' quantitative estimates as a basis). In addition, we

The situation here is completely analogous to the one analyzed by the Department of State with regard to the Keystone XL pipeline. One pipeline involved a pipeline to carry tar sands, and this one involves a pipeline to carry natural gas, but both present questions of whether production emissions will or will not be accelerated by pipeline construction. The uncertain development of the tar sands region in Canada was not considered a reason to determine that the emissions from production were not reasonably foreseeable.

The FEIS also appears to take that position that because it was difficult to figure out how to perform the analysis, it was not required. This argument might have some relevance were there evidence in the record that the Commission had made a serious effort to look into how they might proceed. The failure of the Commission to mention either of these suggests that the agency sidestepped its obligation to conduct a meaningful analysis. It does not evidence that they such an analysis was not feasible.

4. The Commission did not consider methane emissions and radon associated with the compressor station upgrades, pigging stations and other project facilities.

The Commission did not explain why it decided not to consider the environmental impact of GHG emissions from the proposed pipeline. The Commission's failure to do

recommend that the Final EIS explore other means to characterize the impact of the GHG emissions, including an estimate of the "social cost of carbon" associated with potential increases of GHG emissions. The social cost of carbon includes, but is not limited to, climate damages due to changes in net agricultural productivity, human health, properly damages from flood risk, and ecosystem services due to climate change. Federal agencies use the social cost of carbon to incorporate the social benefits of reducing CO2 emissions into analyses of regulatory actions that have a marginal impact on cumulative global emissions; the social cost of carbon is also used to calculate the negative impacts of regulatory actions that increase CO2 emissions.

EPA 2011 comments at 6.

such an analysis was the subject of explicit EPA criticism in their review of the final EIS, which also directed the FERC to the evidence it should consult:

We also continue to recommend that FERC consider relevant studies regarding methane leaks and emissions. With regard to EPA regulations concerning methane emissions from natural gas processing and transmission sources, please note that EPA is planning to issue a proposed rule later this year that will set standards for emissions from these sources (EPA Letter, March 5, 2015).

EPA Letter, March 5, 2015. The Commission could have examined a January 2015 study of emissions from Boston's aging pipelines.²⁹ The study found that emissions of GHGs from those pipelines were much greater than had been thought. In addition, the need to examine emissions from pipeline leaks was raised in comments filed in response to the draft EIS, comments to which the FERC did not respond in the final EIS.³⁰

Nor does the FEIS or Certificate Order propose to mitigate GHC leakage.

The Commission acknowledges that fugitive methane emissions from compressors along the pipeline will be minimized through management actions. Certificate Order ¶ 101. While important, this does not address leaks from the miles of additional pipeline to be built; only the compressor stations.

The final Certificate also should have explicitly required the company to comply with any EPA guidelines or requirements concerning methane leaks that are issued during its projected life. Further, in light of the uncertain success of these mitigation

²⁹ <http://www.csmonitor.com/Environment/Global-Warming/2015/0124/Cities-may-be-leaking-more-heat-trapping-methane-than-previously-thought>

³⁰ Statement of Rhode Island chapter of the Sierra Club, September 16, 2014 (Burrillville hearing), Appendix II of the Final EIS, CO-9. The citation refers to a side by side version of the comments showing the response of the agency to its various particulars. There is no mention of FERC's views on the section of those comments pointing to the need to evaluate the GHG emissions from pipeline leaks.

measures, the Commission should require emission monitoring and recording to enable better regulation and control when such measures become available.

Finally, even FERC's limited analysis of GHG emissions from the compressor stations is invalidated by the use of an outdated estimate of the global warming potential (GWP) of methane. The Final Environmental Impact Statement says, on p. 4-221, "CO₂ has a GWP of 1, CH₄ has a GWP of 25..." But in fact, a recent report by the Intergovernmental Panel on Climate Change (IPCC) found the GWP of methane (CH₄) to be 34, not 25, over the commonly-used 100-year time frame, and a whopping 86 over a 20-year time frame. The IPCC further states, "There is no scientific argument for selecting 100 years compared with other choices." On the contrary, Joe Romm, physicist and Senior Fellow at American Progress, cautions: "Given that we are approaching real, irreversible tipping points in the climate system, climate studies should, at the very least, include analyses that use this 20-year time horizon."

<http://thinkprogress.org/climate/2013/10/02/2708911/fracking-ipcc-methane/>

Thus, FERC should redo its analysis of GHG emissions from the project, including estimated emissions not only from the compressor stations but also from pipeline leaks and from increased shale gas development, using a GWP of 86 rather than 25 for methane, which will clearly result in a far higher estimate of the project's GHG emissions.

Finally, the Commission dismisses concerns over radon exposure from burning pipeline gas indoors, Certificate Order ¶¶ 102-03, making a wild misstatement that "Studies have demonstrated that levels of radon in interstate pipelines carrying gas from the Marcellus shale will be below average indoor and outdoor radon levels." In fact, the level of radon depends on where in the pipeline the measurements are taken. By contrast, the Pennsylvania Department of Environmental Protection studied

this same issue and found that at the well, "The median value was 43.6 pCi/L, and the maximum value was 148 pCi/L."³¹

Radon remediation is required in a home if it hits 4.0 pCi/L. Radon decays over the course of a few days, so depending on where the gas is in the pipeline, levels of radiation will vary, but certainly will be higher than both average indoor and outdoor radon levels.

D. Given the Availability of Viable Project Alternatives, The Commission Failed To Demonstrate A Need for the Project As Required by the Certificate Policy Statement.

The Commission's Certificate requires the Commission to balance the public benefits of the project against adverse impacts. *Certificate Policy Statement*, 88 FERC ¶ 61,227 at 24-26. Generally, a project is deemed to have public benefits if an applicant can demonstrate that a need for the project exists. Algonquin made no such showing here.

1. The Applicant cannot show that this particular project is needed when other less intrusive options could serve claimed demand.

A recent *Boston Globe* article³² reports on a study showing that the amount of methane leaking from natural gas pipelines, storage facilities, and other sources in the Boston area alone is as much as three times greater than previously estimated — a loss that contributes to the region's high energy costs. According to the study, the leak volume would be enough to heat as many as 200,000 homes a year and is valued at \$90 million a year.

³¹ See http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-105822/PA-DEP-TENORM-Study_Report_Rev_0_01-15-2015.pdf.

³² *Boston Globe*, January 21, 2015 (online at <http://www.bostonglobe.com/metro/2015/01/22/natural-gas-leaks-boston-area-are-far-more-extensive-than-thought/5BykQrnaGRr2XLtxpHqLIM/story.html#>).

Moreover, consideration of an alternative of repairing leaks and increasing efficiencies is consistent with Commission policy. In November 2014, the Commission released a proposed policy on cost recovery for modernization of natural gas facilities, which acknowledges the problem of leakage and offers rate incentives to pipelines that choose to identify and repair leaks to increase efficiency.³³ In light of the Commission's recent policy initiative, its failure to consider leak repair as an alternative in the EIS was unreasonable.

2. Other resources such as renewables can meet need.

The natural gas industry and their lobbyists have successfully persuaded the New England Governors, and many other public officials at large and the Commission itself that, without the AIM Project, New England will suffer from a severe shortage of natural gas in the immediate future and that because of increasing demand, capacity must be increased significantly. This proposition is not supported by the existing evidence.

The Commission failed to consider the effect of alternative energy sources - such as solar and wind - on future natural gas demand. A report released by the DOE last month called into question the gas industry's justification for increased pipeline construction. It stated in its Key Finding 1 that, "Diverse sources of natural gas supply and demand will reduce the need for additional interstate natural gas pipeline infrastructure," and Key Finding 2 that "Higher utilization of existing interstate natural gas pipeline infrastructure will reduce the need for new pipelines. The U.S. Pipeline system is not fully utilized because the flow patterns have evolved with changes in supply and demand."

³³ See *Notice of Proposed Policy on Cost Recovery Mechanisms for Modernization of Natural Gas Facilities*, 140 FERC ¶61,147 (2014).

E. The Commission violated NEPA by allowing moving targets for submission of additional information with no opportunity for meaningful comment.

NEPA regulations require public review and comment of a Draft EIS, and at the conclusion of FERC's review, it requires the Agency to "assess and consider comments both individually and collectively" and may "modify alternatives including the proposed action," "develop and evaluate alternatives not previously given serious consideration," "supplement, improve, or modify its analyses," "make factual corrections," or "explain why comments do not merit further agency response." 40 CFR Part 1504 (a)(1) – (4). FERC's NEPA review of this application impermissibly ignores these legal obligations – since items were either not considered, or were left to be considered on a timeline that prevents public review. *See also Native Ecosystems Council v. Forest Service*, 418 F.3d 953, 965 (9th Cir. 2005)(noting that EIS must be revised where information is so incomplete that neither the decision-makers nor the public could make an informed decision about the project and its alternatives).

Here, the changing information continuously submitted by Algonquin, long after deadlines for comment had expired presented a moving target. As attached Exhibit 6 shows, approximately 75 percent of Algonquin's submissions came *after* the September 29, 2014 comment deadline for the EIS expired. And Algonquin continued to supply new information even after the FEIS issued on January 23, 2015. These untimely submissions deprived the public of a meaningful opportunity for comment.

F. The Commission Violated NEPA by Impermissibly Delegating Review to Other State Agencies, Such As the New York State Department of Environmental Conservation.

1. The Commission may not delegate review to other agencies.

The FEIS finding of no significant impacts rests on an assumption that state agencies will issue permits which include adequate protection for water and air quality.

The problem, however, is that the Commission prematurely made a finding of no significant impact without ensuring the adequacy of these permit conditions which have not yet been issued.

The Commission's reliance on other agencies to evaluate and mitigate impacts – particularly when those permits have not been issued – is legally insufficient under NEPA as interpreted by *Idaho v. I.C.C.*, 35 F.3d 584 (D.C. 1994). There, the court found that the Interstate Commerce Commission (ICC) failed to take the required “hard look” when it approved Union Pacific's abandonment of, and salvage activities on, a railroad line in Idaho. There, the ICC imposed six conditions that included requirements to consult with EPA, the Corps of Engineers, and to obtain a Clean Water Act permit if IDEQ determined one is necessary. 35 F.3d at 589-90. The ICC then found that the project would not significantly affect the quality of the human environment “with the above-mentioned protective conditions.” *Id.* at 590.

The court found that the ICC had failed to take the required “hard look” because it “deferred to the scrutiny of others by authorizing salvage subject to conditions that require Union Pacific to consult with various federal and state agencies about the specific environmental impacts that fall within their jurisdictions.” *Id.* The court went on to explain that:

NEPA mandates a case-by-case balancing judgment on the part of federal agencies. In each individual case, the particular economic and technical benefits of planned action must be assessed and then weighed against the environmental costs; alternatives must be considered which would affect the balance of values.... The point of the individualized balancing analysis is to ensure that, with possible alterations, the optimally beneficial action is finally taken . . . Certification by another agency that its own environmental standards are satisfied involves an entirely different kind of judgment. Such agencies, without overall responsibility for the particular federal action in question, attend only to one aspect of the problem . . . Certifying agencies do not attempt to weight

[environmental] damage against the opposing benefits. Thus the balancing analysis remains to be done.

Idaho, 35 F.3d at 597, quoting *Calvert Cliffs*, 449 F.2d at 1123.

Idaho teaches that an agency fails to take the required “hard look” where it “defers to the scrutiny of others” by relying entirely on conditions requiring the project’s compliance with environmental laws imposed by other regulatory entities, and conducts no independent analysis of the environmental impact itself. *Idaho*, 35 F.3d at 595-596. Yet, that as discussed in the next sections is exactly what the Commission did here. As discussed below, the Commission assumed that if these permits are satisfied that the project would not have significant impacts. In so doing, the Commission improperly delegated its regulatory responsibilities.

2. The Commission’s improper delegation of review to New York DEC

FERC impermissibly rejected its obligation to analyze and consider comments as they relate to improving the agency’s analysis and ultimate conclusions regarding issues of freshwater wetlands and air pollution. These issues were not considered in the Draft EIS - shielding them from public review - and were instead delegated to State agencies to issue environmental permits. A state permit review under the Clean Water Act or Clean Air Act is not a substitute for NEPA review - by definition - it is one of the final steps necessary to authorize a project.

Freshwater Wetlands

The FERC staff's *Conclusions and Recommendations Section* in the *Draft EIS* concludes that

if the proposed Project is constructed and operated in accordance with applicable laws and regulations, the mitigating measures discussed in this EIS, and our recommendations, most of these adverse impacts would be reduced to less than significant levels.

The FERC staff's mitigation recommendations were made in the incomplete *Draft EIS*. However, FERC did not require critical information to be submitted until the day of the close of the public comment period. Thus, when supplemental information was submitted to FERC on the last day of the comment period, the public was cut out of any review. FERC completely ignored its review requirements, the letter, and the spirit, and intent of NEPA when it took these actions. Of the forty-two (42) individual recommendations handled this way by Commission staff, *Number 18* on the list published in the *Draft EIS* is:

Prior to end of Draft EIS comment period, file site-specific information regarding location of wetlands meeting criteria of non-saturated condition.

The Clean Water Act requires permits for work in and around freshwater wetlands and a certification that water quality will be protected under State and Federal law. *See* Clean Water Act Section 401. The federal program is delegated by EPA to the Department of Environmental Conservation in New York. Wetlands permitting jurisdiction is also addressed in part by the Army Corp of Engineers.³⁴ There were 5

³⁴ Reynolds Hills twice submitted comments to the Army Corp of Engineers. On September 29, 2014, Reynolds Hills urged that the Army Corp properly identify and regulate the freshwater wetlands. On February 2, 2015, Reynolds Hills urged that the Army Corp delineate the wetland and assert its Clean Water Act Section 404 jurisdiction over the wetlands.

specific permit applications submitted to the New York State DEC to its delegated programs.³⁵ However, the wetland issues were never made fully available by FERC during the NEPA public comment and review.

The record shows that FERC wetlands analysis ignored significant wetlands in the path of the pipeline. A cursory review of the Reynolds Hills and Blue Mountain Reservation right-of-ways of the pipeline company makes that abundantly clear. There were significant consequences from FERC's failing to do what was required by law on this issue. First, the Commission did not consider these issues in its NEPA review. Then, when the issue was impermissibly delegated to New York, the wetland review and draft permits were not provided to the public before the close of the public comment period. NEPA consideration of environmental issues such as impacts to freshwater wetlands goes to the validity of the entire project as proposed. On the contrary, a State wetlands permit process goes to authorizing specific work to be conducted in and around a freshwater wetland. Thus, the Commission improperly delegated its obligations to a state agency that is not obligated to undertake the same review or to even look at the larger picture issues of the permit it is reviewing.

Clean Air Act

The Commission handled the review of critical air pollution issues similar to the way it handled the freshwater wetlands issues - precluding the public from review and then impermissibly passing their required analysis to a different jurisdiction. Another one of the forty-two issues identified by Commission staff, that was not required to be

³⁵ See Application ID: 3-9903-00099/00002 - Freshwater Wetlands; Application ID: 3-9903-00099/00003 - Part 401 Water Quality Certification; Application ID: 3-9903-00099/00004 - Stream Disturbance; Application ID: 3-3730-00060/00013 - Air Title V - Southeast Compressor Station; and, Application ID: 3-3928-00001/00027 - Air Title V - Stony Point Compressor Station.

nor that was submitted to FERC until the close of the public comment period, was

Number 35 on the list published in the Draft EIS that states:

Provide update regarding air permit requirements associated with new/existing M&R stations (NY, CT, MA).

The Commission failed to meet its obligations under *40 CFR Part 1504* to review and assess the proposed project and failed to determine whether the analyses needed to be changed or supplemented. Simply stated, the metering and regulation station impacts on the public health and the communities in which they are located were submitted by the applicant on the day of the close of the public comment period and thus not subject to any review. These vitally important air pollution issues were left to be considered in a state permitting process instead of in the NEPA process as mandated by law.

The metering and regulating systems are located, among other locations, in the City of Peekskill, which has a significant environmental justice community. As noted *infra*, the Commission failed to meet the federal regulatory requirements for the CEQ Environmental Justice Policy. The Commission impermissibly failed to meet the Environmental Justice policy requirements. The NEPA review process provides the proper legal forum to review and analyze these issues during the consideration of whether to approve a project. FERC, then, impermissibly delegated the consideration of important air pollution issues to the New York State DEC.

A review of the New York State DEC permitting process demonstrates the cascading effects of FERC's failure to meet its NEPA obligations and its decision to pass the issue, impermissibly, to another agency for a permit review.

In New York, the air pollution regulation states, in pertinent part:

§211.1 Air pollution prohibited

No person shall cause or allow emissions of air contaminants to the outdoor atmosphere of such quantity, characteristic or duration which are injurious to human, plant or animal life or to property, or which unreasonably interfere with the comfortable enjoyment of life or property. Notwithstanding the existence of specific air quality standards or emission limits, this prohibition applies, but is not limited to, any particulate, fume, gas, mist, odor, smoke, vapor, pollen, toxic or deleterious emission, either alone or in combination with others.³⁶

Members of the public have objected to the New York State DEC's handling of this permit provision. The disproportionately high concentrations of these infrastructure systems in the Environmental Justice communities are required to be considered in the NEPA review. These provisions were ignored by FERC. Further, these infrastructure systems are critical components of the operating pipeline and its compressor stations and include metering and regulating stations and pipeline cleaning stations in various locations. Instead of conducting the required public comment and Commission review to determine whether the air contaminant emitting systems should be placed in an already overburdened community, FERC impermissibly delegated its obligations to permit processing staff in a New York agency. The air permit process is not the forum to discuss the larger issues NEPA requires FERC to conduct.

Conclusion

The Commission failed to meet its NEPA obligations on the review of water and air issues. The law clearly places an obligation on FERC to take a hard look at a proposed project and its alternatives, and to assess and to analyze the issues prior to making any decisions. The Clean Air Act and the Clean Water Act have permitting programs that are

³⁶ 6 NYCRR Section 211.1.

very important to public health - to families and children - and to overall environmental quality. Instead of analyzing, assessing, and properly and duly deciding, FERC decided - impermissibly and illegally - to have the State of New York issue permits instead of FERC meeting its obligation to determine whether or how this project should proceed.

G. Environmental Condition 16 Violates NEPA by Failing to Explicitly Require Supplemental Environmental Review of a Non-HDD Hudson River Crossing

Algonquin has proposed the horizontal directional drill (“HDD”) crossing method for the Hudson and Still River crossings. Certificate Order at 23. Use of HDD was the only method for crossing the Hudson River evaluated in the FEIS because, as the Order states, “The final EIS finds that use of the HDD crossing method to cross waterbodies and implementation of the mitigation measures outlined in Algonquin’s Erosion and Sediment Control Plan (E&SCP) and other project-specific plans will avoid or adequately minimize impacts on surface water resources.”

However, it is possible that HDD will not be feasible. Based on the geological nature of the soils and bedrock beneath the Hudson River, the FEIS determined that the possibility that HDD under the Hudson would fail was “relatively high.” FEIS at 4-46. To address this possibility, Environmental Condition 16 provides that, “[i]n the event of an unsuccessful HDD at the Hudson or Still Rivers,” Algonquin must file a plan for crossing the waterbody for approval, “concurrent with the submission of its application to the U.S. Army Corps of Engineers and other applicable agencies for a permit to construct using this alternative crossing plan.” Order at 61. According to Condition 16, the alternative crossing plan must be approved by the Director of the Office of Energy Projects prior to construction. *Id.*

Condition 16 must be reconsidered because it fails to provide for the supplemental environmental review that would be required in the event that Algonquin

must proposed an alternative river-crossing plan. NEPA and the CEQ regulations require the preparation of a Supplemental Environmental Impact Statement (“SEIS”) whenever: “(i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.” 42 C.F.R. § 1502.9(c)(1); *Marsh v. Or. Natural Resources Council*, 490 U.S. 360, 374 (1989) (“If there remains ‘major Federal action[n]’ to occur, and if the new information is sufficient to show that the remaining action will ‘affec[t] the quality of the human environment’ in a significant manner or to a significant extent not already considered, a supplemental EIS must be prepared.”).

Because the FEIS analyzed only the proposal of using the HDD method to cross the Hudson River, FEIS at 2-36, an alternative crossing plan would constitute a change to the project requiring supplemental environmental review. FERC would be required to prepare an Environmental Assessment to determine whether the proposed alternative crossing method was a “substantial change[] in the proposed action” and what different environmental concerns that change would cause. As the FEIS acknowledges, if the proposed HDD crossing of the Hudson fails, the crossing at the proposed location would require open-cut trenching methods that would have substantial adverse impacts. The FEIS expressly declined to evaluate the impacts of an open-cut crossing and their potential mitigation based on “the potential to avoid these effects using the HDD method.” FEIS at 3-21, 3-45. An alternative using an open-cut crossing method would involve different, potentially significant adverse impacts to the environment, including aquatic and benthic habitat and vegetation, turbidity and re-suspension of contaminated sediments, water quality and water chemistry, bank stability and erosion, aquatic

organisms, endangered species, fisheries, and essential fish habitats.³⁷ These and other potential impacts of the new waterbody crossing plan must be identified, analyzed, and mitigated through preparation of an environmental assessment and, if necessary, an SEIS before FERC approves the use of such a method for the AIM project's Hudson River crossing. Failure to conduct this additional environmental review will be a violation of NEPA; the Commission must take the requisite "'hard look' at environmental consequences," *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989), prior to approving this "major federal action significantly affecting the quality of the human environment, 42 U.S.C. §4332(2)(C). See *Env'tl. Defense Fund v. Marsh*, 651 F.2d 983, 991, 1005-06 (5th Cir. 1981) (requiring the preparation of an SEIS where there were major changes in the design and economic projections for the waterway project that constituted "major federal actions significantly affecting the quality of the human environment").

Petitioners respectfully requests that Environmental Condition 16 be revised to reflect the Commission's NEPA obligations as follows:

In the event of an unsuccessful HDD at the Hudson or Still Rivers, Algonquin shall file with the Secretary a plan for the crossing of the waterbody. This shall be a site-specific plan that includes scaled drawings identifying all areas that would be disturbed by construction. **FERC Staff shall conduct a supplemental environmental review of the plan, including, if the crossing may have significant adverse environmental impacts not evaluated in the FEIS, preparation of a Supplemental Environmental Impact Statement ("SEIS") analyzing those potential environmental impacts of the plan.** Algonquin shall file this plan concurrent with the submission of its application to the U.S. Army Corps of

³⁷ See, e.g., FEIS at ES-4-5, noting that using the HDD method would "avoid in-stream disturbance" of the waterbodies, "avoid direct effects to the Hudson River Important Bird Area, aquatic habitats, and adjacent riparian habitats," "have minimal, if any, adverse effects on essential fish habitat or managed species," and "have no effect on the shortnose surgeon [and] Atlantic sturgeon."

Engineers and other applicable agencies for a permit to construct using this alternative crossing plan. The Director of OEP must review **the plan and the supplemental environmental review**, and approve this plan in writing before construction of the alternative crossing.

H. The Commission Erred in Concluding That the AIM project Will Not Result in Increased Safety Impacts at the Indian Point Nuclear Facility.

The Commission must consider project safety both as part of its review under NEPA and the public interest analysis under Section 7 of the Natural Gas Act. *See Washington Gas Light & FERC*, 532 F.3d 928 (D.C. Cir. 2008)(remanding certificate based on the Commission's failure to show that project would be safe). The Commission has an independent obligation to review safety issues, and cannot rubber-stamp findings of another agency. *See, e.g., Bangor Hydro v. FERC*, 78 F.3d 659 (D.C. Cir. 1996)(vacating Commission decision adopting mandatory prescription from Department of Interior without reviewing evidentiary support).

Here, the Commission's actions relating to Indian Point are deficient on three counts. First, the FEIS failed to address expert testimony submitted that disputed Entergy's Safety Analysis and the NRC's Confirmatory Report. Second, the Certificate Order fails to accurately describe the dangers associated with the Indian Point facility and lacks substantial evidence to support its cursory conclusion that the AIM project will not affect the safety of the Indian Point reactor. Third, notwithstanding its obligation to ensure safety, the Commission improperly relied on the NRC's findings when they have been subject to challenge, and the NRC's position continues to evolve.

1. The FEIS failed to address Mr. Kuprewicz's and Mr. Blanch's expert report.

Section 1502.24 of the CEQ regulations emphasizes that "agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in

the environmental impact statements.” An agency must evaluate the scientific evidence presented, respond to opposing viewpoints and provide reasons for rejecting an expert’s analysis. See *Protect Our Communities v. Salazar*, Case No. 12-cv-2211 (S.D. Cal. 2013)(finding that agency’s consideration of expert opinions by petitioners along with agency experts satisfied NEPA). Failure to address expert opinions will result in invalidation of the agency’s EIS. See *Western Watersheds v. Kraayenbrink*, 632 F.3d 472, 492 (9th Cir. 2010)(remanding EIS where BLM failed to address concerns about project’s impacts raised by its own experts as well as other federal and state agency experts); *Lands Council v. McNair*, 537 F.3d 981, 1001 (9th Cir. Idaho 2008)(reaffirming that agency “must acknowledge and respond to comments by outside parties that raise significant scientific uncertainties” with reasonable support).

The Commission’s FEIS devoted a scant two paragraphs to safety issues at Indian Point. Relying primarily on Entergy’s Safety Analysis and the NRC’s review, the FEIS concluded that the AIM Project poses no increased risks to IPEC and there is no significant reduction in the margin of safety. See FEIS at 4-235-245. The FEIS does not mention any of the serious safety hazards discussed by Mr. Blanch, or reports submitted by Mr. Kuprewicz on November 3, 2014 and January 2015 (attached in Exhibit 3) which questioned Entergy’s and the NRC’s assumption that a pipeline rupture could be addressed in a three minute time-frame. Mr. Kuprewicz explained that:

This assumption is unreasonably optimistic, ignoring both systemic dynamics (compressor and pipeline system rupture dynamics/interactions that mask remote rupture identification), uncertainty in the SCADA monitoring that will further delay remote recognition of a pipeline rupture and control room operator confusion and related human factors that will easily further delay control room response actions of a pipeline rupture, all of which will work to

river response well beyond the assumed three minute time. In addition the 3-minute assumption disregards initial release and subsequent blow down times dictated by the law of thermodynamics related to pipeline rupture, even large 42-inch transmission pipelines.³⁸

Accordingly, Mr. Kuprewicz urged that the Analysis “more thoroughly assess the impact of the pipeline rupture on the Indian Point facilities.”

Mr. Kuprewicz’s first set of comments were submitted on November 3, 2014 – more than two months before the Commission issued the FEIS. Mr. Blanch’s comments were filed in September 2014 in response to the DEIS. The failure of the FEIS to address either expert’s comments on safety merely because they differ from the applicant’s preferred approach, or to accept his advice to perform additional safety analysis undermines the scientific integrity of the Commission’s environmental review and violates the CEQ regulations.

2. The Commission’s conclusions are not supported by substantial evidence.

Given the questions raised by Mr. Kuprewicz and Mr. Kuprewicz, the Commission could not rationally assure the safety of the pipeline, as was the case in *Washington Gas Light v. FERC*, 532 F.3d 928. There, the D.C. Circuit remanded a Commission order which relied on safety assumptions unsupported by substantial evidence in approving an LNG project. A local utility challenged the Commission’s findings, arguing that the influx of LNG would cause its system to suffer severe leakage, and that any measures to reinforce its system could take up to a decade to implement. Notwithstanding the utility’s protest, the Commission declared that there was ample time for the utility to take corrective measures that would allow it to safely accept the liquefied gas by the time the LNG facility was constructed. The court disagreed, and vacated the Commission order finding that there was no substantial evidence to support

³⁸ Kuprewicz Report at 8.

the Commission's assumption that the utility fix its system in a timely manner so as to avoid any safety risks when the LNG facility came online.

As in *Washington Gas*, here the Commission made assumptions about the safety of the Indian Point plant that are likewise unsupported by the record. Mr. Kuprewicz reviewed the Entergy Report and found a key deficiency that would jeopardize public safety: the report made a critical – and unrealistic assumption of a three minute response time to identify and close gas mainline response valves in the event of a rupture.³⁹ Mr. Kuprewicz went on to explain that the three-minute assumption “disregards initial release and subsequent blow down times dictated by the law of thermodynamics” and noted that “history is filled with clear examples of gas transmission pipeline rupture events generating high heat flux events well past an hour.”⁴⁰ Accordingly, Mr. Kuprewicz strongly recommended a more thorough independent assessment of the impact of pipeline rupture on the Indian Point facilities.

Since that time, additional information has emerged. The NRC's response to Mr. Blanch's FOIA request in February 2015 shows that the NRC improperly relied on the ALOHA model, which is prohibited for a pipeline broken in the middle and leaking at both ends.⁴¹ The NRC conducted a formal petition review call (transcript attached as part of Exhibit 3), and could not substantiate the basis for the three-minute rule other than citing the Algonquin Resource Report 11. Throughout February and March 2015, various legislative representatives contacted the Commission to bring these new developments to its attention, urging the Commission not to rush its decision and to

³⁹ Kuprewicz Letter at 8, submitted on November 21, 2015.

⁴⁰ *Id.*

⁴¹ See Exhibit 3, Statement of Facts at 2.

undertake a transparent, independent risk assessment.

Yet, just as the Commission completely ignored safety and gas leakage issues raised by the local utility in *Washington Gas*, so too here, the Commission ignored pipeline safety experts, the NRC's hearing reconsidering its position and congressional input warning it of these problems. As in *Washington Gas*, the Commission cannot reasonably assure the safe operation of the project in the face of overwhelming evidence that suggests otherwise. Accordingly, the Commission's order must be vacated on rehearing, and the Commission must either deny the certificate (if it cannot assure project safety) or alternatively, undertake a robust independent analysis, or await more definitive resolution of these issues by the NRC.

3. **The Commission cannot simply accept, without independent review, the NRC's conclusions which have now been called into question by new evidence.**

The Commission may claim that safety of the nuclear facility rests with the NRC, rather than the Commission. Even so, the Commission has an independent obligation to ensure safe operation – and it cannot blindly accept the NRC's conclusion that a breach or explosion of the 42-inch AIM pipeline would not adversely impact safe operation of the Indian Point facility – particularly when those conclusions have been the subject of vigorous challenge, and are still evolving.

The D.C. Circuit's ruling in *See Bangor Hydro v. FERC*, 78 F.3d 659 is instructive. There, the Commission was directed by statute to require a hydropower license applicant to construct fishways at a dam if prescribed by the Department of Interior and appropriate for fish protection. Accordingly, the Commission granted a license conditioned on the applicant's construction of fishways. The applicant challenged the Commission order, arguing that the record lacked any evidence showing that fishways were needed to protect the fish population. The Commission responded that it was

bound to accept Interior's recommendation. The court disagreed, holding that the Commission had an independent obligation to ensure that its entire order – including the fishway condition – was supported by substantial evidence, even if the condition was included at the recommendation of another agency. The court went on to find that the record was void of any evidence to show that fish passages were needed and thus, vacated the Commission order.

As in *Bangor Hydro*, irrespective of the NRC's conclusions, the Commission has an independent obligation to support its certificate with substantial evidence. Here, also as in *Bangor Hydro*, the record is lacking in evidence that would allow the Commission to conclude, based on substantial evidence that the Indian Point project continue to operate safely once the AIM pipeline is built. Accordingly, the Commission must vacate its order and deny the certificate or alternatively, await a ruling from the NRC resolving these issues.

I. The Commission Erred in Concluding That the AIM project Will Not Result in any Disproportionately High or Adverse Environmental and Human Health Impacts on Minority or Low-Income Communities, or Indian Tribes.

The Commission failed to consider the disparate health related impacts to environmental justice communities and did not provide the meaningful involvement to these impacted communities that is required in the NEPA decision-making process.

Environmental Justice Requirements

Low income communities and communities of color have historically been overburdened as a result of air pollution, water pollution and the disproportionate locating of undesirable land uses in those communities. Executive Order 12898, issued on February 11, 1994, outlined Federal policies to address those environmental justice issues, and CEQ released guidance in 1997. Since 2003, Environmental Justice Policy,

CP-29, has governed NYSDEC actions during review of actions under the New York State Environmental Quality Review Act.

The federal and state guidance and policy define environmental justice as the "fair treatment" and "meaningful involvement" of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.⁴²

"Fair treatment" means that no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental and commercial operations or policies.

"Meaningful involvement" means that (i) all people should have an opportunity to participate in decisions about activities that may affect their environment and/or health; (ii) the public's contribution can influence the regulatory agency's decision; (iii) their concerns will be considered in the decision making process; and (iv) the decision makers seek out and facilitate the involvement of those potentially affected.⁴³

The City of Peekskill is an Environmental Justice Community

In 2010, the City of Peekskill prepared a Community-Based Environmental Justice Inventory (Environmental Justice Inventory).⁴⁴ The City inventory reviewed, identified, and analyzed, the following community characteristics:

⁴² NYSDEC Commissioner Policy 29 "Environmental Justice Policy," March 19, 2003.

⁴³ U.S. EPA.
<http://compliance.supportportal.com/link/portal/23002/23009/Article/32790/How-Does-EPA-define-Environmental-Justice>

⁴⁴ The Environmental Justice Inventory was funded in part from a grant from the New York State Department of Environmental Conservation, And prepared with the assistance of that agency's Office of Environmental Justice.

- a. Areas where a number of residents are living below the poverty line and/or where minorities comprise more than 51.1 percent of the population
- b. Current environmental burdens on Peekskill and surrounding areas
- c. Comparative health status and adverse health effects in Peekskill

The Environmental Justice Inventory found:

- a. Peekskill has a population of around 25,000, with approximately 47% of its population being non-white and approximately 22% being Latino (of any race).
- b. Neighborhoods within a 12.5-mile radius of downtown Peekskill are home to at least 2 hazardous waste handlers, 7 hazardous waste facilities, 19 solid waste facilities, 27 major and minor air polluters, 87 industrial surface water sites, 20 municipal surface water sites, 15 toxic release facilities, 47 hazardous waste handlers, and 23 toxic release sites. The majority of the toxic release sites, hazardous waste, solid waste facilities and wastewater facilities are located in predominantly African-American communities.
- c. Health data comparing Peekskill to surrounding communities indicates that Peekskill has unusually high rates of asthma, including emergency room visits and hospitalizations, respiratory cancers, death due to cardiovascular disease, and high incidents of low birth weight.

West Roxbury is an Environmental Justice Community.

In addition to Peekskill, West Roxbury was also recognized as an environmental justice community in the DEIS at 315. As the DEIS describes, in Massachusetts:

Environmental justice populations are those segments of the population defined as neighborhoods (U.S. Census Bureau census block groups) that meet one or more of the following criteria:

- ☐ the median annual household income is at or below 65 percent of the statewide median income for Massachusetts;
 - ☐ 25 percent of the residents are minority;
 - ☐ 25 percent of the residents are foreign born; or
 - ☐ 25 percent of the residents are lacking English language proficiency.
- According to the 2010 U.S. Census data, 11.4 percent of the Town of Dedham's population in Norfolk County is located in environmental justice block groups that meet the 25 percent minority criteria listed above. Of the 2.9 miles of the West Roxbury Lateral in Dedham, about 1.4 or 47 percent would cross through a portion of one of these groups. **In Suffolk County, the Project would pass through environmental justice block groups in West Roxbury that meet two of the above four criteria (25 percent minority, below the 65 percent of the median income, or a combination of the two). All 1.7 miles (100 percent) of the AIM Project pipeline in West Roxbury would cross through these groups and/or traverse along the outer edges of these groups.**

DEIS at 315, emphasis added.

Final EIS Analysis of Environmental Justice Issues

Environmental justice issues are analyzed in Section 4.9.10 of the Final EIS. That analysis is clearly deficient with regard to both the consideration of health effects and the involvement of the impacted communities.

The Final EIS notes that the Council on Environmental Quality (CEQ)⁴⁵ called on federal agencies to actively scrutinize the following issues with respect to environmental justice:

1. The *racial and economic composition* of affected communities;
2. *Health-related issues* that may amplify project effects on minority or low-income individuals; and
3. *Public participation* strategies, including community or tribal participation in the process.

Racial and Economic Composition. Regarding the composition of affected communities, the FEIS identifies two census block groups⁴⁶ with minority populations greater than 51.5%⁴⁷ that approximately 940 feet of the pipeline would cross,. Those crossings would occur on either side of the point where the pipeline crosses Route 9A near MP 5.8.

Although the Final EIS concludes that the work within those areas "would not be located through neighborhoods," the attached maps and other data indicate that the construction would take place approximately 50-75 feet from homes in Peekskill and Cortlandt neighborhoods.

Health Related Issues.

The AIM Project would have adverse impacts on neighborhoods within Peekskill that already have a disproportionately high number of hazardous facilities and the air

⁴⁵ Council on Environmental Quality, *Environmental Justice, Guidance Under the National Environmental Policy Act*, Executive Office of the President, Washington, D.C. 1997.

⁴⁶ Those are Census Tract 141, Block Group 4 and Census Tract 141, Block Group 3 with 57.3% and 53.9% minority populations, respectively.

⁴⁷ EPA Region 2 guidance for Environmental Justice areas.

and water pollution associated with the operation of those facilities. The operation of a 'pigging' station in Buchanan and the operation of an expanded M&R station and its associated systems in Peekskill would significantly increase the local residents exposure to air pollution. In addition to everyday impacts from the gas pipeline, M & R and pigging stations, and their infrastructure systems, there will be adverse impacts associated with the construction of the pipeline including temporary increases in dust, noise, and traffic. The Final EIS argues that "These impacts would occur along the entire pipeline route and in areas with a variety of socioeconomic backgrounds."

While the adverse environmental impacts would occur along the entire pipeline route, the Commission does not provide sufficient analysis to effectively determine if the project would result in a disproportionately high and adverse impact on these minority and low-income populations. No analysis of the specific health impacts on residents of the environmental justice areas – including Peekskill and West Roxbury -- was conducted. The Environmental Justice Inventory found a number of adverse health impacts already in the area. Where communities are already subject to higher levels of environmental assaults, the added degradation of air quality, increased noise and increased traffic impacts must be seriously considered. The differential impacts on high pollution environmental justice areas and on other areas along the pipeline route must be considered. It was not.

Public Participation.

The Commission staff's public outreach efforts failed to meet the requirements of the CEQ guidance - there was no "meaningful involvement" proposed for environmental justice communities. The Final EIS notes that "In its comments on the draft EIS, the EPA recommended some non-traditional communication techniques to improve success in

contacting some of the low income and minority communities along the proposed Project route" and that in response, Algonquin has agreed to prepare fact sheets in Spanish to be posted on the Project website and would prepare notices regarding public meetings and, in the future, notices regarding construction information in Spanish for the identified environmental justice communities.⁴⁸

This effort, to acknowledge the actual legal requirements of the review after the close of the public record, is antithetical to the purpose of environmental justice policies.

In fact, there were minimal, if any, efforts to meet environmental justice obligations. The populations of people in the pathway of the proposed pipeline expansion, and those folks specifically identified by the policy, such as non-white and Latino populations, were not "sought out" in any manner. Notices about the project were not provided in Spanish. No notices were included in any publications, social networking, or broadcast media that serve the African-American, Latino or other minority populations. There was no involvement of City agencies that serve members of those populations like the Peekskill Housing Authority, the Youth Bureau or the Human Relations Commission. Anecdotal evidence would suggest that the vast majority of non-white and Latino households did not know about the proposed pipeline during any of the comment periods and are still unaware of this proposed project.

The Final EIS reports that FERC conducted a public scoping meeting in the Town of Cortlandt, met with the officials in the City of Peekskill on at least five occasions to discuss the AIM Project, and that all landowners received information about the project

⁴⁸ West Roxbury residents received a mailer from Algonquin in December 2014 which many found was misleading, as described in a response sent to Spectra. In addition, Spectra's response to questions from West Roxbury residents were not helpful. See Attachment 8 (West Roxbury questions to Spectra and responses, and response to mailer).

and were invited to attend information meetings by Algonquin and public meetings by the FERC. Although the Final EIS asserts that there were "at least five meetings" between Algonquin and Peekskill city officials, no specific information is provided regarding the outreach efforts undertaken nor is any information provided about the diversity of the residents that attended the meetings. None of those actions for public outreach undertaken during the NEPA review remedies the omission of involvement of the environmental justice community in this project. The only way that FERC can seek to remedy this situation is by granting the request for a rehearing.

Conclusion

The summary conclusion regarding environmental justice in the Final EIS presents no evidence that the public's contributions had any "influence [on] the regulatory agency's decision" or that "their concerns" were "considered in the decision making process." In fact, the Final EIS acknowledges what should have been done to make efforts to reach all of the impacted communities - and the Final EIS was issued after that process was concluded. The absence of any meaningful notice deprived the public of an opportunity to comment. The absence of and meaningful analysis of the AIM Project's impact on population health and other environmental justice issues failed to provide the requisite "hard look" at the proposed pipeline's impact on minority populations. A full analysis of alternative routes and the differential health impacts needs to be provided as part of a rehearing process. As a result, this request for rehearing must be granted. The guidance and policies of both the federal and state governments provide clear demographic analysis parameters for impacted populations and requires additional outreach steps be taken when those parameters exist. Without explanation, the policy was simply not followed by FERC. The agency is not permitted

to enact environmental reviews in this manner. Thus, rehearing must be held to correct those lapses.

J. The Commission Failed To Support Various Findings of Fact With Substantial Evidence as Required by Section 717r(a) of the Natural Gas Act.

1. The Commission's conclusion that the compressor station will not adversely impact air quality is unsupported.

The FEIS findings that the compressor stations will not adversely impact air quality are unsupported by substantial evidence. Algonquin has made public statements about its AIM project giving the false impression that, because of its replacing older compressor units with new compressor units, the project will reduce emissions at the compressor stations.⁴⁹ Such statements are intended to quell protest by impacted neighbors of the compressor stations. These statements are misleading and inaccurate.

The 2013 actual emissions data reveal that the Southeast Compressor Station released less CO than will occur under the NYDEC's draft air quality permit going forward. Specifically, Southeast in 2013 emitted less than 7.5 tons of CO, whereas the draft permit allows the compressor station to emit over 52 tons of CO. The Commission

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⁴⁹ See, e.g., Spectra Energy Corp comments to the New York Energy Highway Request for Information, *available at* <http://www.nyenergyhighway.com/Content/documents/51.pdf>.

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The Certificate Order does not consider other issues related to air quality – such as contribution of diesel and gasoline engine gas and particle to local and state air quality during the West Roxbury Lateral construction phase of the project in the 2015 and 2016 “ozone seasons.” Ultrafine particles from diesel construction equipment contribute emissions are associated with increases in respiratory diseases (such as asthma) and hospitalizations, especially for at risk populations such as children and the elderly. The Commission did not consider these impacts on residents near the West Roxbury lateral.⁵¹

2. The Commission's conclusion that the project will not diminish property values or increase the cost of homeowners' insurance is unsupported by substantial evidence.

In *Constitution Pipeline*, the Commission acknowledged the possibility that placement of a pipeline on a property might increase the cost of homeowner's insurance. 149 FERC ¶61,199 (2014) at 94-98. Thus, the Commission directed

⁵⁰ See, e.g., Spectra Energy Corp comments to the New York Energy Highway Request for Information, *available at* <http://www.nyenergyhighway.com/Content/documents/51.pdf>.

⁵¹ The record includes the GZA Report, commissioned by Spectra, addressing health and safety aspects of the West Roxbury lateral. The report relies on several erroneous assumptions, such as addressing a single incident rather than probability of fly-rock incidents, and ignoring cumulative impacts. A summary of the deficiencies in the GZA Report is attached as Exhibit 4.

Constitution to monitor the impact of the project on property insurance rates for a two year period following installation of the pipeline. Here, notwithstanding comments advising the Commission about the project's dangers, and potential to devalue homes, the Commission failed to fully consider these impacts and provide adequate mitigation.

3. **The Commission's conclusions that the AIM expansion in the Blue Mountain Reservation and Reynolds Hills would not substantially alter local wildlife populations, including 'special status species' and that no additional surveys are necessary within those properties, are not support by substantial evidence.**

The wetlands and the Dickey Brook waterway on the Reynolds Hills property support vegetation typically adapted to live in saturated soil conditions. They provide food, shelter, drinking water and breeding grounds for many species that are important for an intact ecological system and are a source of significant biodiversity. In describing the adjacent Blue Mountain Reservation, a 1,538-acre county-owned park, the Final EIS states that:

The reservation is also classified as a biodiversity hub in the Croton-to-Highlands Biodiversity Plan, because it provides an area of high-quality wildlife habitat in a densely developed area for many wildlife species, including amphibians and reptiles, such as spotted salamanders, gray tree frogs, wood frogs, garter snakes, milk snakes, and the black rat snake (Miller and Klemens, 2004). The mixed hardwood forest also provides habitat for many forest-dwelling bird species

However, the Final EIS also states that

Because Algonquin would largely make use of its existing rights-of-way and would adhere to its SPCC Plan, E&SCP, and other measures discussed in this EIS, we conclude that Algonquin's proposed pipeline facilities would not substantially alter local wildlife populations.

The information in the FERC *Final Survey Reports* regarding protected species has been marked privileged and confidential, so it has not been made available for review and public comment. This has prevented meaningful public review of a critically

important issue – protection of species, particularly threatened, endangered, or species of special concern.

On December 31, 2014, a preliminary study of the areas east of Route 9 between approximately MP 5.3 and MP 8.0⁵² was carried out by Dr. Erik Kiviat, Director of Hudsonia, Ltd. Dr. Kiviat is an endangered species expert and certified wetlands scientist⁵³. He noted:

Potentially Occurring Rare Flora and Wildlife

All wild native species of organisms and their habitats are important to conserve. This biological diversity (biodiversity) is an important current and potential resource for human use, plays important roles in the maintenance of other natural resources such as the quality of air, water, and soil, and provides important information about conditions in nature (indicator species). Each state has a list of Species of Greatest Conservation Need (SGCN) identifying those animals that need conservation attention; this list is created and updated by the New York State Department of Environmental Conservation (DEC). The SGCN list includes animals listed as Endangered, Threatened, or Special Concern, as well as other species not so listed. Each state also has a program that ranks and tracks rare plants; ours is called the New York Natural Heritage Program (NHP). Plants are ranked on a scale of statewide rarity from S1 (the rarest) to S5 (the most common); plants ranked S1, S2, and S3 are of conservation concern. State-listed Endangered and Threatened species have legal protection in New York. Protection of Special Concern species and rare plants is limited and depends on the species. However, all of these species not currently listed as Endangered or Threatened have the potential to become endangered if they are not conserved, and the first step in conservation is to identify which species are at risk of negative impacts from development projects such as the proposed pipeline expansion.

⁵² See *Preliminary Biodiversity Assessment of the Algonquin Gas Pipeline at Reynolds Hill and Blue Mountain Reservation, City of Peekskill and Town of Cortlandt, Westchester County, New York*, Erik Kiviat, January 12, 2015.

⁵³ Dr. Kiviat has studied the plants and animals of the region for 40 years and has authored or co-authored 80 publications and 200 technical assistance reports on wetland ecology, rare species conservation, habitat ecology, introduced species, the Hudson River, and other subjects. Erik is the author of *The Northern Shawangunks: An Ecological Survey*; *Hudson River East Bank Natural Areas*; and *Hackensack Meadowlands, New Jersey, Biodiversity: A Review and Synthesis*. He is a Certified Wetland Scientist. See <http://hudsonia.org/about/people/>.

Exhibit 4 (attached) compares the observations of Dr. Kiviat regarding species of special concern to the information in Table 4.7.1-1 and in the accompanying text in the Final EIS. The discrepancies between the information provided in the Final EIS and the first hand observations by Dr. Kiviat indicate that additional studies of vulnerable species should be performed at the very minimum. No decision regarding potential threats from the pipeline project can be established until all species of special interest have been identified - therefore the conclusions that the AIM expansion in the Blue Mountain Reservation and Reynolds Hills would not substantially alter local wildlife populations - including 'special status species' - and that no additional surveys are necessary within those properties, are not supported by substantial evidence.

K. The Commission Cannot Confer Eminent Domain Powers on Algonquin Regarding New York Parkland Until a Full Environmental Review has been Completed.

As a matter of law, Westchester County cannot convey any property within the Blue Mountain Reservation to Spectra without first alienating the parkland under State law or without having the property duly and properly condemned under eminent domain authority granted by the Commission. During the gas pipeline approval process, Spectra's submission makes clear its intent to conduct pipeline replacement work in Blue Mountain Reservation that exceeds the scope of the current easements it has with Westchester County for use of County property, and would require use of eminent domain power granted by the petition. However, the Commission failed to consider many pieces of information and many pieces are missing from the record - including wetlands, biodiversity, endangered plant and animal species, loss of recreational uses and others - that are necessary for the valuation of the County owned Reservation property and for any actions regarding future use.

1. Overview of the Blue Mountain Reservation and Pipeline Easement

The Reservation is an incredibly valuable gem in the Westchester County Park System. It's history traces back to 1926, when the County Parks Commission noted:

*This reservation will comprise approximately 1500 acres and is one of the finest tracts of picturesque, rugged woodland in the County. It includes three small lakes, a large brook and several smaller ones, and if approved will help to supply the increasing public demand for camping places.*⁵⁴

In the 1950s and 1960s, the current easements encumbered the parkland, identifying the route and limiting the use on the property. The permanent easements are for 3 feet on each side of centerline of the pipeline. The easement language specifically states that:

*the Grantee shall not make substantial deviation from the above described line without first obtaining consent of grantor.*⁵⁵

The easements also include specific obligations on the pipeline company to essentially pay or restore any damage it creates. In each easement, Paragraph 9 contains the same language:

And Grantee shall repair or pay for all such damages caused by or arising out of or in connection with its activities in maintaining, operating, altering or removing said pipeline subsequent to the final Completion of the original construction and installation of the same.

The maintenance sections of the easements limit such work to 75 feet. The right-of-way both limits the work that can be done in the right-of-way in the Reservation and obligates the Grantee to repair or pay for all damages it causes.

⁵⁴ Westchester Park Commission Annual Report, January 4, 1926 at page 71.

⁵⁵ The 1952 easement for the 26-inch Algonquin Pipeline can be found at liber. 5118 page 447. The 1964 easement for the 30-inch Algonquin Pipeline can be found at liber. 6459 page 389.

2. **Algonquin Cannot Meet Its Obligation Under the Existing County Easements**

Despite the issuance of the Certificate Order, there remain many unknowns that make any Westchester County transaction with the company impossible. On January 14, 2015, Hudsonia, Ltd. presented an analysis and report to the Westchester County Board of Legislators Labor, Parks, Planning & Housing Committee, that demonstrates that there are problems with the FERC record - including misidentification of wetlands that are located in the Reservation and problematic analysis of endangered, threatened, and species of special concern issues. The wetlands issues are the subject of Clean Water Act permit applications currently pending before the Department of Environmental Conservation.⁵⁶

The wetlands issues are relevant because of the evident overlap between Spectra's proposed new work areas (outside of the right-of-way) and the location of regulated wetlands (in and adjacent to the right-of-way). Two wetland areas inside the Reservation that are likely subject to DEC wetlands jurisdiction are slated for large scale and widespread pipeline construction impacts because they are in the right-of-way pathway.⁵⁷ The disturbance of the wetlands, the hydrogeology (both on and off-site), the

⁵⁶ See NYSDEC Permit Application ID: 3-9903-00099/00002 - Freshwater Wetlands, Application ID: 3-9903-00099/00003 - Part 401 Water Quality Certification, Application ID: 3-9903-00099/00004 - Stream Disturbance, Application ID: 3-3730-00060/00013 - Air Title V - Southeast Compressor Station, Application ID: 3-3928-00001/00027 - Air Title V - Stony Point Compressor Station. The biodiversity issues have been re-submitted to the United States Fish and Wildlife Service on March 4, 2015. The failure to properly identify wetlands was been raised with the United States Army Corp of Engineers and NYSDEC and Reynolds Hills has requested the each agency to duly and properly delineate the Reynolds Hills and Blue Mountain Reservation wetlands as required by federal and state law and regulation.

⁵⁷ "Preliminary Biodiversity Assessment of the Algonquin Gas Pipeline at Reynolds Hill and Blue Mountain Reservation, City of Peekskill and Town of Cortlandt, Westchester County, New York" by Erik Kiviat, PhD ("Hudsonia") at page 5.

forest, the biodiversity, and the general topography will markedly and permanently impact Blue Mountain Reservation. The right-of-way construction will also permanently change and impact a wetlands complex in the Reynolds Hills property adjacent to the Reservation (also subject to Spectra's failure to identify DEC jurisdictional wetlands).⁵⁸ In addition, there may be Native American archeological and historical resources that would be impacted by the proposed construction in both areas, and Tribal representatives are seeking to explore and analyze the entire right of way this Spring.⁵⁹

The record, on which the FERC decision to issue a certificate is based, creates a significant problem. The lack of a complete record identifying all of the issues and the values - biological, historical, aesthetic, recreational, or otherwise - prevents a full understanding by Westchester County of the true costs of repairs and payment for any damages caused by the pipeline work. Spectra had ample time to properly complete the record and to meet its review obligations under the National Environmental Policy Act. Without meeting these clear legal requirements, it is unable to meet its obligations to the County under the existing easements and it now has no basis to properly value the significant amount of parkland it will destroy and/or permanently change during the pipeline construction and expansion process.⁶⁰

⁵⁸ Hudsonia at page 5.

⁵⁹ There has been no opportunity for the review or analysis by Native American Tribal representatives, as is required.

⁶⁰ Further, the proposal to merely re-seed the construction areas as "restoration," without regard to substantial botanical considerations such as preserving native species, decreasing invasive species, and limiting wetland disruption and destruction during construction, cannot be said by any measure to compensate for the construction impacts.

3. Westchester County and the New York State Legislature Cannot Approve Parkland Alienation for the Expansion of Spectra Work Beyond the Right of Way.

In New York, the Public Trust Doctrine addresses changes in the use of parkland. The doctrine, and many years of case law, make clear that “any conveyance” of parkland, especially that of the right to construct, use and maintain a pipeline in an over mile long right-of-way must meet parkland alienation requirements.⁶¹ Further, the scope and scale of the impact to Blue Mountain Reservation prohibits consideration of the project for any of the very limited exceptions to the full parkland alienation requirements. The doctrine requires that any attempt to alter the use of parkland, like those contemplated by Spectra (whatever it calls the property interest whether a revocable license or an easement) must be subject to an act of the New York State Legislature.⁶² In addition, the alienation process requires compliance with the State Environmental Quality Act. This doctrine, and its implementation in countless situations involving changes to parkland in New York demonstrate the State’s commitment to the value of its parklands like Blue Mountain Reservation. The need for the extraordinary involvement of the State legislature is consistent with the views and comments about Blue Mountain Reservation made over 80 years ago by the then County Parks Commission.

New York State law prohibits Westchester County from entering into any conveyance with Spectra or any other company for any conveyance of Blue Mountain

⁶¹ The term conveyance is expansive, as is “any conveyance.” For example, the Real Property Law of New York defines conveyance as “every instrument, in writing, except a will, by which any estate or interest in real property is created, transferred, assigned, or surrendered.” See Section 240(1). Similarly, the Courts in New York have had a similarly expansive reading of the term as the public trust doctrine for parkland alienation has been interpreted over the years.

⁶² Handbook on the Alienation and Conversion of Municipal Parkland in New York <http://parks.ny.gov/publications/documents/AlienationHandbook.pdf>.

Reservation without first meeting the parkland alienation requirements. Any action by Spectra to acquire conveyances is similarly restricted. The current easements restrict work areas and require repair or payments for damages associated with work on the pipeline. The County, which holds the Reservation in trust for the public, has a significant obligation to protect it. The proposed construction would extend over a mile within the Reservation and would result in substantial damage and destruction that would be permanent and not repairable⁶³. Based upon the incomplete record, the County (or any other entity) cannot determine the value the right-of-way as it is obligated to do.

4. The Commission Should Not Issue an Order to Proceed or Grant Eminent Domain Powers to Spectra for the Expansion of Spectra Work Beyond the Right of Way in New York Parkland Without Reopening the Record and Reconsidering the Issues.

Spectra's actions in the review of the gas pipeline proposal also have the effect of preventing it from exercising eminent domain powers at this time. The Blue Mountain Reservation in Westchester County is an asset of untold value to the residents of Westchester County. Even in the best of circumstances it would be difficult to ascertain a financial value for it given the aesthetic, recreational, and environmental values it serves. These ecological values are significant - biodiversity, threatened or endangered species, and wetlands - as is the need for a viable and credible plan to preserve, protect or restore the Reservation. The exercise of eminent domain for AIM gas pipeline expansion, approved by the Commission this month, would require that this difficult valuation task be done.

The actual impacts to the parkland from the proposal would need to be fully understood. The efforts of Spectra to analyze and understand the numerous impacts to

⁶³ The company has not even proffered any restoration or conservation plan commensurate with the significance of the park.

this parkland have fallen short. They do not have a record upon which to fully understand the impacts to the park.

The eminent domain process, under FERC authority, for any such conveyance of Blue Mountain Reservation property cannot be completed. Eminent domain requires that property only be taken with just compensation. Based upon the record, the company cannot meet that significant Constitutional requirement. There is no basis to reach a reasonable or rational valuation of the Reservation lands. Thus, the requirements of eminent domain cannot be met and should not be granted.

L. The Commission erred by failing to hold a hearing to resolve disputed issues of material fact.

The Commission must hold a hearing to resolve disputed issues of material fact. *Cajun Electric v. FERC*, 298 F.3d 173, 177 (D.C. Cir. 1994). Here, one party, William Huston, requested a hearing, finding that Mr. Huston's issues could be resolved on the record.

Yet the record overflows with issues of materials fact, ranging from whether AIM will support gas export to whether the project is overbuilt to dozens of disputes over the extent of environmental harm. Perhaps the most serious factual dispute concerns the differing opinions over the safety of Indian Point, with both Mr. Kuprewicz and testimony before the NRC documenting safety risks, while a study by Entergy, Indian Point's owner concluded that the AIM project would not increase risks. The record also contains disputed facts as to segmentation, with Mr. Kuprewicz presenting evidence that Algonquin segmented the pipeline even though Algonquin claims otherwise. The Commission erred by failing to set these factually disputed issues for hearing.

VI. REQUEST FOR STAY

The Commission reviews requests for a stay under the standard

established by the Administrative Procedure Act, 5 U.S.C. §705, and will grant a stay when "justice so requires." *See, e.g., National Fuel*, 139 FERC ¶ 61,307 (2012)(reciting standards for a stay). In assessing a stay, the Commission considers several factors, which typically include: (1) whether the party requesting the stay will suffer irreparable injury without a stay; (2) whether issuing the stay may substantially harm other parties; and (3) whether a stay is in the public interest. The basis for a stay is fact specific and involves a balancing of all of these factors. *Virginia Petroleum Jobbers v. FERC*, 259 F.2d 921 (D.C. Cir. 1958)(listing factors considered in issuance of stay, including whether absence of stay will preclude future relief).

A. The Parties Will Suffer Irreparable Harm in the Absence of A Stay

To justify a stay, a party must demonstrate the prospect of injury that "must be both certain and great; it must be actual and not theoretical. *Wisconsin Gas v. FERC*, 788 F.2d 669, 674 (D.C. Cir. 1985). Moreover, the injury must be irreparable; mere injuries, however substantial, in terms of money, time and energy necessarily expended in the absence of a stay are not enough. The possibility that adequate compensatory or other corrective relief will be available at a later date may defeat a claim of irreparable harm. *Virginia Petroleum Jobbers Ass'n v. FPC*, 259 F.2d at 925. Recoverable monetary loss may constitute irreparable harm only where the loss threatens the very existence of the movant's business. *See Washington Metropolitan Area Transit Comm'n v. Holiday Tours, Inc.*, 559 F.2d 841, 843 n. 2 (D.C.Cir.1977).

Even under this stringent standard, the parties can satisfy the irreparable harm requirement for a stay. . Now that the certificate has issued, Algonquin can invoke eminent domain authority under Section 717f(h). Algonquin's ability to exercise eminent domain is not theoretical; as a certificate holder, Algonquin has an immediate, substantive right to condemn property under Section 717f(h). *See e.g., East Tennessee Gas*

v. Sage, 361 F.3d 808 (4th Cir. 2004)(granting pipeline with valid FERC certificate right to take property in advance of payment of compensation). As such, Algonquin can file condemnation actions against impacted landowners and municipal government to incur thousands of dollars in legal fees into court to defend against taking of property for a project that might either ultimately be vacated on rehearing, or significantly modified by the terms of the yet-to-be-granted water quality certificates. Moreover, even if the petitioners prevail and the eventually property is restored to the respective owner, the parties are unlikely to ever recover attorneys fees and other costs associated with defense of their land. See, e.g., *Guardian Pipeline v. 295.49 ACRES OF LAND*, Docket No. 08-C-0028 (ED Wis. 2008) (holding that federal condemnation rules governing pipeline takings do not contain fee-shifting provisions). In addition, just as courts recognize that an action that threatens the “very existence of a business” warrants a stay (see *Washington Metropolitan Area Transit Comm’n*, 559 F.2d 841, 843 n. 2), a potential action that threatens an individual’s property demands similar protection.

The potential for eminent domain is not the only irreparable harm that will result in the absence of a stay. Algonquin could begin tree-clearing activity and other ground-disturbing activity, which would irreparably harm habitat and surrounding environment.

B. Grant of A Stay Will Not Harm Algonquin

Meanwhile, issuance of the stay will not harm Algonquin. Most precedent agreements contain regulatory out clauses so that Algonquin will not face financial consequences from shippers for delays. In addition, Algonquin would suffer more harm if it were to commence the project, only to have the certificate vacated part-way through.

C. Stay Is In the Interest of Justice

Finally, a stay is in the interest of justice: the project has the potential to impact

multiple communities from New York to Boston and if built, will effectively make the next phase of the project a fait accompli. Moreover, allowing the project to proceed will force landowners to spend money to defend against a condemnation action for a project that may not be built. Accordingly, the Commission should stay this proceeding pending resolution of this matter on rehearing and judicial review.

Alternatively, if the Commission declines to grant a broad stay, it can still impose other conditions to protect against the harms described. For example, the Commission should make clear that not only is Algonquin prohibited from seeking authorization to commence construction until it obtains all necessary federal authorizations (Certificate, Appendix B, ¶9), but that it may not cut down trees or engage in any other ground-disturbing activity until such permits are issued. The Commission should also restrict Algonquin from initiating any eminent domain actions until all federal authorizations are received and a rehearing decision is issued. The Commission has authority to limit the scope of eminent domain rights conferred by the certificate. *See Mid-Atlantic Express v. Baltimore County*, Docket No. 09-2234 (4th Cir. 2010)(upholding certificate provision conditioning exercise of eminent domain on completion of site-specific surveys).

CONCLUSION

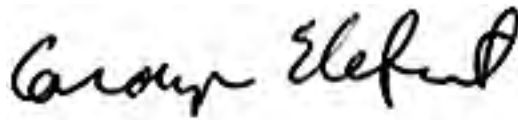
Wherefore for the reasons set for in this Petition for Rehearing, the Coalition Petitioners respectfully request that:

1. The Commission GRANT rehearing, and deny the Certificate, based on the lack of substantial evidence to support the conclusion that the project will have no significant environmental impacts and will serve the public necessity and convenience; or, in the alternative;
2. Vacate the certificate for the reasons stated herein and prepare a legally compliant EIS that treats the Atlantic Bridge and AIM projects a single unit, evaluates the

cumulative impacts of Access Northeast, shale development and greenhouse gas emissions and other issues identified herein and conducts its own independent analysis of safety and environmental issues;

3. Refrain from issuing a certificate until all federally-required permits have been issued and the NRC has fully and adequately considered review of safety issues related to the reactor;
4. Grant a stay, or prohibit Algonquin from engaging in ground-breaking activity or invoking eminent domain before resolution of this and other pending requests for rehearing.

Respectfully submitted,



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April 2, 2015

CERTIFICATE OF SERVICE

I certify that on the 2nd day of April, 2015, I have served the foregoing petition for rehearing on all parties listed on the official service list through the Commission's e-filing system.

Carolyn Elefant

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EXHIBIT 1:
LIST OF INTERVENORS

**EXHIBIT 1: LIST OF INTERVENORS JOINING IN THE REQUEST FOR REHEARING OF AIM PIPELINE
CERTIFICATE, FERC DOCKET CP14-96**

Intervenors		
Intervenor	Status/City	Interest
COMMUNITY WATERSHEDS CLEAN WATER COALITION, INC.	501(c) (3) NYS	<p>Members include environmental, religious, housing and community groups that depend on Croton Watershed water.</p> <p>Through regional action, CWCWC is dedicated to protecting and improving the naturally-filtered, high quality waters of the Croton Watershed and all NYS watersheds. CWCWC believes that clean, affordable water is a basic human right.</p> <p>Members residing in the areas of the Croton Watershed traversed by the pipeline will be directly impacted</p>
Jessica Porter	<p>Dedham, MA</p> <p>I am a direct abutter to the pipeline. I do not know the precise number of feet, but the distance between my property and the pipeline will be approximately three lanes of traffic and a sidewalk. My address is 4 Willow Street but my house is bordered to the back by Providence Highway.</p>	<p>I am impacted as an abutter to the project: safety, property value, and will be directly impacted by construction, in terms of quality of life and safety.</p> <p>For instance, I understand from the EPA's filings that FERC could have required Spectra to use low emissions fuel during construction, which would help ensure my family's health and safety during the construction process.</p>

Intervenors		
Intervenor	Status/City	Interest
Food & Water Watch	DC-based, international non-profit with close to 60,000 supporters in impacted counties	To ensure that the food, water, and fish that humans consume is safe, accessible, and sustainable. To that end, Food & Water Watch promotes policies that will maintain the environmental integrity of our drinking water supplies, rather than put them at risk of degradation. Local coordinator lives in Glastonbury, 4 miles from the Cromwell compressor station and 2 miles from the end of the Cromwell Discharge loop.
Sierra Club Lower Hudson Chapter	Non- profit organization founded in 1892. Sierra Club's Lower Hudson Group has approximately 4,000 members in Rockland, Westchester, and Putnam counties.	Seeks to protect environment from pipeline impacts.
Stop The Algonquin Pipeline Expansion (SAPE)	grassroots group of approximately 80 members in Westchester, Putnam and Rockland counties,	Group seeks to oppose the project. An online petition initiated by SAPE opposing the Project has nearly 20,000 signatures.
Better Future Project	Cambridge-based non-profit, 7000 members	Seeks to build a grassroots movement to rapidly shift society beyond coal, oil and gas by coordinating programs like 350 Massachusetts, Climate Summer and Mothers Out Front.
Capitalism vs. the Climate	CT-based group with 17 members	Organizes non-hierarchically and takes direct action in solidarity with communities most impacted by the climate crisis. We're members of Rising Tide North America.
Fossil Free Rhode Island	30 member RI-based Group	Spurs real action on runaway climate change, which poses a mortal threat to the biosphere of which the human species is a part. We seek to redress inequitable distribution of environmental burdens of both local and global impact by opposing extreme energy projects such as the Keystone XL Pipeline, fracking, and mountaintop removal mining.

Intervenors		
Intervenor	Status/City	Interest
Phil Barden	2331 Centre Street, West Roxbury, MA	Directly abuts project
Eunice Carias	2335 Centre Street, West Roxbury, MA	Directly abuts project
Paul Dunn	2295 Centre Street, West Roxbury, MA	Directly abuts project
Margaret P. Sheehan	2 Glenhaven Rd., West Roxbury, MA	Directly abuts project
Paul McInerney	2369 Centre Street, West Roxbury, MA	Directly abuts project
Maria Rivera	2358 Centre Street, Roxbury, MA	Directly abuts project
Jan White	2323 Centre Street, Roxbury, MA	Directly abuts project
Mary McMahon	2356 Centre Street, Roxbury, MA	Directly abuts project
Robert and Audrey Brait	43 Paragon Road, West Roxbury, MA	Within impact radius of project
Dan McCann	66 Glenellen Rd., West Roxbury, MA	Within impact radius of project
William and Robin Cullinane	479 High Street, Dedham, MA	Within impact radius of project
Linder Sweeney Walter Partridge	67 Clisby Avenue, Dedham, MA	Within impact radius of project
Reynolds Hill, Inc.	Non-profit Membership Community Peekskill & Cortlandt, NY	Landowner directly impacted by the installation of the pipeline through a wetland and other environmentally sensitive areas on our property
Keep Yorktown Safe	Grassroots group in Yorktown, NY	
City of Peekskill, New York	Population of 24,000, located on eastern bank of the Hudson River, Westchester County, NY.	Algonquin will replace an existing pipeline within City limits with a 42-inch pipeline which will adversely impact residents who live adjacent, or in close proximity to the pipeline and area of proposed construction.
Rickie Harvey	Resident West Roxbury, one mile from project.	Resident of community directly impacted by pipeline.

Intervenors		
Intervenor	Status/City	Interest
Virginia Hickey	264 East Street Dedham, MA	Directly abuts project. Pipeline to run directly in front of home. Immediately impacted by the installation - digging, property damage, inconvenience, noise, and pollution of the construction project. Long term impact believes family will no longer be safe in their home. Also believes the areas of the town of Dedham in the blast zone of the pipeline which is near playing fields, shops, schools, will no longer be safe. Cannot afford to move from the home purchased (at the peak of the housing market). In relation to that home lost significant value in the years following 2005. It is only now, in 2015 beginning to gain value again. This pipeline will once again cause property to lose value.
Alexandra Shumway	Dedham, MA	Lives within approximately 300 feet of the proposed route with her husband and three children. Her house is in the residential neighborhood that abuts Rt 1 in Dedham. Quality of life during construction: will be impacted by air quality, noise and light pollution, likelihood of night time construction which will disturb family sleeping. Long term - impacted by safety issues, risk of explosion, air quality risks of gas leaks.

Intervenors		
Intervenor	Status/City	Interest
Joseph Matthew Hickey	Dedham, MA	<p>Direct abutter. My house is 1/2 mile from where the compressor station will be built"); I am a direct abutter to the pipeline route. It will pass up the middle of my street, 1 lane of traffic and a sidewalk away.</p> <p>There will be the initial construction and disrupted traffic. This will cause an increase in noise dust exhaust etc.. The pipeline itself is a transmission line among other things that means there is no mercaptan added to the gas to provide that warning smell if there is a leak. My house and many of the houses in the area have are older homes with stone foundations. There is nothing to stop gas from permeating into a basement from a leak. This pipeline increases the risk of radon in my home. This pipeline will also affect my property values and what I can do on my property in the years to come.</p>
West Roxbury Saves Energy (WRSE)	Rickie Harvey West Roxbury Saves Energy (WRSE) 32 Pomfret Street West Roxbury, MA 02132 617-413-1786 mailto:rickieh@verizon.net rickieh@bellatlantic.net	
Paul Nevis	West Roxbury, MA	Within impact radius of project

Intervenors		
Intervenor	Status/City	Interest
Charles River Spring Valley Neighborhood Association (CRSV)	West Roxbury, MA Contact: John St. Amand	Members of CRSV number several hundred homeowners and residents living in the neighborhood of West Roxbury including Baker Street to Spring Street to Oakmere Stret to Northdale Road to Centre Street to Baker Street (see map). The Centre Street portion are abutters to the the proposed West Roxbury Lateral pipeline and M&R Station portions of the AIM project. All members of CRSV are no more than .5 miles from the proposed project. CRSV mission is to inform the residents in the area of news and issues that affect the neighborhood and their property.
Pramilla Malick	264 Jacobs Rd Westtown NY	Within impact radius of project

EXHIBIT 2:

Timeline of Spectra Activities Related to
Development of AIM and connected projects,
Atlantic Bridge and Access Northeast.

PUBLIC FILINGS - SPECTRA ENERGY PARTNERS

Date	Document	Information	URL
12-13-10	This info is included in AIM Application for Certificate of Public Convenience and Necessity	Beginning of initial AIM "open season"	http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14190856
2-11-11	Same	End of initial AIM "open season"	
9-20-12	Same	Beginning of second AIM "open season"	
11-2-12	Same	End of second AIM "open season"	
6-11-13	Same	Beginning of AIM Supplemental & Reverse "open season"	
6-25-13	Same	End of AIM Supplemental & Reverse "open season"	
6-28-13	FERC Approval of AIM use of Pre-Filing Process		
9-13-13	FERC – Notice of Intent to Prepare an EIS; Request for Comments on Environmental Issues and Notice of Scoping Meetings	Opening of AIM Scoping Process – scoping period closes on 10-14-13	http://elibrary.ferc.gov/0/idmws/file_list.asp?document_id=14145816
9-30-13	N/A	Only AIM Scoping Meeting in NY	
10-8-13	Riverkeeper	Request to extend the scoping period for 30 more days based on sensitive nature of NYC watershed – lack of notice expressed by public officials	http://elibrary.ferc.gov/0/idmws/file_list.asp?document_id=14152494
10-8-13	Putnam County Legislator Sam Oliverio	Request to extend comment [Scoping] period for another 30 days	http://elibrary.ferc.gov/0/idmws/file_list.asp?document_id=14153993
10-9-13	Comment & Intervenor Request - Fountainhead Parks	Mobile Home community – Algonquin has not maintained the right of way on their property	http://elibrary.ferc.gov/0/idmws/file_list.asp?document_id=14155084
10-10-13	Comment - NYS Senator George Latimer	Request to extend scoping period for at least 30 additional days	http://elibrary.ferc.gov/0/idmws/file_list.asp?document_id=14155476
10-10-13	Transcript of NY Scoping Meeting 9-30-13	Doug Sipe Chair of Meeting	http://elibrary.ferc.gov/0/idmws/file_list.asp?document_id=14152990

Date	Document	Information	URL
10-11-13	Comment - NYS Assemblywoman Sandy Galef	Request to extend comment [Scoping] period for 60 days	http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14153390
10-11-13	Comment - NYS Senator Terry Gipson	Requesting that this period be extended by thirty days	http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14153468
10-11-13	Comment - Town Supervisor Linda Puglisi	Request to extend comment [Scoping] period for 60 days	http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14153529 http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14155477
10-11-13	Comment - Accufacts/Kuprewicz	Request to extend scoping period for at least 30 additional days	http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14153643
10-14-13	Comment - NY State Senator Andrea Stewart-Cousins	Request to extend scoping period for 30 additional days	http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14153727
10-14-13	Comment - Westchester BOL Peter Harkham	Request to extend scoping period for at least 30 additional days, preferably 60 days	http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14153742
10-14-13	Comment - Sierra Club Atlantic Chapter	Request to extend scoping period for at least 30 additional days	http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14153850
10-14-13	Entergy Comments	Interesting	http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14153866
10-15-13	N/A	Close of AIM Scoping Period (10-14-13 was a Federal Holiday)	
10-18-13	Comment - City of Peekskill	Request for 60-day extension to the comment [Scoping] period	http://elibrary.ferc.gov:0/idmws/file_list.asp?document_id=14157186

Date	Document	Information	URL
2014	Spectra 2013 Annual Report	"The Algonquin Incremental Market (AIM) project will increase the west-to-east capacity of our Algonquin pipeline system – and it is fully subscribed by virtually all of the major local distribution companies in New England. Early this year, we announced the Atlantic Bridge project , which expands the Algonquin and Maritimes & Northeast systems to serve the growing needs of New England states and Maritime provinces." - page 5 (President's Letter)	
		"We're pleased with our record of operating our assets reliably and safely. But we can do better when it comes to our performance regarding employee and contractor personal safety. Injury rates rose in 2013, primarily due to preventable accidents like sprains, strains, slips and falls. While some of these incidents may seem minor, we take them very seriously. We investigate every safety event to determine what happened and how to best prevent reoccurrence. We have launched an initiative to dig deeper, taking a closer, more critical look at our own processes and culture, as well as those of other successful companies and industries. Our ongoing financial success will be enhanced by the progress we make in lowering the injury and incident rates of our employees and contractors".	
		"We're even supporting the export of clean, affordable natural gas supplies beyond North America through infrastructure projects that will serve liquefied natural gas plants and terminals in both British Columbia and the U.S. Gulf Coast." [West Coast Projects]	
2-5-14	Atlantic Bridge Press Release	Announcing Atlantic Bridge Open Season	http://investors.spectraenergy.com/phoenix.zhtml?c=204494&p=irol-newsArticle&ID=1897244
2-5-14	Atlantic Bridge Brochure	Beginning of Atlantic Bridge Open Season	http://www.spectraenergy.com/content/documents/Projects/Atlantic-Bridge-Open-Season.pdf
	Atlantic Bridge Open Season Notice	Announces executed agreement with Unitil Corporation to participate as an Anchor Shipper	
2-28-14	FERC - Application for Certificate of Public Convenience and Necessity for AIM	Included notice that other fed agencies required to complete their reviews within 90 days after issuance of the Final EIS.	http://elibrary.ferc.gov/idmws/file_list.asp?document_id=14190856
3-18-14	FERC - Notice of Application - AIM		

Date	Document	Information	URL
3-31-14	Atlantic Bridge Brochure	Close of Atlantic Bridge Open Season	http://www.spectraenergy.com/content/documents/Projects/Atlantic-Bridge-Open-Season.pdf
6-26-14	Atlantic Bridge Preliminary Facilities Diagram	Map showing Atlantic Bridge changes/additions to Algonquin pipeline	http://www.spectraenergy.com/content/inline-images/Maps/map_atlantic_bridge_full2.jpg
6-27-14	Spectra Letter to New England States Committee on Electricity (NESCOE) regarding June 20, 2014 <i>Governor's Infrastructure Initiative Update</i> (Access Northeast)	<p>Current Spectra Energy Projects & Impact to Electric Reliability and Lower Costs</p> <p>The LDC natural gas demand will be balanced through sponsored pipeline expansions which include Spectra Energy's Algonquin Incremental Market expansion project (AIM) and the Atlantic Bridge project. The AIM project will begin to de-bottleneck the pipeline system by winter of 2016, helping to enhance reliability and soften prices, specifically in New England. . . . AIM is underpinned by commitments from gas utility companies across southern New England. These gas utilities entered into long- term capacity contracts supported by regulators who value reliable supply and reduced delivery costs for gas consumers. Atlantic Bridge's proposed in-service is November 2017 and is similarly anticipated to be supported by gas utilities.</p> <p>While both AIM and Atlantic Bridge projects will increase capacity in the region, they will not satisfy the full expanse of electric generation requirements or the electric reliability issue. Accordingly, Spectra Energy is recommending a new expansion program that resolves New England's electric fuel security risk. New supplies delivering to Algonquin will require further expansions on Algonquin to reliably reach power plants, otherwise, supplies will not provide electric reliability. Algonquin can continue to expand up to 1 BCF (equivalent to over 5,000 MW) in addition to AIM and Atlantic Bridge, doubling the current capacity of the system and providing last mile deliverability and service flexibility required by critical power plants. Assuming a timely RFP process, this service can be provided as early as 2018 and will minimize impacts to the environment and regional stakeholders, while providing the greatest confidence for execution success.</p>	http://www.nescoe.com/uploads/Spectra_EnhancingElectricReliabilityinNE_27Jun2014.pdf

Date	Document	Information	URL
7-1-14	Access Northeast - Press Release	<p>"These plans for expansion of the Algonquin and Maritimes pipeline systems are in response to the New England governors' recent initiative on new energy infrastructure and in anticipation of a Request for Proposal to be initiated by The New England States Committee on Electricity (NESCOE). This expansion, as outlined in a June 27 letter to NESCOE, would create up to 1 Bcf/day in capacity, and is in addition to Spectra Energy's previously announced Algonquin Incremental Market (AIM) and Atlantic Bridge projects."</p> <p>* * * *</p> <p>Specifically, the Spectra Energy solution for New England will:</p> <p style="padding-left: 40px;">Be scalable, to ramp up supplies as demand grows.</p> <p>* * * *</p> <p>Spectra Energy's Algonquin Incremental Market expansion project will begin to de-bottleneck the pipeline system by winter of 2016, helping to enhance reliability and soften natural gas prices in New England. AIM is underpinned by commitments from gas utility companies across southern New England that entered into long-term capacity contracts. Atlantic Bridge's proposed in-service is November 2017, and it will be similarly supported by gas utilities.</p>	<p>http://investors.spectraenergy.com/phoenix.zhtml?c=204494&p=irol-newsArticle&ID=1944279</p> <p>Access Northeast Website: http://www.spectraenergy.com/Operations/New-Projects-and-Our-Process/New-Projects-in-US/New-England-Energy-Reliability-Solution/</p>
As of 7-3-14	<i>Northeast Gas Association</i> Proposed Pipeline Projects - July 2014 Issue	<p>Map showing both "AIM" and "Atlantic Bridge" proposals</p> <p>Description of <u>Atlantic Bridge</u>: "Incremental expansion on Algonquin [pipeline] and Maritimes & Northeast [pipeline], to serve northern New England and Canadian Maritimes. Capacity increase from 100 to 6000,000 Dth/d" <u>Atlantic Bridge</u> Described as "Announced Feb. 2014, Open Season held, Feb.-March, 2014"</p>	
As of 7-3-14	<i>Northeast Gas Association</i> Proposed Pipeline Projects - July 2014 Issue	<p>Description of <u>AIM</u>: "Providing 342 MMcf/d of additional capacity to move Marcellus production to Algonquin City Gates. Shippers and 6 gas utilities in New England" <u>AIM</u> Status described as "Open season held fall 2012, Filed with FERC, 2-14"</p>	
8-6-14	FERC issues AIM Draft EIS		
8-6-14	AIM DEIS page 4-272 "Other Known Projects"	<p>"Algonquin is also currently evaluating proposals to modify other parts of its existing interstate natural gas pipeline system to meet the growing market demand for increased energy (Algonquin, 2014d). This planned expansion is referred to as the Atlantic Bridge Project and would involve work in New York, Connecticut, Rhode Island, and Massachusetts."</p>	

Date	Document	Information	URL
9-16-14	Access Northeast Press Release	<p>"The [Northeast Access] gas pipeline expansion project will enhance the Algonquin and Maritimes pipeline systems, . . ."</p> <p>"Access Northeast, originally outlined by Spectra Energy in a June 27, 2014, letter to the New England States Committee on Electricity (NESCOE), . . . "</p> <p>"This expansion will complement Spectra Energy's previously announced Algonquin Incremental Market (AIM) and Atlantic Bridge projects. Spectra Energy's AIM expansion project will begin to de-bottleneck the pipeline system by the winter of 2016-2017, helping to enhance reliability and reduce natural gas price volatility in New England."</p> <p>"Given the advanced nature of the project, expressions of interest from natural gas service providers for regional assets will be secured by October 31, 2014."</p>	<p>http://investors.spectraenergy.com/phoenix.zhtml?c=204494&p=irol-newsArticle&ID=1968326</p>

Date	Document	Information	URL
???	Spectra "Access Northeast" Website	<p>" Natural Gas and Electric Power</p> <p>Typically, gas distribution companies, not electric power producers, hold the firm contracts for natural gas flowing into New England. We currently have two projects in development, Algonquin Incremental Market (AIM) and Atlantic Bridge, that will increase natural gas supply for residences and businesses in 2016 and 2017, respectively. For electric reliability, however, the power generators need access to natural gas service during peak demand. The current effort by the region's leaders is critical to making that happen, and thus critical for New England's future security and prosperity."</p> <p>* * * *</p> <p>"Specifically, Spectra Energy proposes expanding its Algonquin and Maritimes & Northeast systems, pipelines which already directly connect to about 60 percent of New England's natural gas-fired electric generation. This will provide direct, guaranteed natural gas deliveries to critical power plants that are required for grid stability, especially on peak power demand days. The pipeline expansions will be available in increments of 200 million cubic feet per day (cf/d), up to 1 billion cf/d (1.5 billion cf/d including AIM and Atlantic Bridge), and could be in service as early as November 2018, depending on the schedule set by the states. Importantly, the expansions can occur on our existing footprint to minimize environmental impact and stakeholder disruption. This solution will be timely, environmentally responsible, scalable and effective."</p> <p><i>Algonquin Gas Transmission:West to East Usage and Potential Increased Capacity</i></p> <p>■ Current Capacity ■ Electric Reliability Solution ■ AIM & Atlantic Bridge</p>	http://www.spectraenergy.com/Operations/New-Projects-and-Our-Process/New-Projects-in-US/New-England-Energy-Reliability-Solution/

Date	Document	Information	URL
8-3-14	Platts Online Interview with Spectra regarding the Access Northeast Project	<p>Platts interview with Bill Yardley, Spectra president for transmission and storage:</p> <p><u>Interviewer</u> (at 1:31): Spectra is proposing an expansion of capacity to bringing an added 1 billion cu. ft. a day to New England</p> <p><u>Spectra</u> (at 1:41): Yes well that's really on top of a couple of other expansions. We've got one for the local distribution companies . . . and that's called our AIM project. That's about 300,000 [cu.ft.] a day and about a billion dollars. We have another one planned for 2017 which is about another billion dollars - a similarly sized project which we'll be finalizing shortly - and another bcf, up to a bcf could come for the electric generation load starting in 2018 and that would probably be in a 2 to 3 billion dollar range.</p> <p>* * * *</p> <p><u>Interviewer</u> (at 2:20) This is pretty costly stuff, as you note - what sort of commitments do you need and how do you pay for it?</p> <p><u>Spectra</u> (at 2:32) . . . so far is that we get nearly 100% commitments for the pipe. So we don't really build on spec . . . so the first two expansions I mentioned, AIM, and what we're calling Atlantic Bridge is the second one, they're for the local distribution load.</p> <p>* * * *</p> <p><u>Interviewer</u> (at 3:14) And there's competition, to, to bring gas to that region. Kinder Morgan, for example, has major plans to bring up to 2 billion cubic feet a day of additional capacity. Is there enough demand for these different projects?</p> <p><u>Spectra</u> (at 3:27) Yeah, you know it's interesting. When you look at the demand that resides on the Algonquin System for electric generation. So Algonquin is our pipeline that runs from New Jersey up to Boston. And then we own the Maritimes and Northeast pipeline that goes up into Maine and Nova Scotia. About 60% of the electric generation is off of those two pipelines. And so whatever happens in the region is going to involve Algonquin. For the region as a whole, there's probably - - if we got a BCF a day into the region, that's probably ample for the next few years for electric generation. And New England is one of those areas - I'm from there - where you know that conservation and renewables are going to be gaining a lot of momentum and so we want to be careful not to overbuild the area but build it in the appropriate way.</p> <p><u>Interviewer</u> (at 4:23) You know, you mentioned you're a native New Englander, as am I. We know that there's often opposition to energy projects in that region, perhaps more so than even in other parts of the country. Do you anticipate this could be a problem for Spectra as it goes forward with this project?</p> <p><u>Spectra</u> (at 4:39) Well, we look at that very carefully. And when trying to figure out how much gas to bring into the region and how to do it, there are obviously various methods. You can bring in a big greenfield project or you can improve the infrastructure that you've got. in this region, we have a ton of experience here - we still have a hundred employees in the Boston area - it's best to take advantage of your existing footprint and improve that. And that's the direction that we chose to go. And it's more environmentally responsive, responsible rather, it's cost effective. You can do it incrementally so you don't have to build the entire BCF all at once. And we think that it's the best solution for what the region really wants to see. And I think you end up with - well, I know you end up with a lot less potential opposition if you do that.</p>	http://www.plattstv.com/video/new-england-seeks-more-gas-supplies-august-3/3706671906001

Date	Document	Information	URL
9-4-14	Atlantic Bridge Landowners Informational Meetings Letter from Spectra to Yorktown Supervisor	"During the informational meeting, Algonquin representatives will be available to answer your questions on land acquisition, environmental and permitting processes, construction, operation and other aspects of the AB Project. We encourage you to attend the meeting to learn about the Project, review mapping, displays, collect information about the Project and Algonquin, and informally ask any questions that you may have,"	https://col126.mail.live.com/mail/ViewOfficePreview.aspx?messageid=mgXkXjdvZA5BGrlwAhWtm9KA2&folderid=flagBnFUxcckiuw5u49mNKHw2&attindex=0&cp=-1&attdepth=0&n=54458243
9-16-14	Boston Globe Article - Access Northeast	<p>"The pipeline operator, Spectra Energy Corp., of Houston, and Northeast Utilities, the parent of Nstar and Western Massachusetts Electric Co., said they will invest \$3 billion in a project to bring an additional 1 billion cubic feet of gas a day into New England."</p> <p>* * * *</p> <p>"Spectra and Northeast Utilities plan to expand the Algonquin pipeline, which runs from New Jersey to Everett, and the Maritimes & Northeast line, which carries liquefied natural gas that is pumped from ships anchored in the waters off of Eastern Canada.</p> <p>The project, if approved by the Federal Energy Regulatory Commission, which regulates interstate pipelines, would be completed in 2018, company officials said. May said the project cost would be recovered from customers over the first year following the project's completion, as is typical for such capital investments."</p> <p>* * * *</p> <p>"The Access Northeast project would complement an earlier proposal by Spectra to expand the Algonquin pipeline by 14 percent by adding 40 miles of pipe and installing new compressor units, company officials said. If it is approved by the FERC, the project is scheduled to be completed in the winter of 2016-17."</p>	http://www.bostonglobe.com/business/2014/09/15/nstar-and-spectra-announce-project-increase-new-england-natural-gas-supply/11IyTBQ2oiSKqwKx0iZVnM/story.html
9-17-14 thru 9-29-14	Atlantic Bridge Project Calendar	7 Atlantic Bridge Open Houses	http://www.spectraenergy.com/Operations/New-Projects-and-Our-Process/New-Projects-in-US/Atlantic-Bridge/Project-Calendar/
9-17-14	Atlantic Bridge Project Calendar	First Atlantic Bridge Open House Glastonbury, CT	http://www.spectraenergy.com/Operations/New-Projects-and-Our-Process/New-Projects-in-US/Atlantic-Bridge/Project-Calendar/
9-29-14	Close of AIM DEIS comment period		
10-1-14 thru 10-8-14	Atlantic Bridge Project Calendar	5 Additional Atlantic Bridge Open Houses	http://www.spectraenergy.com/Operations/New-Projects-and-Our-Process/New-Projects-in-US/Atlantic-Bridge/Project-Calendar/

Date	Document	Information	URL
10-8-14	Atlantic Bridge Project Calendar	Last Atlantic Bridge Open House Buzzard Bay, MA	http://www.spectraenergy.com/Operations/New-Projects-and-Our-Process/New-Projects-in-US/Atlantic-Bridge/Project-Calendar/
10-22-14	FERC Request for additional AIM Data		
10-31-14	Spectra response to AIM data request		
12-8-14	Spectra-NE Utilities & Iroquois Alliance – Access Northeast	Access Northeast, which was announced in September . . . will move natural gas sourced from the Appalachian basin into New England by maximizing the use of existing infrastructure on existing footprints. “With FERC’s recent issuance of a certificate approving the Constitution Pipeline Project and Iroquois’ companion Wright Interconnect Project, another major milestone in establishing a direct link to the Marcellus supply basin has been achieved,” - Jeff Bruner, President of Iroquois	
12-19-14	Initial target date for AIM Final EIS (postponed by FERC on 10-22-14?)		
1-23-15	AIM Final EIS is issued	Begins 90 period for completion of other Federal reviews.	
1-30-13	Spectra Request on Atlantic Bridge	Letter, filed January 30, 2015, requesting use of the Federal Energy Regulatory Commission’s (FERC or Commission) pre-filing review process for Algonquin Gas Transmission, LLC’s (Algonquin) planned Atlantic Bridge Project Letter also stated that Algonquin intends to file an application no later than September 2015	
1-31-15	Spectra's requested AIM FEIS date on 10-31-14		
2-20-15	FERC Response on Atlantic Bridge Pre-Filing Request	"We believe that beginning the Commission’s review of this proposal prior to the receipt of your application will greatly improve our ability to identify issues early and address them in our environmental document." Maggie Suter named as Project Manager	
3-3-15	FERC Issues AIM Certificate		

Date	Document	Information	URL
3-23-15	Atlantic Bridge Files Stakeholders Letter	"The stakeholder mailing list consists of a list of government officials and a list of private landowners. The portion of the stakeholder mailing list containing private landowner contact information contains privileged information . . .	
4-23-15	AIM Federal Authorization Decision Deadline	90-day deadline from issuance of the Final EIS.	

EXHIBIT 3:

Nuclear Issues

June 27, 2014

To: Westchester Board of Legislators
Energy & Environment and Infrastructure Committees

Subject: Nuclear incompatible with natural gas

This is a follow-up to my presentation to your Committee last week. Since that time I have received a letter from the NRC (copy enclosed) assuring they will require Indian Point to analyze the potential risks associated with the AIM project. While this is good news, I still fear both Entergy and the NRC will withhold this information from the public under the false premise of national security.

I am not opposed to either nuclear power or the expansion of the gas transmission lines however they cannot safely co-exist within miles of one another due to the potential risk of a gas line malfunction causing major damage to the nuclear facility and the potential for large release of highly radioactive material .

Supporting my position is a copy of a risk analysis conducted for a proposed fuel enrichment facility in Eunice, New Mexico. This analysis is required by NRC regulations[\[1\]](#). This proposed facility only contains low levels of radioactive material and no reactors or spent fuel and is located in a very low population zone.

The analysis looks at the risk of one 16-inch pipeline operating at 50 pounds per square inch with a maximum capacity of 500,000 cubic feet per day and located 1800 feet from the facility. The analysis determined that the risk from a gas line failure was greater than what was acceptable. Contrast this to the proposed AIM project with a new 42 inch gas line operating at 850 pounds per square inch located 1500 feet from vital structures, and a few hundred feet from oil storage tanks, with a capacity of 3,420,000 cubic feet per day. Consequences of this type of accident in Westchester County are incalculable and could well exceed the damages of the Fukushima accident. In my opinion, there is no way either Entergy or the NRC could approve this project as presently proposed but they will make every effort to find a way to justify this dangerous project.

The risk of this installation is thousands of times greater than the facility in New Mexico and located in one of the most densely populated areas in the US. The letter to me from the NRC states that it will require Entergy to assess the risk of the new gas line per the requirements of 10 CFR 50.59.

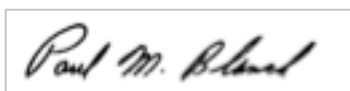
This was somewhat of a surprise to me that the NRC now admits there is a potential danger and will require a detailed evaluation by Entergy.

This NRC letter to me is not public information but I have informed the NRC that I waive any confidentiality requirement and the letter can be made public.

I have shared this letter with Fred Dacimo, VP at Energy and my previous boss at Indian Point.

My only request of the Committee is that it assures the proper analysis is conducted and made available to its experts for review. I am willing to appear before the Committee along with representatives of the NRC, Entergy and Spectra to openly discuss this proposed project.

Sincerely.

A rectangular box containing a handwritten signature in cursive script that reads "Paul M. Blanch".

Paul M. Blanch

135 Hyde Rd.

West Hartford, CT 06117

[860-236-0326](tel:860-236-0326)

Paul M. Blanch
Energy Consultant

November xx, 2014

Chairman John Stetkar
USNRC
Advisory Committee on Reactor Safeguards
Washington DC 20001

Dear Mr. Chairman,

I am writing you to request your attention about a grave concern I have with the safety of the Indian Point nuclear plants with the existing and a new proposed natural gas transmission lines traversing and in the proximity of the site. From my conversations with Dr. Mario Bonaca, former ACRS Chairman, he is not aware this issue has ever been brought before the ACRS.

I have made many attempts to address this issue (see enclosure) with the NRC Staff only to be informed that these lines do not present any risk which would jeopardize compliance with 10 CFR 100.20. The most recent Indian Point Inspection Report even states this new 42 inch 850 PSI line can be installed within the provisions of 10 CFR 50.59 will not require a license amendment. The analysis supporting this 10 CFR 50.59 analysis is fraught with significant errors and assumptions. I have filed two different 10 CFR 2.206 petitions (enclosed). My latest petition dated October 15, 2014 primarily deals with inaccurate and incomplete information submitted by Entergy. I do not expect the ACRS to deal with this 10 CFR 50.5 and 50.9 issues but I would appreciate an assessment on the underlying technical and safety issues.

I am a registered professional engineer with more than 45 years of experience in nuclear safety, engineering operations and federal regulatory requirements. I have spent several hundred hours reviewing documents related to the proposed expansion of the Algonquin gas pipeline and consulting with other engineers in my field. I have been an expert witness for the State of New York related to the relicensing of Indian Point units #2 and #3. I am writing the ACRS to advise you that critical information about this project has been kept from public view and not shared with the ACRS. As a result, public, the ACRS members of Congress are unaware of the very significant risks this proposed project poses to the Indian Point nuclear power facility and to the health and safety of the citizens of Westchester and the entire tri-state region.

Spectra Energy's proposed Algonquin Incremental Market ("AIM") gas pipeline expansion project is currently under review by the Federal Energy Regulatory Commission (FERC). The project consists of the construction of a new 42" diameter,

high-pressure (850 PSI) gas pipeline running from Rockland County and crossing under the Hudson River into Westchester County. According to plans submitted to FERC by Spectra Energy and by Entergy's analysis the new gas transmission line will run within 105 feet of nuclear structures whose failure could result in significant damage to vital components and structures. See enclosed letter to FERC dated September 29, 2014 that outlines the potential nuclear safety issues associated with the proposed new gas transmission line.

An accident or failure of the new pipeline could result in a catastrophic gas explosion and release of the facility's forty years of radioactive spent fuel, rendering all of Westchester County, New York City and much of Connecticut and Long Island uninhabitable for generations. The potential for a disaster of this magnitude demands the most thorough, independent, transparent and stringent risk analysis¹ be conducted and reviewed before any decision is made to issue a permit for this project. An independent analysis is not being conducted, and if it has, it is not public information. The NRC's review of Entergy's 10 CFR 50.59 submittal dated August 21, 2014 was based upon risks and probabilities inconsistent with acceptable engineering practices and in direct conflict with NTSB investigations of similar gas line failures.

For example, Entergy's analysis assumes that the flow of natural gas from a rupture would be terminated 3 minutes whereas similar ruptures required 30 minutes to 3 hours to isolated the rupture. Leak detection and isolation of both upstream and downstream valves are from Houston Texas. Emergency response is not possible until the flow of gas is terminated.

Another deficiency in the analysis is the proposed new line runs within 105 feet of Gas Turbine Fuel Oil storage tanks located 100 feet in elevation above vital structures and contain hundreds of thousands of gallon of jet fuel. These tanks contain hundreds of thousands of fuel and are located 100 feet in elevation above the plant. These tanks are located about 600 feet from other vital structures.

This analysis is unacceptable.

I also draw your attention to the following:

- In its Draft Environmental Impact Statement (EIS) released by FERC on August 6, 2014, FERC claimed that the proposed new pipeline would "not pose any new safety hazard to the [Indian Point nuclear power] facility." Such a statement, without the proper independent risk analysis to support it, is irresponsible and unacceptable.
- FERC's Draft EIS omits any mention of damage prevention, emergency response, public awareness, and consequences of a gas pipeline rupture. An analysis of all of

¹ [29 CFR 1910.119 Appendix C to §1910.119 -- Compliance Guidelines and Recommendations for Process Safety Management](#)

these potential risks is required by the Department of Transportation.² An incomplete analysis such as this should not be accepted.

- Entergy's "Hazard Analysis" summary, submitted to the Nuclear Regulatory Commission on August 21, 2014, was conducted by a former employee of the New York Power Authority, the previous owner of IPEC, and fails to assess the true risk presented by the new and existing gas transmission pipelines. The person conducting this analysis apparently has no known experience or publications in the areas of nuclear or gas line risk assessment. Entergy and the NRC under the provisions of 10 CFR 2.390 have withheld his analysis.

- Indian Point is the only nuclear power facility in the U.S. with gas transmission lines located within the protected areas of the nuclear power plant; three existing natural gas transmission pipelines traverse the Indian Point site close to vital structures. Extra precautions should be taken, but are not proposed by Spectra Energy or be Entergy.

- Spectra Energy's plans for the pipeline do not include any local automatic gas termination valves, which were removed after the initial Safety Evaluation Report (SER) and no means to combat a fire or explosion prior to gas flow termination as required by law.³ The controls to terminate the gas flow remotely are located at company's facility in Houston, Texas. This is unacceptable.⁴

The following are a few of the primary examples of the deficiencies I have noted in my review of the limited contained within Entergy's summary of its analysis is provided.

The detection of a leak from a remote location is a very uncertain task according to Mr. Rick Kuprewicz, a world recognized expert on the risk of gas transmission lines.

The FSAR dated 2011 clearly stated that a rupture/failure of the existing 70 year old 26 and 30 inch gas transmission lines crossing the Indian Point are "not feasible." This statement is in direct conflict with Entergy's most recent analysis

Failure of any of these gas pipelines could result in a total loss of cooling to the reactor cores and the inventory of spent fuel. Spectra Energy and Entergy have

² 30 CFR Part 380, Appendix A to Part 380 – "Minimum Filing Requirements for Environmental Reports Under the Natural Gas Act."

³ 49 CFR 192.6155 states that "each operator shall establish written procedures to minimize the hazard resulting from a gas pipeline emergency."

⁴ Stopping the flow of a 42-inch, 850 psi gas line is very different from stopping the flow of a 16-inch, low pressure gas line such as currently exists. Spectra does not address this disparity.

made no provisions to address this type of event.

Corrosion of the gas lines may be accelerated by stray currents from the two proposed intersecting high-voltage DC electrical lines, which would also run in the vicinity of pipes and tanks at Indian Point. Spectra Energy has not addressed this possibility in their documents.

Some of the possible consequences of a gas pipeline fire or explosion at Indian Point include loss of power to the entire site, secondary fires from liquid fuel storage tanks, reactor core damage and melting, asphyxiation of site personnel, spent fuel, radioactivity release, and massive social and economic damage for generations. None of these possible risks are being addressed.

Despite the lack of a complete, independent risk analysis, the NRC Staff has concluded⁵:

“Finally, the staff determined that Entergy’s conclusions involving the potential rupture of the proposed pipeline near IPEC poses no threat to safe operation of the plant or safe shutdown of the plant, are reasonable and acceptable, and are also comparable with the staff’s conclusions.”


Based on my review and by pipeline experts of Entergy’s summary of its risk analysis and the subsequent review by the NRC, I believe there are serious factors that have not been properly considered.

I believe the ACRS may want to obtain and review copy of both the Entergy and the NRC’s analysis as discussed in the NRC’s Inspection Report and discussed in Entergy’s 10 CFR 50.59 analysis dated August 21, 2014.

I formally request that I be allowed to present my position before the ACRS. I would also welcome the presence of the NRC staff and Entergy to present their thoughts before the ACRS. All of my information is based upon publically available information and the meeting should be open to the public.

I look forward to your prompt response.

Sincerely,



Paul M. Blanch, P. E.
135 Hyde Rd.
West Hartford, CT 06117
860-236-0326

⁵ NRC Inspection Report dated November 7, 2014

⁶ Ibid

860-922-3110
pmb Blanch@comcast.net

Enclosures:

- Professional credentials
- 10 CFR 2.206 petition submitted to the NRC on October 15, 2014
- 10 CFR 2.206 petition submitted to the NRC on October 25, 2015
- Letter to FERC dated September 29, 2014NRC
- NRC Indian Point Inspection report dated November 7, 2014
- Entergy 10 CFR 50.59 analysis dater August 21, 2014 with Blanch comments.
- Letter from New York Attorney General dated
- Letter from Paul Blanch to Governor Cuomo dated
- Letter from Congresswoman Lowey dated

Paul M. Blanch
Engineering and Energy Consultant

November 18, 2014

The Honorable Andrew M. Cuomo
Governor of New York State
New York State Capitol Building
Albany, New York 12224

Dear Governor Cuomo,

I am a registered professional engineer with more than 45 years of experience in nuclear safety, engineering operations and federal regulatory requirements. I have spent several hundred hours reviewing documents related to the proposed expansion of the Algonquin gas pipeline and consulting with other engineers in my field, and I am writing to you now to advise you that critical information about this project has been kept from public view. As a result, decision makers are unaware of the very significant risks this proposed project poses to the Indian Point nuclear power facility and to the health and safety of the citizens of Westchester and the entire tri-state region.

As you are aware, Spectra Energy's proposed Algonquin Incremental Market ("AIM") gas pipeline expansion project is currently under review by the Federal Energy Regulatory Commission (FERC) and is subject to permitting approval from your Department of Environmental Conservation. The project consists of the construction of a new 42" diameter, high-pressure (850 PSI) gas pipeline running from Rockland County and crossing under the Hudson River into Westchester County. According to plans submitted to FERC by Spectra Energy, the pipeline will intersect two proposed 1,000 megawatt High Voltage Direct Current (HVDC) electrical lines and run within 105 feet of nuclear power structures in a significant seismic zone and densely populated region.

An accident or failure of the new pipeline could result in a catastrophic explosion and release of the facility's forty years of radioactive spent fuel, rendering all of Westchester County, New York City and much of Connecticut and Long Island uninhabitable for generations. The potential for a disaster of this magnitude demands that public officials require the most thorough, independent, transparent and stringent risk analysis be conducted and reviewed before any decision is made to issue a permit for this project. However, that analysis IS NOT being conducted or required, and in fact, information vital to the decision-making process is being concealed from federal officials, members of your own administration and the public. This is unacceptable.

I draw your attention to the following:

- In its Draft Environmental Impact Statement (EIS) released on August 6, 2014, FERC claimed that the proposed new pipeline would "not pose any new safety hazard to the [Indian Point nuclear power] facility." Such a statement, without the proper

independent risk analysis to support it, is irresponsible and unacceptable.

- FERC's Draft EIS omits any mention of damage prevention, emergency response, public awareness, and consequences of a gas pipeline rupture. An analysis of all of these potential risks is required by the Department of Transportation.¹ An incomplete analysis such as this should not be accepted.
- The Nuclear Regulatory Commission acknowledges that the construction of the pipeline requires an updated site hazards analysis. However, they suggest the analysis can be performed *after* FERC's permit is issued. This runs counter to the purpose of a risk analysis to determine whether or not new hazards pose undue risk precluding permit issuance in the first place.
- Entergy's "Hazard Analysis" summary, submitted to the Nuclear Regulatory Commission on August 21, 2014, was conducted by a former employee of the New York Power Authority, the previous owner of IPEC, and fails to assess the true risk presented by the new and existing gas transmission pipelines. I am attaching my formal petition to the NRC, which details the failures and omissions of the Hazard Analysis.
- Indian Point is the only nuclear power facility in the U.S. with gas transmission lines located within the protected areas of the nuclear power plant; three existing natural gas transmission pipelines traverse the Indian Point site close to vital structures. Extra precautions should be taken, but are not proposed by Spectra Energy.
- Spectra Energy's plans for the pipeline do not include any local automatic gas termination valves and no means to combat a fire or explosion prior to gas flow termination as required by law.² The valves to shut off the gas flow remotely are located at company's facility in Houston, Texas. This is unacceptable.³
- The proposed gas pipeline segments do not even meet the strictest safety standards established by the Department of Transportation.⁴ We should demand the highest standards, not the minimum standards for a gas pipeline.

¹ 30 CFR Part 380, Appendix A to Part 380 – "Minimum Filing Requirements for Environmental Reports Under the Natural Gas Act."

² 49 CFR 192.6155 states that "each operator shall establish written procedures to minimize the hazard resulting from a gas pipeline emergency."

³ Stopping the flow of a 42-inch, 850 psi gas line is *very* different from stopping the flow of a 16-inch, low pressure gas line such as currently exists. Spectra does not address this disparity.

⁴ 49 CFR 192 "Transportation of natural and other gas by pipeline: Minimum federal safety standards"

- Corrosion of the gas lines may be accelerated by stray currents from the two proposed intersecting high-voltage DC electrical lines, which would also run in the vicinity of pipes and tanks at Indian Point. Spectra Energy has not addressed this possibility in their documents.
- Failure of any of these gas pipelines could result in a total loss of cooling to the reactor cores and the inventory of spent fuel. Spectra Energy and Entergy have made no provisions to address this type of event.
- Some of the possible consequences of a gas pipeline fire or explosion at Indian Point include loss of power to the entire site, secondary fires from liquid fuel storage tanks, reactor core damage and melting, asphyxiation of site personnel, spent fuel radioactivity release, and massive social and economic damage for generations. None of these possible outcomes are being addressed.

Despite the lack of a complete, independent risk analysis, your administration's agencies are considering permits for the project, and FERC indicates that its Final Environmental Impact Statement will be released next month. FERC could issue the permit for this project immediately thereafter.

Therefore, a comprehensive, independent and transparent risk analysis is *urgently* needed, and the deeply flawed and incomplete documents being offered by Spectra, Entergy, the NRC, as well as the FERC Draft Environmental Impact Statement, should be rejected. This is the responsibility of any decision maker with any authority over any aspect of the proposed Spectra AIM pipeline, including the NYS DEC.

The possibility that the construction and operation of a massive new high pressure gas pipeline in close proximity to a nuclear power plant could result in a human catastrophe of unimaginable proportions mandates that you and other public officials demand accountability and take every possible precaution to ensure the health and safety of this generation and every generation that follows.

I urge you in the strongest possible terms to use your offices to fulfill this responsibility.

Sincerely,



Paul M. Blanch, P. E.
135 Hyde Rd.
West Hartford, CT 06117 860-236-0326

enclosures:

Professional credentials
Petition submitted to the NRC on October 15, 2014

Secretary Johnson
US Dept. of Homeland Security
Washington, DC 20528

Commissioner Hauer
Department of Homeland Security
1220 Washington Avenue,
Bldg. 7A, State Campus
Albany, NY 12242

Brian Wright
Deputy Director of Critical Infrastructure
Department of Homeland Security
1220 Washington Avenue,
Bldg. 22, State Campus
Albany, NY 12242

Re: Spectra Energy Algonquin Incremental Market (AIM) natural gas pipeline/compressor stations expansion, Federal Energy Regulatory Commission Docket #14-96

December 2, 2014

Dear Secretary Johnson, Commissioner Hauer, and Mr. Wright:

We are contacting you regarding an urgent time-sensitive Homeland Security matter -- the proposed placement of a 42" diameter, high pressure natural gas pipeline to intersect 2 proposed 1,000 megawatt power lines within 105 feet of vital structures at the Indian Point Nuclear Facility and close to its more than forty years of spent fuel, in a significant seismic zone and densely populated area near the financial capital of the world.

A successful attack could displace millions of residents and render the surrounding area uninhabitable for generations. We have brought these issues to the Nuclear Regulatory Commission, FERC and members of Congress, yet, it appears that as early as December 19, 2014, FERC may issue its Final Environmental Impact Statement on Spectra Energy's Algonquin Incremental Market (AIM) pipeline expansion project and issue its permit shortly thereafter.

The enclosed documents from Rick Kuprewicz, a leading pipeline expert and Paul Blanch a noted nuclear power expert and engineer, clearly outline the numerous increased threats posed by the convergence of these new hazards and the Indian Point nuclear power plant and the lack of a comprehensive, independent and transparent risk assessment.

Further serious concerns are raised due to the alarming rates of transmission pipeline incidents. According to the U.S. Department of Transportation's Pipelines and Hazardous Materials Safety Administration, in 2013 alone, there were 95 incidents in gas transmission pipelines. On 7/5/14 a 2.5 magnitude earthquake occurred 10 miles from Indian Point.

The purpose of an expansion of this magnitude is to enable Spectra to export gas overseas. Along with enhanced energy efficiency, the existing pipeline has adequate capacity to serve the growing energy needs of New England. Rather than protect our energy security, this proposed expansion will drain it.

Given the high density populations of Westchester, Rockland and Putnam and the proximity of Indian Point to NYC and its water supply, a pipeline explosion near Indian Point would be a disaster of catastrophic proportions.

According to the 2011 DHSES Strategic Plan, the first DHSES goal is to:

Prevent, Protect Against, and/or Mitigate Acts of Terrorism and Man-Made and Natural Hazards: by assessing and understanding our threats, vulnerabilities and consequences, sharing information and intelligence with our stakeholders, and taking proactive measures to lessen the likelihood or impact of incidents, emergencies and disasters.

We urge you to help protect this region and take prompt proactive measures to reduce the likelihood of this potential disaster by halting this dangerous and unnecessary project immediately until a comprehensive, independent, transparent risk assessment is conducted, completed and reviewed. This assessment must include an evaluation of a possible terrorist attack that could impact the gas lines and the storage of the jet fuel in proximity of one another prior to any decisions regarding the proposed AIM pipeline expansion project.

Thank you in advance for your prompt and careful attention to this urgent matter.

Sincerely,

Sandra R. Galef
Assemblywoman District 95

Kenneth W. Jenkins
Westchester County Legislator, 16th L.D.

Peter B. Harckham
Westchester County Legislator, 2nd L.D.

Harriet Cornell
Chairwoman, Environmental Committee
Rockland County Legislature

Benjamin Boykin
Westchester County Legislator, 5th L.D.

Leo Weigman
Mayor – Village of Croton-on-Hudson

Catherine F. Parker
Westchester County Legislator, 7th L.D.

Victoria Gearity
Trustee & Mayor-Elect Ossining Village

Alfreda A. Williams
Westchester County Legislator, 8th L.D.

Amy Rosmarin
Councilwoman – Town of North Salem

Catherine Borgia
Westchester County Legislator, 9th L.D.

Richard Clinchy
Councilman – Town of Somers

MaryJane Shimsky
Westchester County Legislator, 12th L.D.

Dan Welsh
Councilman – Town of Lewisboro

Lyndon Williams
Westchester County Legislator, 13th L.D.

Enclosures:

Letter to Governor Cuomo from Paul Blanch, nuclear power expert and engineer

Petition to Nuclear Regulatory Commission from Paul Blanch

Report from Richard Kuprewicz of Accufacts, Inc., pipeline expert

NYS Office of the Attorney General's comments to FERC regarding proposed AIM pipeline expansion



Homeland Security

JAN 12 2015

The Honorable Amy Rosmarin
Councilwoman
Town Board of North Salem
266 Titicus Road
North Salem, New York 10560

Dear Councilwoman Rosmarin:

Thank you for your December 2, 2014 letter to Secretary Johnson regarding the potential vulnerabilities of the Indian Point Nuclear Facility and the proposed gas pipeline. The Indian Point Nuclear Facility is owned and operated by Entergy Corporation. The U.S. Nuclear Regulatory Commission (NRC) is responsible for ensuring the safety and security of commercial nuclear power plants. As such, we recommend you follow up with the NRC to address this issue.

While the Department of Homeland Security (DHS) does not maintain any ownership of or regulatory authority over nuclear facilities, it leads the national effort to protect critical infrastructure from all hazards by managing risk and enhancing resilience through collaboration with the critical infrastructure community. This effort is conducted through the Critical Infrastructure Partnership Advisory Council (CIPAC) voluntary framework with partners from across the Government and industry. Under the CIPAC voluntary framework, DHS coordinates closely with the U.S. Department of Energy, the NRC, state and local governments, and industry partners to enhance critical infrastructure security and resilience. Industry partners include the owners and operators of the Nation's critical infrastructure, including those from nuclear power plants. Still, the NRC is the lead agency in all regulatory matters noted in your correspondence.

Regarding pipeline system security, the pipeline industry's security environment is based on the Pipeline Security Guidelines developed and issued by the Transportation Security Administration (TSA), as well as guidance developed by industry security working groups. During periods of heightened threats, pipeline companies follow the TSA Pipeline Security Guidelines for implementing increasingly stringent measures, to include, among others:

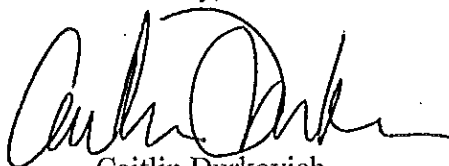
- Communicating threat information to employees to raise security awareness throughout the company;
- Enhancing access control;
- Deploying physical barriers;
- Increasing patrolling of critical facilities;
- Testing security monitoring and surveillance equipment to ensure full capability; and
- Fostering threat level response coordination with local law enforcement.

The Honorable Amy Rosmarin

Page 2

Thank you for your interest in this important matter. The co-signers of your letter will receive a separate, identical response. Should you require any additional information about the National Protection and Program Directorate's Office of Infrastructure Protection please do not hesitate to contact us at (703) 235-8110.

Sincerely,

A handwritten signature in black ink, appearing to read 'Caitlin Durkovich', written over a horizontal line.

Caitlin Durkovich
Assistant Secretary

cc: John Melville, Executive Deputy Commissioner, New York Division of Homeland Security and Emergency Services

Brian Wright, Director, Critical Infrastructure Program, New York Division of Homeland Security and Emergency Services

Official Transcript of Proceedings

NUCLEAR REGULATORY COMMISSION

Title: 10 CFR 2.206 Petition Review Board
RE Indian Point Nuclear Generating Unit

Docket Number: 05000247 and 05000286

Location: teleconference

Date: Wednesday, January 28, 2015

Edited by Douglas Pickett

Work Order No.: NRC-1342

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Washington, D.C. 20005
(202) 234-4433

1 UNITED STATES OF AMERICA
2 NUCLEAR REGULATORY COMMISSION
3 + + + + +
4 10 CFR 2.206 PETITION REVIEW BOARD (PRB)
5 CONFERENCE CALL
6 RE
7 INDIAN POINT
8 + + + + +
9 WEDNESDAY
10 JANUARY 28, 2015
11 + + + + +

12 The conference call was held, Christopher
13 Miller, Chairperson of the Petition Review Board,
14 presiding.

15
16 PETITIONER: PAUL BLANCH

17
18 PETITION REVIEW BOARD MEMBERS

19 Christopher Miller, Chairperson
20 Lee Banic
21 Thomas Setzer
22 Rob Carpenter
23 Dave Beaulieu
24 Dave Cylkowski
25 Ben Beasley

1 PETITION REVIEW BOARD MEMBERS (Continued)

2 Paul Prescott

3 Tahirih Solomon

4 Rao Tammara

5 Mike McCoppin

6 Dori Willis

7 Greg Oberson

8 Diane Render

9 Sergiu Basturescu

10 Doug Tifft

11 Stella Opara

12 Doug Pickett

13 Gladys Figueroa

14 Neil Sheehan

15 Sergiu Basturescu

16 Paul Prescott

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P-R-O-C-E-E-D-I-N-G-S

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MR. PICKETT: Good afternoon. Again, my name is Doug Pickett. I'm the Indian Point project manager in NRR in Rockville, Maryland. We're here today to allow the Petitioner, Mr. Paul Blanch, assisted by Mr. Richard Kuprewicz of Accufacts, Incorporated, to address the Petition Review Board, also referred to as the PRB, regarding the 2.206 petition submitted by Mr. Blanch on October the 15th, 2014. I am the petition manager for the petition and the PRB Chairman is Mr. Christopher Miller.

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As part of the PRB's review of this petition Mr. Paul Blanch has requested this opportunity to address the PRB. This meeting is scheduled from 2:30 to 3:30 this afternoon.

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The meeting is being recorded by the NRC Operations Center and will be transcribed by a court reporter. The transcript will become a supplement to the petition. The transcripts will also be made publicly available.

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I'd like to open this meeting with introductions. As we go around the room here in Rockville, Maryland, please be sure to clearly state your name, your position and the office that you work

NEAL R. GROSS

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WASHINGTON, D.C. 20005-3701

(202) 234-4433

(202) 234-4433

39

1 for within the NRC. We're going to start introductions
2 with myself here in Rockville, Maryland.

3 I'm Doug Pickett, the petition manager.

4 CHAIRMAN MILLER: And I'm Chris Miller.
5 I'm with the Division of License Renewal in the Office
6 of Nuclear Reactor Regulation, and I'll be the PRB
7 Chair.

8 MS. RENDER: I'm Diane Render from the
9 Division of Operating Reactor Licensing, project
10 manager.

11 MR. MCCOPPIN: Mike McCoppin. I'm Chief
12 of the Radiation Protection and Accident Consequences
13 Branch, Office of New Reactors.

14 MR. TAMMARA: My name is Rao Tammara. I'm
15 the technical reviewer, NRO.

16 MR. COLYER: Eddie Colyer, project
17 manager, Health Quality and Rulemaking.

18 MS. Banic: Lee Banic, NRR petition
19 coordinator.

20 MR. BLANCH: Yes, could people speak up a
21 little bit? I'm having trouble hearing.

22 PARTICIPANT: Can't hear.

23 MR. CYLKOWSKI: David Cylkowski. I'm an
24 attorney in the Office of General Counsel.

25 MS. SOLOMON: Tahririh Solomon, the senior

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1 special agent with the Office of Investigations.

2 MR. CARPENTER: Rob Carpenter, Office of
3 Enforcement, enforcement specialist.

4 MR. BEASLEY: Ben Beasley. I'm a branch
5 chief in the Division of Operating Reactor Licensing.

6 MS. WILLIS: Dori Willis. I'm the team
7 lead for Allegations and Enforcement in NRR.

8 MR. Harris: Brian Harris, project
9 manager, DPR.

10 MR. OBERSON: Greg Oberson, materials
11 engineer, Office of Nuclear Regulatory Research.

12 MS. SPIRA: Mattie Spira, Office of
13 Enforcement.

14 MS. OPARA: Stella Opara, NRR, allegations
15 specialist.

16 MR. PICKETT: We have completed the
17 introductions in the NRC headquarters. You can tell
18 we've got quite a few people in a lot of areas of
19 expertise being represented.

20 At this time we'd like to know is there
21 anybody else from NRC headquarters on the phone?

22 MR. PRESCOTT: Yes, Paul Prescott from the
23 Office of NRO, Quality and Vendor Inspection Branch.

24 MR. BASTURESCU: Sergiu Basturescu, NRR,
25 Technical Review.

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1 MR. PICKETT: Okay. Anyone else from NRC
2 headquarters?

3 (No audible response)

4 MR. PICKETT: And is there anyone from NRC
5 from the regional office on the phone?

6 MR. SHEEHAN: Neal Sheehan, Office of --
7 (Simultaneous speaking)

8 MR. PICKETT: I'm sorry, we heard Neal
9 Sheehan and who else?

10 MR. BURRITT: Art Burritt.

11 MR. PICKETT: Okay.

12 MR. SETZER: Doug, Tom Setzer, Region I.

13 MR. PICKETT: Okay. And the Licensee,
14 Entergy, could you please introduce who you have on the
15 phone?

16 MR. WALPOLE: Sure, Doug. It's Bob
17 Walpole, Manager; Steve Prussman from Regulatory
18 Assurance; and Rich Drake, our civil engineering
19 supervisor.

20 MR. PICKETT: Okay. Mr. Blanch, Mr.
21 Kuprewicz, would you please introduce yourselves along
22 with anyone else that's with you for the record?

23 MR. BLANCH: Yes, this is Paul Blanch.
24 I'm an energy consultant and the Petitioner. I'd like
25 to introduce Rick Kuprewicz, who will be also making a

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1 statement. I'd like to thank Jerry Shapiro of Senator
2 Gillibrand's office; Dana Levenberg, who will also be
3 making a brief statement; and Sara Levine of
4 Assemblywoman Lowey's office. And I'd like to say hi
5 to old friends Bob Walpole and Paul from Morgan Lewis.

6 MR. PICKETT: Okay. It's not required for
7 members of the public to introduce themselves for this
8 call, however, if there are members of the public; and
9 I understand there are, could you please identify
10 yourself at this time?

11 MS. CLAIRE: Paula Claire, Garrison, New
12 York.

13 MS. GLIDDEN: Susanna Glidden, North
14 Salem, New York.

15 MS. ROSEMARY: Emily Rosemary,
16 councilwoman, Town of North Salem.

17 MS. McDONALD: Susan McDonald, New York.

18 MS. VAN DOLSEN: Susan Van Dolsen,
19 Harrison, New York.

20 MR. PICKETT: Could we do those again, the
21 last two. Susan McDonald I heard and --

22 MS. VAN DOLSEN: Susan Van Dolsen,
23 Harrison, New York.

24 MR. PICKETT: Thank you.

25 MS. VANN: Nancy Vann, Peekskill, New

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1 York.

2 MR. HOUSTON: William Houston,
3 Binghamton, New York.

4 MR. BESSETTE: Paul Bessette, Morgan
5 Lewis.

6 MS. WISER: Ellen Wiser, White Plains, New
7 York.

8 MS. SPEAR: Susan Spear, Office of U.S.
9 Senator Kirsten Gillibrand.

10 MR. LOCHBAUM: Dave Lochbaum, Union of
11 Concerned Scientists.

12 MR. PICKETT: Okay.

13 MS. LEVENBERG: Dana Levenberg, New York
14 State Assemblywoman Sandy Galef's office.

15 MS. LEVINE: Sara Levine, Congresswoman
16 Nita Lowey's office.

17 MR. PICKETT: Okay. If there's no one
18 else, I'd like to emphasize that we each need to speak
19 clearly and loudly to make sure that the court reporter
20 can accurately transcribe this meeting. If you have
21 something to say, we'd like you to first state your name.
22 For those dialing into the meeting, please remember to
23 mute your phones to minimize any background noise or
24 distractions. If you do not have a mute button, you can
25 do this by pressing the star, six buttons. To un-mute,

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1 press the star, six keys again.

2 At this time I'll turn this over to the PRB
3 Chairman, Chris Miller.

4 COURT REPORTER: Mr. Pickett, this is the
5 court reporter. Before you proceed with the call this
6 afternoon, at the conclusion of the call could you
7 provide me with a service list of the names of everyone
8 on the call? People that registered to speak and party
9 members.

10 MR. PICKETT: I can certainly give the
11 names of the NRC folks. I was hoping to rely on you to
12 get the names of everybody else.

13 COURT REPORTER: So do you have a list of
14 people who are registered to speak?

15 MR. PICKETT: This call is also being
16 recorded by the NRC Operation Center, so we can go back
17 over the recording.

18 COURT REPORTER: All right. Thank you.

19 MR. PICKETT: I'll help you out with that.

20 COURT REPORTER: Sure. Thanks.

21 MR. PICKETT: Okay.

22 CHAIRMAN MILLER: Thank you. And good
23 afternoon, everyone. Thanks for convening with us
24 today and agreeing to provide information. Thank you,
25 Mr. Blanch and Mr. Kuprewicz. I'm Chris Miller and I'm

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1 looking forward to hearing the information you have to
2 provide for us.

3 I'd like to first share some background on
4 the process that we're using. Section 2.206 of Title
5 10 of the Code of Federal Regulations process is the
6 primary mechanism for the public to request enforcement
7 action by the NRC in a public process. This process
8 permits anyone to petition the NRC to take
9 enforcement-type action related to NRC licensees or
10 licensed activities. Depending on the results of its
11 evaluation, the NRC could modify, suspend or revoke an
12 NRC-issued license or take any other appropriate
13 enforcement action to resolve a problem. The staff
14 guidance for the disposition of this 2.206 petition
15 request is in Management Directive 8.11, which is
16 publicly available on our Web site.

17 Today's meeting's purpose is to give the
18 Petitioner, Mr. Blanch, an opportunity to provide any
19 additional explanation or support for the petition
20 before the Petition Review Board's initial
21 consideration and recommendation.

22 So we have the initial documents that you
23 sent, and I believe you supplemented with some
24 additional items, Mr. Blanch, today. They came to us
25 at the last minute and I don't know if everybody on the

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1 Board has gotten a chance to look at all of them, but
2 we do have them and we'll take them into consideration
3 when the Panel meets.

4 So, a couple of things. This meeting is
5 not a hearing. It's not an opportunity for the
6 Petitioner to question the NRC or the PRB about the
7 merits of the issues presented in the petition request.
8 It's really an opportunity for you to give us a fuller
9 picture, us, the members of the Board, a fuller picture
10 that we can work from in making our deliberations.

11 No decisions regarding the merits of this
12 petition will be made at this meeting.

13 Following the meeting the Petition Review
14 Board will conduct its internal deliberations and then
15 the outcome of the internal meeting will be discussed
16 with the Petitioner, Mr. Blanch.

17 The Petition Review Board typically
18 consists of a chairman, usually a manager at the senior
19 executive level who serves with the NRC. And you've
20 heard some of the other -- that's myself. And then a
21 petition manager, which is Doug, and a PRB coordinator.
22 Other members of the Board are determined by the NRC
23 staff based on the content of the information in the
24 petition request.

25 As described in our process, the staff may

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1 ask clarifying questions in order to better understand
2 the Petitioner's presentation and reach a reasoned
3 decision whether to accept or reject the Petitioner's
4 request for review under the 2.206 process. And we'll
5 try to do that at the end of the call. We'll listen to
6 everything that you and your speakers have, Mr. Blanch,
7 and then we'll try to ask if there's any clarifying
8 questions or any additional information that we think
9 that members of the Board may need to ask of you.

10 With that being said, I want to summarize
11 the scope of the petition under consideration and the
12 NRC activities to date. On October 15th Mr. Blanch
13 submitted a 2.206 petition to the NRC regarding the 10
14 CFR 50.59 site hazards analysis prepared by Entergy
15 Nuclear Operations, the Licensee, for Indian Point
16 Nuclear Generating Stations 2 and 3.

17 The 50.59 analysis was performed by the
18 Licensee to determine the safety impact on the Indian
19 Point plant due to Spectra Energy's proposed 42-inch
20 diameter natural gas pipeline that has plans to traverse
21 a portion of the owner-controlled property at the Indian
22 Point facility.

23 In the petition Mr. Blanch requests that
24 the NRC take the following enforcement actions against
25 Entergy, the Licensee, for the following violations:

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1 Violation of 10 CFR 50.59, Completeness and Accuracy of
2 Information, for providing inaccurate and incomplete
3 information in the 50.59 site hazards analysis;
4 violation of 10 CFR 50, Appendix B, Quality Assurance
5 Criteria for Nuclear Plants and Fuel Reprocessing
6 Plants, for relying on a contractor who was not
7 qualified in accordance to Appendix B requirements, was
8 not qualified in accordance with Entergy Quality
9 Assurance Program, and, as a result, was not qualified
10 to perform an analysis for such significant
11 safety-related issue; and violation of 10 CFR 50.59,
12 Changes, Tests and Experiments, for failing to perform
13 the necessary safety evaluation requirements.

14 Furthermore, in the petition, Mr. Blanch
15 requested that the NRC issue a demand for information
16 against Entergy for the following: Demand an
17 explanation from Entergy seeking an explanation as to
18 why the previously identified violations do not also
19 constitute a violation of 10 CFR 50.5, Deliberate
20 Misconduct; demand that Entergy seek the results of a
21 new and realistic risk hazard analysis consistent with
22 the guidance providing in OSHA Appendix C, Section
23 1910.119, Compliance Guidelines and Recommendations
24 for Process Safety Management; and demand that Entergy
25 attest to the completeness and accuracy of Entergy

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1 Report IP-PRT-08-00032, prepared in August 2008 that
2 assessed the safety impact of the existing 26 and
3 30-inch diameter natural gas pipelines that traverse
4 the owner-controlled property in Indian Point.

5 That report was performed by the same
6 contractor that performed the current site hazards
7 analysis for Entergy. In addition, the report from
8 August 2008 contributed to NRC's rejection of a previous
9 2.206 petition submitted by Mr. Blanch concerning the
10 existing natural gas pipelines.

11 The Petitioner has also supplemented his
12 original petition with the following: The Town of
13 Cortlandt, New York contracted with Accufacts,
14 Incorporated to perform a review and analysis of the
15 proposed Spectra Energy natural gas pipeline and how it
16 may affect Cortlandt.

17 The Blanch petition is supplemented by the
18 Accufacts letter dated November 3rd, 2014 that is
19 critical of Entergy's 50.59 site hazards analysis and
20 characterizes it as seriously deficient, inadequate and
21 under-representing the real risks.

22 Point 2, the Petitioner letter dated
23 November 11th, 2014 discusses the proposed West Point
24 Partners' construction of a high voltage direct current
25 transmission cable that may run near or adjacent to the

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1 proposed natural gas pipelines before tying into the
2 Buchanan Switchyard. This letter also supplements the
3 Blanch petition. The Petitioner has expressed concern
4 that stray DC currents emanating from the high voltage
5 cable could adversely impact the existing gas
6 pipelines, the new gas pipelines, and underground
7 safety-related components at the Indian Point facility.

8 And if I may discuss the NRC activities to
9 date, on November 24th, 2014 the petition manager
10 contacted the Petitioner to discuss the 2.206 process
11 and to offer the Petitioner an opportunity to address
12 the PRB by phone or in person. Petitioner requested to
13 address PRB by phone prior to its internal meeting to
14 make the initial recommendation to accept or reject the
15 petition for review.

16 As a reminder for the phone participants,
17 please identify yourself if you make any remarks as this
18 will help in the preparation of the meeting transcript
19 that will be made publicly available. And thank you.

20 Mr. Blanch, I'll turn to over to you and Mr.
21 Kuprewicz to provide any information you believe the PRB
22 should consider as part of this petition.

23 MR. BLANCH: Okay. This is Paul Blanch
24 speaking again. With your introduction, which I
25 appreciate, I'm sorry, that was Charles Miller is your

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1 name?

2 CHAIRMAN MILLER: Chris Miller.

3 MR. BLANCH: Chris Miller?

4 CHAIRMAN MILLER: Yes.

5 MR. BLANCH: Okay. You stated obviously
6 that this is being conducted in accordance with 10 CFR
7 2.206 and guidance provided by Management Directive
8 8.11. And you made a statement that this is not an
9 opportunity for questions by the Petitioner. I'm not
10 sure where that statement originated. I've reviewed
11 Management Directive 8.11 and it's clear certainly that
12 the Licensee is allowed to ask questions and the NRC can
13 ask questions and it does not prohibit the Petitioner
14 from asking questions. Again, we don't have to get into
15 the details of the Management Directive.

16 But secondly, this meeting is somewhat a
17 follow up of a telephone conversation the NRC had in
18 early December with various congressional
19 representatives of the New York and Westchester area,
20 and during that meeting and confirmed by a Mr. Doug
21 Tifft, T-I-F-F-T, that Mr. Blanch would have an
22 opportunity with meetings with the NRC staff and those
23 meetings would include this conversation. So the
24 inference there was that I myself would be able to
25 address technical issues, and that's my primary

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1 interest. And the reason for my interest is primarily
2 to decide whether I further want to amend my petition
3 or take any other subsequent action, including -- well,
4 whatever action I decide to take.

5 Again, I filed a Freedom of Information Act
6 request for various documents related to the analysis,
7 which has been totally redacted except for an
8 introduction and one single reference, that reference
9 being the submittal by Entergy of August 21st. We and
10 the experts are extremely interested because we suspect
11 there contains inaccurate information within the
12 analysis, and I'll get into that a little bit later.

13 And other federal agencies, and Richard can
14 expound on this. There's a process which I sent to you.
15 It's called CEII, which allows members of the public and
16 technical experts to sign an agreement to review various
17 documents that are proprietary, confidential or could
18 endanger the health and safety of the public, and so on
19 and so forth. We'd like the NRC to consider entering
20 into some type of agreement where our experts could
21 review the Entergy and the NRC analysis, because we
22 certainly believe that it contains questionable
23 information at first, at best.

24 Our main concern, and there are many
25 concerns; and Richard is probably the most qualified to

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1 speak on that, but in the summary of the analysis
2 provided August 21st by Entergy there was an assumption
3 that the gas flow would be terminated within three
4 minutes of its initiation. And I don't mean detection,
5 but initiation. And based on historical experience and
6 research we certainly question that. And I'd like to
7 stick with that primary point and have Richard speak to
8 that, if that's okay.

9 Now, Richard, if you would like to speak on
10 that particular three-minute isolation time.

11 MR. KUPREWICZ: Sure. Maybe my preamble
12 is, because I haven't spoken up before, and if I'm not
13 getting clear, please speak up because it's hard over
14 the phone on conference.

15 Let me just give you a brief background
16 here. I won't spend a lot of time. I don't usually
17 waste a lot of time selling myself, but I've got over
18 40 years experience in the energy industry, especially
19 in incident investigations related to major pipeline
20 failures. I've spent many years trying to improve
21 pipeline safety regulations, especially after the
22 terrible pipeline ruptures in Bellingham in '99 and in
23 Carlsbad in 2001. That was a gas transmission line was
24 the latter one. And in Bellingham it was a liquid line.
25 Multiple loss of life, near loss of the city in

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1 Bellingham, and obviously a tragic loss of life in
2 Carlsbad, a very remote area. It killed 12 people, 5
3 of them children.

4 Anyway, I have assisted over many years in
5 the improvement of pipeline safety regulation, trying
6 to work with industry and various other parties,
7 regulators as well as the public, usually representing
8 the public as members on various committees. Many of
9 those served in the development of pipeline safety
10 regulation regarding integrity management, especially
11 for transmission pipelines. And also in the area that
12 may be very relevant to this particular subject, in the
13 area of pipeline control room management. And those
14 regulations have been promulgated and are now in
15 regulation. And as again in all regulation, there's
16 always a series of compromises, but hopefully you move
17 the ball forward.

18 And I spent over 40 years trying to improve
19 the area of control room management for not only
20 refineries and chemical plants, but also in pipelines.
21 I have very little tolerance for trying to blame the
22 pipeline control room operator for some of these
23 terrible incidents you've been seeing lately in the last
24 10 or 15 or so years.

25 On the issue that may be very relevant here,

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1 you can get my CV. It's in the public domain. That
2 will cover most of my documents that are in public. The
3 investigations I've been brought into, that are
4 hypersensitive are not in public domain, may involve
5 criminal investigations, and I will not discuss any of
6 that stuff. And I can bring lots of attorneys in on both
7 sides of the fence that will try to protect that
8 neutrality.

9 I am also a very experience HAZOP team
10 leader, and I only mention that because a HAZOP team
11 leader used to carry under law under OSHA a requirement
12 that you had to be field experienced, operational
13 experience to lead the team. I don't know if that's in
14 the current regulations, but that doesn't mean a couple
15 years. So again, the experience requirement is there
16 to assure you're asking the right questions and then the
17 parties can reach a rational reasonable conclusion.

18 Now, let me focus in on the specific issue
19 of the claimed three-minute closure time for the valves.
20 I think the report that I've seen that's in public
21 indicates that they'll close the valves in three minutes
22 under the impression that that will actually stop the
23 gas burning, or the gas explosions, more likely
24 explosions than gas burning, within a three-minute time
25 period. And I'll just tell you that my extensive

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1 experience in this area, you won't even necessarily
2 recognize this within three minutes, much less within
3 a control room many, many miles away, take the
4 appropriate actions to try to initiate actions to shut
5 down, close -- shut some compressors and close valves.
6 That can go for quite some time.

7 Now, in all fairness I need to point out in
8 the San Bruno pipeline rupture, a slightly different
9 animal, smaller line, lower pressure, not necessarily
10 remote-operated valves, but that burned for over 90
11 minutes. Okay? And in that particular location the
12 fire department was several hundred yards down the
13 street. Okay? So my point is in these terrible
14 tragedies -- nobody wants a pipeline rupture, but in
15 these large diameter pipeline ruptures all kinds of
16 dynamics and noise interfere so that what happens is a
17 guy in a control room may or may not get information in
18 a manner allowing him to make what I'll call executive
19 decisions to take the appropriate action to handle a gas
20 pipeline rupture. So time can go very quickly in a
21 control room.

22 And so in this particular case I would say
23 the illusion of a closure time in three minutes is -- it
24 may be after you push the buttons to do that, you may
25 be designed to do that, but the real relevant issue that

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1 this Panel I think needs to consider is the actual
2 dynamics that in the event of a pipeline rupture in this
3 sensitive location, the system dynamics will
4 substantially delay the recognition and the appropriate
5 shutoff and responses such that gas will explode and
6 burn for quite a period of time. Right?

7 I need to just comment on one other issue
8 that's often confusing, and that is in federal pipeline
9 safety regulation there's an animal called the
10 potential impact radius that's used to decide what we
11 think might be the potential impact from a gas
12 transmission pipeline rupture. That animal was never,
13 ever intended -- and FERC knows this. I've said this
14 in enough cases under oath, that that was a screening
15 tool to help define high consequence areas. And I've
16 also said under oath in other cases that the PIR was
17 meant to help identify high consequence areas and should
18 not be used to cite the consequences of pipeline
19 ruptures.

20 As it turns out, the larger the diameter of
21 the pipeline, the potential impact radius moves in the
22 right direction, but the actual impact radius can be
23 much larger. And I have said to PHMSA on more than one
24 occasion, trying to go through a cycle to improve the
25 regulations for larger diameter pipelines, that became

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1 very evident -- that there was a problem in the federal
2 regulations that became very evident after the San Bruno
3 rupture. And even the NTSB acknowledges this, there's
4 something not quite right with this PIR equation for
5 larger diameter pipelines.

6 Now with that said, I think the fundamental
7 issue here from my perspective is if the pipeline were
8 to rupture either as a 30-inch or a 42-inch; because the
9 issues goes beyond just the 42-inch, would it generate
10 blast? And the answer probably is mostly likely,
11 though there are ruptures that don't generate blasts.
12 They're rare. When I say "blasts," I mean blasts from
13 the ignition of the gas cloud that is mixed with the
14 turbulent action. And most likely in a rupture you'll
15 get multiple blasts.

16 From what I have seen of the layout; and
17 again, I haven't seen a complete detail of the layout,
18 I don't expect blast forces because -- like major damage
19 to like the reactor buildings or anything, because
20 they're pretty reinforced, but the question would be
21 would possible blast generated cause damage to
22 structures that might be what I'd call safety- critical
23 that would interfere with the possibility of having the
24 fail-safe shutdown of the Reactors 2 and 3? And I don't
25 have an answer to that one. I'll be very frank with you.

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1 I would tell you this: Blast forces tend
2 to dissipate. They're situation-specific. And from
3 what I've seen I would expect that there are blast
4 forces. While they will kill, they wouldn't
5 necessarily damage a lot of structure because they
6 dissipate quickly with distance. So the controlling
7 issue regarding this from my perspective and experience
8 is the tremendous amount of heat flux generated from
9 these high-tonnage release gas transmission pipeline
10 ruptures that have ignited.

11 And what happens is the higher the heat
12 flux, the longer the duration, the more damage that can
13 occur. I would expect extensive damage to auxiliary
14 equipment such as transmission pipelines and equipment
15 that might be related to fail-safe shutdown of the
16 reactor facilities themselves.

17 And that's where I brought the very simple
18 question in my report. In the event of a rupture of a
19 sustained duration; it's going to be longer than three
20 minutes given the transient dynamics on this system,
21 what equipment would be affected and would it interfere
22 with the fail-safe shutdown of the plant? I don't have
23 an answer for you on that. I can tell you the burns will
24 be substantially longer than three minutes with
25 significantly high heat fluxes.

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1 That's about it for me.

2 MR. BLANCH: Thank you very much, Richard.

3 Does anyone have any questions for what Richard just
4 said?

5 Mr. PICKETT: Excuse me. I just take it
6 -- I do have a question for Mr. Kuprewicz. And I am
7 no --

8 MR. KUPREWICZ: Who's speaking?

9 MR. PICKETT: Doug Pickett. I am no pipe
10 expert like you are, Mr. Kuprewicz, but in layman's
11 terms, and I think I probably represent a lot of the
12 people in the room here, when we think about a 42-inch
13 gas line breaking, we would imagine a major explosion,
14 but after that we would think this would be like
15 effectively a torch and it wouldn't matter whether the
16 valve closed in three minutes or three hours. Now am
17 I wrong in my thinking?

18 MR. KUPREWICZ: Well, first of all,
19 there's no dumb question, so please do not hesitate to
20 ask, if you can. If I'm not clear, then please ask.
21 I'm not here to give a speech.

22 That's a fair question you ask. The
23 tonnage release on these, especially these large
24 diameter pipelines are such that you can expect to see
25 multiple detonations, multiple blasts. The initial

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1 blast will probably be the highest force one. And so
2 when you do site-specific blast pressure waves from the
3 tonnage release and time to ignition, usually the
4 initial blast ignition will have the greatest force.
5 But then what will happen, because the gas releases are
6 so great and the air cloud mixture is so turbulent,
7 you'll see multiple secondary blasts, but they won't be
8 as significant as the first one.

9 But those blast pressure waves will
10 -- again, the science will tell you they dissipate quite
11 quickly with distance. So if you're in a real congested
12 area, that will contribute to the blast forces. But
13 from what I've seen of the structure spacing, I think
14 if you sat down and went through the detail of the layout
15 of the critical structures at Indian Point, while blasts
16 can be an issue of concern, my less-than-informed
17 opinion at this stage given the limited information that
18 can be made public is that while blasts can damage
19 structures and actually cause some building failures,
20 I don't think it will necessarily -- it won't interfere
21 with the reactors structures. They're pretty
22 hardcore.

23 So you'll get multiple blast explosions,
24 but that's not the controlling factor. The controlling
25 factor is the tremendous heat flux and the duration of

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1 that heat flux. I have seen the heat fluxes so high that
2 they will liquify steel at a distance and vaporize
3 aluminum. And I'm not saying that to scare anybody. I
4 just want everybody to understand if that occurs, what's
5 that do to the equipment that could be used to fail-safe
6 the plant? If it can't affect the plant and the plants
7 can still be fail-safed, then even in a tremendous
8 tragedy such as a rupture the plant is protected. And
9 then I'd have to say I don't like rupture, but I can tell
10 you that the plant would be protected. But I can't say
11 that. I can't come to that conclusion from what I've
12 seen to date.

13 DR. GAVIN: Well, I'm just trying to get a
14 better understanding of the difference between the
15 valves closing in three minutes versus three hours.
16 And it sounds like the heat flux is the limiting factor.

17 MR. KUPREWICZ: Well, I think that --
18 Well, no, no. Let me be real clear here: There's more
19 than just the time to close the valves. You have to
20 recognize that while you have a rupture; and it won't
21 be pressure drop, okay, the dynamics of where this pipe
22 is located in proximity to the compressor station you
23 would most likely not see pressure drop. So you won't
24 see pressure drop alarms for quite a while in the control
25 room that may be 1,000 miles away. And that's not the

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1 control room operator's fault. Okay?

2 The dynamics, the way the rupture will
3 work, the way a pipeline ruptures, it unzips in a
4 microsecond. It totally casts out pipe steel in all
5 directions and forms these huge craters and then the gas
6 roars at the speed of sound coming out of the pipe and
7 the gas, the speed of the sound and the gas, which is
8 higher than the velocity of the speed of sound and air.
9 That's why you hear these roars and nobody can figure
10 out what it is.

11 So my point is that if you had a rupture,
12 it's going to be awhile before somebody in a control room
13 gets the word that you might have a rupture. And that's
14 going to be more than probability. If you ran the
15 transient dynamics and you were trying to figure this
16 out, you were trying to estimate how much time would it
17 take before we'd understand we had a rupture and gave
18 the command to close valves, it may be many, many
19 minutes.

20 Mr. Pickett: Okay. Thank you.

21 MR. BLANCH: Yes, and this is Paul
22 following up. We do have other structures. We have
23 the gas turbine fuel oil tanks that are located in a very
24 close proximity which hold hundreds, maybe millions of
25 gallons of jet fuel oil which would flow downhill. We

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1 have other vital structures. We have the switchyard.
2 We have transformers. We have vital tanks that are used
3 for cooling which are in the high-heat flux and blast
4 radius.

5 We also have information that the flow in
6 the existing lines, the 26 and 36-inch lines, may in fact
7 be changed through this modification. We do not know
8 if this has been addressed.

9 MR. KUPREWICZ: Yes, and that's a good
10 point. And I didn't mention this, but Paul has brought
11 up a good point. If that jet fuel tank is part of your
12 fail-safe system, and if I understand it's within 150
13 feet of this pipeline, blast radius will take the tank
14 out. Okay?

15 Now, if you don't need it to fail-safe the
16 plant, it'll burn, it may even explode, but it won't
17 necessarily -- if you don't need it to fail-safe the
18 plant, then from my perspective I don't like it, but it's
19 not going to jeopardize the plant.

20 MR. BLANCH: Well, it will burn -- it will
21 be hundreds of thousands of gallons of burning fuel
22 flowing down into safe-related structures.

23 MR. KUPREWICZ: Okay. If you know the
24 detail, because I don't --

25 (Simultaneous speaking)

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1 MR. BLANCH: That's why I --

2 (Simultaneous speaking)

3 MR. KUPREWICZ: -- the risk analysis would
4 look at.

5 MR. BLANCH: That's why I sent you the plan
6 view of a site showing elevations and distances. And
7 you can see it flows right down near safety-related
8 structures, which we all know what they are. The
9 switchyard will be taken out. There are other vital
10 components that will be taken out.

11 The bottom line here is that none of us know
12 everything about this. I certainly don't. Richard
13 will admit he doesn't know everything about nuclear
14 safety, and we all have our shortcomings. And we
15 desperately need to have the ability to review this
16 analysis and FERC has a procedure for allowing it called
17 CEII, which I don't know what means, but we can sign
18 confidentiality agreements for the very purpose that
19 you said we can't have it.

20 I have security clearance. I have worked
21 at Indian Point and other plants. Richard has security
22 clearance. Any other experts that we decide to bring
23 on would have the security clearance to review the
24 analysis and make sure it's complete and considered
25 everything.

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1 We have significant safety issues, and
2 we're not talking like in Connecticut where it killed
3 seven people. We are talking tens of millions of people
4 that could be endangered by releases from Indian Point.
5 And we cannot take this lightly.

6 We cannot believe for instance the
7 three-minute closure time, the fact that vital
8 structures will not be jeopardized. Flow in the
9 existing lines, which you said before in the final
10 safety analysis report that the rupture of those lines
11 is not feasible, yet it is feasible in the new lines.
12 I mean, either you're telling me the truth now or
13 something is amiss here. We have a probability of zero
14 for one line and a finite probability for another.

15 We absolutely need an independent
16 assessment of the analysis, and that is what we're
17 questioning. And I think that we need to pursue this,
18 that the NRC has to check with its management for an
19 independent review, whether we do it in cooperation with
20 Spectra, Entergy, NRC. That's fine with us. We'd love
21 to hear all inputs. But it's an absolute necessity that
22 further review be done by the experts in these various
23 disciplines, especially Richard, and including myself,
24 who has knowledge of Indian Point Nuclear Power,
25 knowledge of the regulations, knowledge of the risks.

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1 I have met with the chairman's office on
2 issues similar to this where the chairman at the time
3 allowed me to meet and shared with me information that
4 is not necessarily publicly available. That is what we
5 are asking in addition to the requests of the 2.206
6 petitions.

7 Again, I think that's pretty much what I
8 want to say, and I would like to hear from Congresswoman
9 Lowey's office by way of Dana Levenberg and hear some
10 of her statements, if she is ready to make some
11 statements. Dana?

12 MS. LEVENBERG: Sorry, I was on mute. Hi,
13 I'm sorry. Just to clarify, Dana Levenberg,
14 L-E-V-E-N-B-E-R-G, and I'm from New York State
15 Assemblywoman Sandy Galef's office, so a state
16 representative, not a congressional representative.

17 I just wanted to reiterate the
18 assemblywoman has as recently as January 15th submitted
19 a letter to the Secretary of FERC, as well as the
20 chairman of the NRC underscoring her extreme concern
21 that this independent risk assessment that was done both
22 by Entergy and -- I mean, that the assessment that was
23 done both by Entergy and NRC has experts like Rick and
24 Paul overseeing it, looking at it, reviewing it, or even
25 conducting their own analysis with the relevant

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1 pertinent information that has been provided. And
2 again, Paul laid out some possibilities. I'm not sure
3 what the one that would be best for NRC is. She's
4 extremely concerned that the issues that have been
5 brought forth by these two experts preclude the safe
6 siting of a larger pipeline so close to Indian Point.

7 She also wanted to make sure that as she
8 understands it there's no precedent for this type of
9 proximity and this size of gas line to be so close to
10 a nuclear power plant. And this is the most critical
11 nuclear power plant in our nation, one that has the NRC's
12 -- maybe the most eyes on this plant, more so than maybe
13 any other because its proximity to New York City.

14 And the radius of the impact of a blast and
15 additionally the heat that would create these other
16 issues that Mr. Kuprewicz has pointed out, based on the
17 fact that this three-minute assumption that was used and
18 that was articulated by the NRC expert on a phone call
19 that the assemblywoman organized with some
20 congressional offices, is sort of the most important
21 issue that has come up, in her opinion, that precludes
22 this from actually making any sense for this pipeline
23 to be sited so close to Indian Point.

24 It is really a great and dire concern for
25 her and for the safety and well-being of the

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1 constituents she represents in the 95th Assembly
2 District, which includes Montrose, Buchanan, the Town
3 of Cortlandt, Croton, Peekskill and many of the other
4 areas that would be directly impacted by any sort of
5 rupture or an issue with the gas line that would impact
6 Indian Point. So she really wants to make sure that
7 some sort of analysis, an independent assessment of the
8 analysis with cooperation of these types of experts be
9 undertaken and either looking at again -- once again
10 either looking at what's already been done with these
11 experts or starting from scratch and undertaking
12 something that's truly independent. That's
13 it.

14 MR. KUPREWICZ: I might just want to
15 interject here a process risk analysis doesn't take like
16 man months, so that's just the basic --

17 (Simultaneous speaking)

18 PARTICIPANT: Sir, could you state your
19 name?

20 MR. KUPREWICZ: -- probably thinks this
21 is --

22 MS. LEVENBERG: I don't know what that
23 means.

24 MR. KUPREWICZ: It's something that you
25 get the right players in a room and they're cooperative

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1 and open. Then you can get there fairly quickly. It
2 doesn't take weeks. It doesn't even take a day if you
3 really get the right people together.

4 MS. LEVENBERG: I'm sorry. Who's
5 speaking?

6 MR. KUPREWICZ: Nor am I advocating that it
7 has to be me. I'm not --

8 MS. LEVENBERG: Oh, is this Rick? Is this
9 Rick? I didn't know who was speaking. Okay.

10 MR. KUPREWICZ: Oh, I'm sorry. I don't --

11 MS. LEVENBERG: It's Rick.

12 MR. KUPREWICZ: -- the problem with cell
13 phones.

14 MS. LEVENBERG: Yes.

15 MR. KUPREWICZ: This is Rick Kuprewicz.

16 MS. LEVENBERG: Okay.

17 MR. KUPREWICZ: So, the right players in a
18 room, including the Government folks, if they want to
19 be there, you get the right questions addressed with the
20 right information and then that hazard analysis or
21 something like that can go very quickly. Again though,
22 we know that some of this will be hypersensitive, and
23 so everybody has to respect that, too. Anyway --

24 (Simultaneous speaking)

25 MR. BLANCH: And I think it's safe to say

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1 -- this is Paul Blanch -- safe to say that, speaking for
2 myself, we would more than be willing to involve the
3 experts from the NRC, the experts from Spectra and from
4 Entergy such that we could hear all sides.

5 MR. KUPREWICZ: Fair call.

6 MS. GLIDDEN: This is Susanna Glidden.
7 Congresswoman Lowey's aid is ready to say something,
8 too.

9 MS. LEVINE: Well, actually, thank you,
10 but this is Sara from Congresswoman's Lowey's office,
11 Sara Levine, L-E-V-I-N-E. I am unfortunately not
12 making a statement today. I'm here just to listen and
13 observe. But thank you.

14 MS. GLIDDEN: Well, thank you, Sara.

15 MR. BLANCH: Dave Lochbaum, do you have any
16 comments?

17 (No audible response)

18 MR. BLANCH: I guess not.

19 CHAIRMAN MILLER: Thank you, Paul. Is
20 there any other information you want to pass before I
21 ask the Panel and those listening in if they have any
22 questions?

23 MR. BLANCH: Yes, there's one other
24 statement that I want to make. Again, my petition is
25 alleging wrongdoing on behalf of Entergy in submitting

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1 inaccurate incomplete information, and it appears to me
2 the NRC has already made a determination in its
3 inspection report that this information is accurate.
4 And how can we be assured of an independent assessment
5 of this petition if it's the same chain of command that
6 has already approved and said this information is
7 accurate? That's an outstanding question and I'm not
8 sure how we can get true independence. And according
9 to Management Directive 8.11; and I know there was
10 someone from the Office of Investigation, if there is
11 an allegation of wrongdoing, which there is, the Office
12 of Investigations has to be heavily involved with this
13 assessment of the 2.206 petition.

14 CHAIRMAN MILLER: So, Paul, this is Chris
15 Miller, and I just wanted to give you my short discussion
16 of one of the things that the Panel is going to consider
17 is if there's any allegations that we need to look at
18 and move forward, if we move forward with any
19 allegations from the material provided, the Office of
20 Investigations will be a part of that, will be in on
21 those discussions. That's how we do it in our normal
22 allegation process. So the 2.206 Board will actually
23 look and see if there are any new allegations that come
24 up as a result of this.

25 MR. BLANCH: And I personally am not

1 advocating the treatment of this 2.206 as an allegation.

2 CHAIRMAN MILLER: Okay. Thank you.

3 Anything else that you want to provide to the Board
4 before we go around for questions?

5 MR. BLANCH: I think again I'd like to
6 reemphasize the possibility of an independent analysis
7 which would include the parties that I mentioned before
8 and some process where we could sign some type of
9 confidentiality agreement to have access to the
10 information that the NRC has restricted.

11 And the other question I have is for this
12 three-minute isolation time. In the response to my
13 FOIA request the references were not redacted, however,
14 there was no reference to how this three-minute time was
15 come up with, and I would like to see the reference for
16 how the NRC determined that the three-minute time is
17 sufficient.

18 CHAIRMAN MILLER: Okay. I've got that
19 note. Let me ask around the table here at headquarters
20 first. Is there anyone that has questions for Mr.
21 Blanch or any of the presenters?

22 (No audible response)

23 CHAIRMAN MILLER: Seeing none, anybody
24 from the regions?

25 MR. SETZER: Thank you, no, Chris.

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1 CHAIRMAN MILLER: Okay. Anyone from
2 members of the public that have questions for Mr.
3 Kuprewicz or Mr. Blanch or the presenters?

4 MS. VAN DOLSEN: This is Susan Van Dolsen.
5 I'm a member of the public. I just was wondering about
6 the precedent. There was evidently some sort of
7 independent risk assessment done for the Vermont Yankee
8 plant in 2008. And so there was something
9 commissioned. I think it was through the State of
10 Vermont. Would it require like someone at the state
11 level to do this, or is this something -- I just was
12 curious as how to proceed forward if you were not willing
13 to do it, if there's another way we could try to go
14 forward.

15 MR. PICKETT: Can you help us out? Are you
16 talking about a natural gas pipeline at Vermont Yankee
17 or something --

18 MS. VAN DOLSEN: No, an assessment. Just
19 an independent assessment. There was a team put
20 together. So there's a precedent for putting together
21 an assessment.

22 MR. BLANCH: I think it was called the CVA,
23 and it's some vertical assessment that was done at
24 Vermont Yankee. And there was also one done at Indian
25 Point at the request of Senator Clinton and other

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1 Congressional reps, again back in the same time frame,
2 2008-2010. So this request for an independent
3 assessment is not without precedence.

4 MS. VAN DOLSEN: And have any been done
5 near a gas pipeline? So, that's another question. I
6 see this one, but I don't know if there has been an
7 assessment independently done to do a risk assessment
8 near a natural gas pipeline.

9 MR. BLANCH: The only one I could think is
10 the one that was conducted by AREVA in Eunice, New Mexico
11 maybe five, six years ago for a 16-inch line operating
12 at 50 pounds. I have a copy of that assessment that was
13 done.

14 MS. VAN DOLSEN: And how many nuclear
15 plants operate near a gas pipeline in the proximity of
16 the one that we're talking about in this case?

17 MR. BLANCH: Well, the closest one, even
18 closer than Indian Point, is Turkey Point, which has
19 never been analyzed.

20 CHAIRMAN MILLER: So I'm going to try to
21 turn our direction back towards what we're trying to do
22 in this call -- is to try to get any additional
23 information for the Panel to consider in their
24 deliberations. So I would ask is there any other
25 questions that we want to ask of those who presented that

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1 the Panel should consider for this issue?

2 MS. LEVENBERG: I'm sorry. This is Dana
3 again from Assemblywoman Sandy Galef's office, and I
4 just wanted to point out that we had received a response
5 from the NRC related to the technical basis behind the
6 assumptions that valves will close an isolated gas leak
7 within three minutes, and that came directly from
8 Resource Report 11, Reliability and Safety, filed with
9 FERC by Algonquin in February of 2014 related to the AIM
10 project. And it was Section 11.4.3.2. And it was
11 specifically again from Algonquin. That was where it
12 came from. And it was specifically about the pressure
13 drops that would be noted from the remote -- the gas
14 control center in Houston, Texas. And again, that was
15 provided to me by the NRR office, by Doug Tifft at the
16 NRC.

17 So again, I think that we continue to have
18 concern based on Mr. Kuprewicz' review of this
19 three-minute assumption that is so critical because it
20 came from Algonquin, or Spectra, I guess.

21 MR. BLANCH: And that three-minute
22 assumption is what they are basing this safety of Indian
23 Point upon.

24 MS. LEVENBERG: Right.

25 MR. KUPREWICZ: Yes, this Rick Kuprewicz.

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1 And it kind of gets down to -- if I recall -- again, I
2 look at a lot of gas pipelines, but even if you close
3 the valve in three minutes, which you will not, because
4 a transient study for rupture in this particular
5 location will clearly indicate that that's not the case
6 -- even if you were to close those valves, it is still
7 going to burn for many minutes at high heat flux, because
8 that's what the laws of science, the laws of
9 thermodynamics will dictate. If I recall, the valve
10 spacings are 15 miles. If you have 15 miles of
11 high-pressure gas pipeline, it's not going to go to zero
12 pressure. It's going to burn for a long time at high
13 heat flux.

14 So, if I were to comment on this, what the
15 NRC has to think about is what is the actual -- the
16 transient dynamics of a pipeline rupture in this
17 location approximately three miles away from a
18 compressor station and how long will this burn at heat
19 fluxes that can affect equipment? End of subject.

20 It isn't I can close the valves in three
21 minutes. It might be 20 minutes before you recognize
22 that. So, that's the fundamental issue that you folks
23 have to see if someone has done that.

24 MR. PICKETT: This is Doug Pickett again.
25 When you first started your presentation I thought I

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1 heard you say something like the fellow who's going to
2 be in Houston monitoring the pressure would not see a
3 pressure drop if a pipe ruptured, and I was a little
4 confused on that. Can you go into that again? What
5 would he see?

6 MR. KUPREWICZ: Yes, most likely he's in
7 the control room getting all kinds of alarms. If you've
8 ever -- well, you guys have NRC control rooms, but
9 pipelines get a lot more alarms. And so he's got to
10 figure out how he's monitoring this and checking on
11 this, and he may get an alarm. He may say, hey,
12 something has changed, but I don't know what it is. But
13 for a rupture release in which you've blown these pipes,
14 the 42-inch pipe is going to shrapnel and come out of
15 the line, out of the ground. Big crater. Huge gas
16 velocities.

17 But the laws of thermodynamics dictate the
18 rate at which the gas can be released out the full-bore
19 ruptures from both ends. Okay? And that's limited to
20 the speed of sound of the gas, the speed of the sound
21 of the gas within the gas. Not in air. So it's
22 roaring. But it limits the mass rate. It limits how
23 much it releases.

24 So bottom line is in layman's terms the
25 pressures don't drop as fast as you'd think. It's not

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1 a balloon burst.

2 MR. PICKETT: Okay.

3 MR. KUPREWICZ: And if you close the valves
4 and they're 15 miles apart, there are plenty of
5 documents in the public domain that will show you it
6 takes many, many minutes before the flames really start
7 to decline. And so the real issue here is if you get
8 a gas pipeline rupture, how long will this burn at heat
9 fluxes that can affect equipment that is important? If
10 the answer is there's no equipment there, then that's
11 fine. Move on. But from what I'm seeing, that's not
12 necessarily the case.

13 MR. BLANCH: And adding to that, NRC
14 regulations dictates that we have to assume a single
15 failure at the valve --

16 (Simultaneous speaking)

17 MR. KUPREWICZ: Yes, let me also point out
18 to the NRC, don't feel like anybody's criticizing you
19 folks because you don't understand this stuff. There
20 are gas pipeline operators that we have to sit in a room
21 and great detail and explain this. And they're closer
22 to this and they don't get it until someone shows it to
23 them. So don't think like I'm saying, oh, you missed
24 this and it's your fault. That's not what I'm doing
25 here. Please.

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1 CHAIRMAN MILLER: Thank you. I wanted to
2 ask is there anyone from the Licensee that would like
3 to ask any questions of the presenters?

4 MR. WALPOLE: No, thank you, Chris.

5 CHAIRMAN MILLER: Okay. Any other
6 questions, concerns? Did I go to the regions?
7 Anything from the region?

8 (No audible response)

9 CHAIRMAN MILLER: Okay. Good. Well, I
10 --

11 MR. BLANCH: And how long can we expect to
12 have to wait for a transcript of this session?

13 MR. PICKETT: Doug Pickett here again.
14 We've requested the transcript to be within a week, so
15 then we have to review the transcript and make sure it's
16 accurate. And hopefully within a few weeks you'll be
17 able to see the transcript.

18 MR. BLANCH: Okay.

19 CHAIRMAN MILLER: Okay. Do you another
20 question, Mr. Blanch?

21 MR. BLANCH: No, that's all I have.

22 CHAIRMAN MILLER: Okay. Well, I wanted to
23 thank you and Mr. Kuprewicz. Good informative session.
24 I got a lot of information covered. So thanks for
25 taking your time. We'll continue with our process.

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1 Before we close, does the court reporter
2 need anything additional before we close the meeting,
3 close the transcript?

4 COURT REPORTER: Yes. Mr. Kuprewicz,
5 could you spell your last name for me?

6 MR. KUPREWICZ: Gee, I've never been asked
7 that before.

8 MR. BLANCH: Yes. Right.

9 MR. KUPREWICZ: It's K-U-P-R-E-W-I, C as
10 in cat, Z as in zebra.

11 COURT REPORTER: Got it. That's all.

12 (Whereupon, the above-entitled matter went
13 off the record at 3:34 p.m.)

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----- Forwarded message -----

From: **Paul Blanch** <pdblanch@comcast.net>
 Date: Thu, Feb 19, 2015 at 3:13 PM
 Subject: Re: Transcript of PRB Meeting
 To: "Pickett, Douglas" <Douglas.Pickett@nrc.gov>
 Cc: Paul Blanch <pdblanch@comcast.net>, "Miller, Chris" <Chris.Miller@nrc.gov>, "Banic, Merrilee" <Merrilee.Banic@nrc.gov>, "Tifft, Doug" <Doug.Tifft@nrc.gov>, Dana Levenberg <levenbergd@assembly.state.ny.us>, Susan Van Dolsen <svandolsen@gmail.com>, Bernard Vaughey <vaughey@aol.com>, RICHARD KUPREWICZ <kuprewicz@comcast.net>, Geri Shapiro <geri_shapiro@gillibrand.senate.gov>, Dave Lochbaum <davelochbaum@comcast.net>, Cody <cody_peluso@schumer.senate.gov>, Ellen Weininger <ewgrassroots@aol.com>, Rossana Raspa <rossana.raspa@nrc.gov>, "William. R. Corcoran" <william.r.corcoran@1959.usna.com>

Doug:

Thanks for a direct answer to my question. I have carefully reviewed all of this information from the NRC and Entergy prior to submitting my 2.206 petition.

I have also reviewed [Department of Transportation \(DOT\) Pipeline Hazardous Material Safety Administration \(PHMSA\) website](#) and [Resource Report 11, "Reliability and Safety,"](#) and 49 CFR 190-199. None of these NRC cited references the 3 minute isolation times. I would like to see industry/NRC research or actual calculations, history or testing supporting this assumed isolation time.

There is no indication or documentation supporting this imagined 3 minute closure time. Exactly where did this number originate other than from Entergy's 50.59 submittal? There are numerous reports from ASME, NTSB publicly available <http://www.nts.gov/investigations/AccidentReports/Pages/pipeline.aspx> that discuss closure time and termination of flammable gas flow from a pipe rupture. The two most prominent are the San Bruno fire and the Edison, NJ gas line rupture in 1994 but many more can be above cited NTSB website.

I think the NRC needs to do some research on actual events rather than blindly accepting a questionable 3 minute number which has no apparent basis. Should the NRC care to review these ASME, NTSB and other documents refuting this 3 minute assumption, I and Richard Kuprewicz would be more than willing to provide them to the NRC or the NRC can search the web for the same information I have obtained.

The NRC apparently not required or plans any actual performance testing or

verification. The NRC itself requires the analysis to consider an operator response time of 10 or 20 minutes. See enclosed NRC documentation.

In addition, one has to consider the actual closure time of at least (2) 42 inch valves, the blowdown time of 850 PSI--42 inch diameter pipe and five miles between valves. One must also consider the gas lines which run parallel to these lines and must also be isolated.

I have worked with the NRC/AEC for more than 40 years and do not recall it ever accepting an analysis number without verification, analysis and actual testing. 10 CFR 50 Appendix B clearly requires testing. Below are just two of the examples from 10 CFR 50 that requires testing of SSCs as defined in 10 CFR 50.2.

III. Design Control

Measures shall be established to assure that applicable regulatory requirements and the design basis, as defined in § 50.2 and as specified in the license application, for those structures, systems, and components to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions. These measures shall include provisions to assure that appropriate quality standards are specified and included in design documents and that deviations from such standards are controlled. Measures shall also be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the structures, systems and components.

Measures shall be established for the identification and control of design interfaces and for coordination among participating design organizations. These measures shall include the establishment of procedures among participating design organizations for the review, approval, release, distribution, and revision of documents involving design interfaces.

*The design control measures shall provide for **verifying** or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculational methods, or by the performance of a **suitable testing program**. The **verifying or** checking process shall be performed by individuals or groups other than those who performed the original design, but who may be from the same organization. Where a **test program** is used to **verify** the adequacy of a specific design feature in lieu of other verifying or checking processes, it shall include suitable qualifications testing of a prototype unit under the most adverse design conditions. Design control measures shall be applied to items such as the following: reactor physics, stress, thermal, hydraulic, and accident analyses; compatibility of materials; accessibility for inservice inspection, maintenance, and repair; and delineation of **acceptance criteria for inspections and tests**.*

Design changes, including field changes, shall be subject to design control measures commensurate with those applied to the original design and be

approved by the organization that performed the original design unless the applicant designates another responsible organization.

XI. Test Control

A test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents. The test program shall include, as appropriate, proof tests prior to installation, preoperational tests, and operational tests during nuclear power plant or fuel reprocessing plant operation, of structures, systems, and components. Test procedures shall include provisions for assuring that all prerequisites for the given test have been met, that adequate test instrumentation is available and used, and that the test is performed under suitable environmental conditions. Test results shall be documented and evaluated to assure that test requirements have been satisfied.

Once again, where did the 3 minute time originate?

Please consider this additional information as part of my 2.206 petition.

Paul Blanch
[860-236-0326](tel:860-236-0326)
[860-922-3119](tel:860-922-3119) cell
pmb Blanch@comcast.net

On Feb 19, 2015, at 12:03 PM, Pickett, Douglas <Douglas.Pickett@nrc.gov> wrote:

Mr. Blanch –

In direct response to your question, Mr. Miller was simply acknowledging your request as an action item for the Petition Review Board. More to the point, the following provides an explanation describing why the NRC finds Entergy's assumption of a 3 minute valve closure time acceptable .

The following is taken from Entergy's 50.59 site hazards analysis (ML14253A339, Enclosure 1, page 7 of 21) and describes how the remote operator would be expected to respond within the first minute and the valves would close in the second minute.

Actions in the event of a rupture

The existing pipeline automation and control system, which will be used for the proposed new 42 inch pipeline near IPEC, does not provide for an automatic isolation of the closest upstream and downstream mainline valves upon the detection of a pipeline rupture. The two closest actuated valves are located at mile post 2.61 on the west side of the Hudson River and at mile post 5.47 just east of IPEC. They would require an operator to take action to close these valves. The system, however, is monitored 24 hours a day and an alarm would immediately alert the control point operator, located in Houston, Texas, of an event and isolation would be initiated. This would result in all the gas between these valves at the time of closure being able to vent or burn. The estimated time to respond to the alarm (less than one minute) and the closure time of the valves (about one minute) was used as the basis for an assumed closure time of three minutes for the analysis performed in the attached report.

The next closest isolation valve locations are at the Stony Point Compressor Station mile post 0.0 and at MLV 15 at mile post 10.52. Valve operation follows the requirements of the DOT Code and is tested on a periodic basis to ensure compliance with code requirements.

The following describes why the NRC finds this acceptable.

What is the technical basis behind the assumption that valves will close to isolate a gas leak within 3 minutes?

Section 11.4.3.2, Equipment, from [Resource Report 11, "Reliability and Safety,"](#) filed with FERC by Algonquin in February 2014 related to the AIM Project states as follows:

"A gas control center is maintained in Houston, Texas. The gas control center monitors system pressures, flows, and customer deliveries. Further, the gas control center is manned 24 hours a day, 365 days a year. Algonquin also operates area and sub-area offices along the pipeline route whose personnel can provide the appropriate response to emergency situations and direct safety operations as necessary.

Algonquin's proposed AIM Project pipeline will be equipped with remote control shutoff valves as required by the USDOT regulations. This allows the shutoff valves to be operated remotely by the gas control center in the event of an emergency, usually evidenced by a sudden loss of pressure on the pipeline. Remotely closing the shutoff valve allows the section of pipeline to be isolated from the rest of the pipeline system.

Data acquisition systems are present at all meter stations along the system. If system pressures fall outside a predetermined range, an alarm is activated and notice is transmitted to the Houston gas control center. The alarm provides notice that pressures at the station are not within an acceptable range."

In addition, NRC personnel reviewed information from the [Department of Transportation \(DOT\) Pipeline Hazardous Material Safety Administration \(PHMSA\) website](#) and noted that natural gas transmission line regulations are found in 49 CFR 190-199. These regulations require written procedures for conducting operations and maintenance activities and for emergency response, controller training, valve and pipeline maintenance, fatigue management, and other aspects related to design, construction, and operation of gas transmission and distribution pipelines.

Based on the above information, we noted that there were controls in place to readily identify and isolate a gas leak and determined that the assumptions specified in Entergy's analysis appeared to be reasonable.

Doug

Douglas V. Pickett, Senior Project Manager
Indian Point Nuclear Generating Unit Nos. 2 & 3
James A FitzPatrick Nuclear Power Plant
Douglas.Pickett@nrc.gov
[301-415-1364](tel:301-415-1364)

From: Paul Blanch [<mailto:pdblanch@comcast.net>] **Sent:** Wednesday, February 18, 2015 10:52 AM **To:** Miller, Chris **Cc:** Paul Blanch; Pickett, Douglas **Subject:** Re: Transcript of PRB Meeting

The following is from the transcript. What did you mean in response to my inquiry "I've got that note." What is the origin of the 3 minute isolation time?

<image001.png>
Paul Blanch [860-236-0326](tel:860-236-0326)
Paul Blanch
[860-236-0326](tel:860-236-0326)
[860-922-3119](tel:860-922-3119) cell
pdblanch@comcast.net



THE ASSEMBLY
STATE OF NEW YORK
ALBANY

CHAIR
Exhibit 2-000069
Real Property Taxation

COMMITTEES
Corporations, Authorities and Commissions
Election Law
Governmental Operations
Health

SANDRA R. GALEF
Assemblywoman 95th District

February 26, 2015

Honorable Cheryl A. LeFleur
Chairman
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

20150402-5890: FERC.DNR (Unofficial) 4/2/2015 4:22:58 PM

Honorable Stephen G. Burns
Chairman
U.S. Nuclear Regulatory Commission
Mail Stop O-16G4
Washington, DC 20555-0001

Re: Project Docket Number **CP14-96-000**

Dear Chairmen LeFleur & Burns,

After spending time communicating with the NRC about the conclusion of the safety hazard analysis they conducted regarding the siting of the AIM pipeline in close proximity to the Indian Point Energy Center, I have been most disappointed. The fact that we have a major nuclear power plant with already contentious debate about its safety within 50 miles of New York City, that is now having its safety potentially compromised further with this high volume high pressure 42" pipeline is disturbing at best.

I do not understand why the approval process is being expedited. I have received information that the basis for a very important assumption in the safety hazard analysis has not been properly validated. Why is this issue not being addressed by NRC or FERC? I have brought this concern to the attention of the NRC with support from nuclear and gas line experts, and yet, no action has been taken, as far as I am aware, to go back and reexamine that 3 minutes is a valid and conclusive amount of time in which gas flow to the area could be stopped.

This is the main focus of my concern. I would like to know what evidence exists that for gas line ruptures that have occurred elsewhere, in fact gas flow has been shut down in 3 minutes. In the disasters that have been publicized, this has not been the case. The gas expert I have been speaking with has made it clear that Houston, Texas would not necessarily recognize a pressure drop in Buchanan, New York quickly enough, nor based on the distance of the valves, would the system be able to work fast enough to make a shutdown happen that quickly.

Again, with such critical infrastructure at this juncture in this small town, just a stone's throw from the biggest city in the U.S., I am having a difficult time understanding why this concern does not merit further questioning before pushing through the siting of this pipeline within 500 feet of Indian Point's fuel oil. I am attaching a recent press release I sent out highlighting my concerns, as well as a petition that was filed with the NRC by nuclear expert Paul Blanch. While I specifically name NRC for not having validated the 3 minute estimate, I believe FERC is just as responsible for expediting the siting process without assuring the public that proper analysis has taken place.

I look forward to your response.

Sincerely,

Sandra R. Galef
New York State Assembly
95th District
Representing the following municipalities in a 15 mile
radius of Indian Point: Cortlandt, Buchanan, Croton,

Peekskill, Nelsonville, Cold Spring, Ossining, Briarcliff,
Philipstown

Att.

Cc: U.S. Senator Charles Schumer
U.S. Senator Kirsten Gillibrand
Congresswoman Nita Lowey
Commissioner Joseph Maartens, NYS DEC
NYS Attorney General Eric Schneiderman
Legislator Catherine Borgia, Westchester County
Legislator John Testa, Westchester County
Supervisor Linda Puglisi, Town of Cortlandt
Mayor Theresa Knickerbocker, Village of Buchanan

20150402-5290.FERC.PDF (Unofficial), 4/2/2015, 4:22:58 PM



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
WASHINGTON, D.C. 20555-0001

March 13, 2015

Sandra R. Galef
Assemblywoman 95th District
The Assembly State of New York, Room 641
Legislative Office Building
Albany, NY 12248

Dear Ms. Galef:

I am responding to your letters of January 15 and February 26, 2015, to the Chairman of the Nuclear Regulatory Commission (NRC) regarding the proposed Algonquin Incremental Market (AIM) Project where a 42-inch diameter natural gas pipeline is proposed to cross a portion of the owner controlled property at the Indian Point Energy Center in Buchanan, NY. Members of your staff have discussed the AIM project with staff from the NRC Region I Office located in King of Prussia, PA, with support from NRC headquarters staff located in Rockville, MD.

NRC regulations required that Entergy Nuclear Operations, Inc., the licensee for Indian Point, perform a site hazards analysis to determine the impact that the proposed natural gas pipeline would have on the facility. Accordingly, Entergy performed an analysis of the proposed 42-inch diameter gas pipeline and concluded that the plant could safely shut down in the event of a pipeline rupture and that the proposed gas pipeline would not represent an undue risk to the safe operation of the facility. The NRC staff reviewed Entergy's analysis and concluded that it was reasonable. In addition, the NRC staff performed an independent confirmatory analysis by conservatively assuming a complete rupture of the 42-inch diameter gas pipeline and similarly concluded that the plant could operate safely or could shut down and that the proposed pipeline would not represent an undue risk to the plant.

Your letter of January 15, 2015, stated that the NRC analysis was based on unrealistic assumptions and severely overestimated the ability of remote operators to isolate the gas pipelines and stop the flow of gas. Your letter also included a letter from Mr. Richard Kuprewicz, President of Accufacts, Inc., in which he states that the Entergy site hazard analysis is severely deficient and inadequate. Finally, you requested that an independent risk analysis be performed before the Federal Energy Regulatory Commission approves a certificate to build the proposed AIM Project.

During previous discussions with your staff, you were informed that the NRC had received a petition from Mr. Paul Blanch in which he also called for an independent analysis of the safety impact of the proposed AIM Project and that Mr. Blanch would have the opportunity to discuss his concerns with the NRC's Petition Review Board.

On January 28, 2015, Mr. Blanch, with assistance from Mr. Kuprewicz, made their presentation before NRC's Petition Review Board where they discussed their concerns over the proposed AIM Project. Their presentation focused on the following three items. First, they stated that it was unreasonable to assume that remote operators located in Houston, TX, would be able to detect pressure losses resulting from a postulated pipe rupture and take actions resulting in isolating gas flow within 3 minutes. Based on his experience, Mr. Kuprewicz estimated that the remote isolation valves would not close prior to 30 to 60 minutes following a pipe rupture.

- 2 -

Second, they believed that the controlling factor following a postulated pipe rupture would be the critical heat flux resulting from an extended fire that would last much longer than 3 minutes and would result in melting essential safety system components at the Indian Point site. They acknowledged that the robust concrete structures at the Indian Point site would not likely be adversely impacted by the overpressure pulse associated with the initial explosions. Third, they insisted that an independent safety analysis be performed to more accurately determine the impact of the proposed AIM project on the Indian Point site.

Your letter of February 26, 2015, further questioned Entergy's assumption that the pipeline isolation valves would close within 3 minutes following a pipeline rupture. Specifically, you questioned how remote control room operators located in Houston, TX, would be able to recognize that a pipeline rupture occurred and take the necessary actions to close the valves and isolate flow within 3 minutes. The NRC staff shared these concerns and performed a sensitivity study to determine the impact of a delayed closure of the pipeline's isolation valves. The study was bounded by the assumption of an infinite source which, simply stated, is the case where the isolation valves do not close and remain open for 60 minutes. The staff used the Areal Locations of Hazardous Atmospheres (ALOHA) model to simulate a 60-minute, continuous release. The ALOHA model was developed by NOAA and the EPA for responding to chemical releases, as well as emergency planning purposes. The outcome of the infinite source on the staff's confirmatory analysis resulted in only a minimal increase in both the overpressure pulse and the heat flux at safety-related structures, systems, and components (SSCs) of the plant. Due to the distance between the proposed routing of the 42-inch diameter natural gas pipeline and safety-related SSCs located at the Indian Point site, the predicted increase in peak pressure and critical heat flux remained below levels that would adversely impact the safe operations at the Indian Point site or prevent a safe shutdown.

The petition submitted by Mr. Blanch is being reviewed by the Petition Review Board. As part of that review process, a determination will be made regarding the need for an independent analysis, in addition to that already performed by the NRC staff. We will apprise you of any decisions by the Board regarding the petition when we communicate them to Mr. Blanch.

Thank you for sharing your concerns on this important issue.

Sincerely,

A handwritten signature in cursive script that reads "Michele G. Evans".

Michele G. Evans, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

- 2 -

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Thank you for sharing your concerns on this important issue.

Sincerely,

/RA/

Michele G. Evans, Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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***concurred via email**

OFFICE	LPL1-1/LA	LPL1-1/PM	NRO/BC	LPL1-1/BC	Region 1/BC	DORL/DD	DORL/D
NAME	KGoldstein	DPickett	MMcCoppin*	BBeasley	PKrohn*	GWilson	MEvans
DATE	02/20/15	03/04/15	03/11/15	03/04/15	03/11/15	03/06/15	03/13/15

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**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
WASHINGTON, D.C. 20555-0001

March 20, 2014

The Honorable Sandra R. Galef
New York State Assembly
Legislative Office Building, Room 641
Albany, NY 12248

Dear Ms. Galef:

I am responding to your letter of January 23, 2014, to Chairman Allison M. Macfarlane of the U.S. Nuclear Regulatory Commission (NRC), regarding your concerns over proposed increases in energy delivery and transmission systems near Buchanan. The proposed Algonquin Incremental Market (AIM) Project and the West Point Partners Transmission (WPPT) Project will pass in the vicinity of the Indian Point Energy Center (IPEC). Your letter contained questions directed to a number of Federal and State agencies that have various jurisdictions over electrical transmission, natural gas pipelines, and nuclear power plant operation. Below, we address those questions that we believe are pertinent to the NRC.

Specifically, you asked, (1) "Does the NRC have an opportunity to weigh in on the impact to IPEC's safety that siting increased capacity gas pipes and electric transmission lines would have, both in constructing of the lines/facilities as well as their ongoing operations?" and (2) "Is there any communication between licensing and siting agencies to ensure that the overlap or convergence of these three energy production and delivery infrastructures makes sense, are safe, and are vetted?"

The *Code of Federal Regulations* requires that nuclear power plant structures, systems, and components important to safety be appropriately protected against dynamic effects resulting from events and conditions that may occur outside the nuclear power plant. These events include the effects of explosion of hazardous materials that may be associated with nearby industrial activities such as storage facilities or transportation routes such as navigable waterways and pipelines. The NRC was informed by Entergy Nuclear Operations that they've been actively engaging Spectra Energy in order to obtain a better understanding of the AIM project and to ensure that appropriate reviews and analyses are conducted to determine whether the proposed project could introduce increased hazards near or on the IPEC site. The NRC will continue to monitor these activities.

For your information, there are three gas pipelines, with only two typically in-service simultaneously, that traverse the IPEC owner controlled area. The NRC has independently evaluated the external hazards posed by these pipelines on safety-related structures a number of times over the years, including pre-licensing in 1973 and more recently in 2003 and 2008. Our evaluations have considered the design and construction of the gas lines, operation and maintenance practices, postulated failure modes, and standoff distances to safety-related structures. The NRC staff believes that a jet fire would be the most likely consequence of a major pipe rupture and the resulting fire would be limited to immediate flammable materials, such as trees, and would not impact safety-related structures. The modeling of a vapor cloud explosion, which the staff believes is highly improbable, would create an overpressure wave that would dissipate to below 1 psig before reaching safety-related reinforced concrete structures,

S. Galef

- 2 -

such as the Unit 3 diesel generator building, and would not pose a threat. Therefore, our reviews have concluded that the pipelines do not adversely affect the safety and security of the plant.

In response to your second question regarding coordination between the various responsible agencies, a memorandum of agreement (MOA) between the NRC and the Federal Energy Regulatory Commission (FERC) was executed in 2009. In accordance with the MOA, the two agencies may consult with each other with regard to the availability of technical information that would be useful in areas of mutual interest, and we promote and encourage a free flow of such information. The NRC has contacted FERC to inform them of our involvement as a regulatory agency for the Indian Point Nuclear Generating Units. Our agencies will certainly engage each other should there be questions or concerns as we mutually conduct our independent reviews of this matter.

Thank you for sharing your concerns regarding the potential effects of these proposed projects on the Indian Point site. If you have any further questions, please contact the NRC's Project Manager for IPEC, Mr. Douglas Pickett at (301) 415-1364.

Sincerely,

A handwritten signature in black ink that reads "Michele G. Evans". The signature is written in a cursive, flowing style.

Michele G. Evans, Director
Division of Operating Reactors Licensing
Office of Nuclear Reactor Regulation

S. Galef

- 2 -

such as the Unit 3 diesel generator building, and would not pose a threat. Therefore, our reviews have concluded that the pipelines do not adversely affect the safety and security of the plant.

In response to your second question regarding coordination between the various responsible agencies, a memorandum of agreement (MOA) between the NRC and the Federal Energy Regulatory Commission (FERC) was executed in 2009. In accordance with the MOA, the two agencies may consult with each other with regard to the availability of technical information that would be useful in areas of mutual interest, and we promote and encourage a free flow of such information. The NRC has contacted FERC to inform them of our involvement as a regulatory agency for the Indian Point Nuclear Generating Units. Our agencies will certainly engage each other should there be questions or concerns as we mutually conduct our independent reviews of this matter.

Thank you for sharing your concerns regarding the potential effects of these proposed projects on the Indian Point site. If you have any further questions, please contact the NRC's Project Manager for IPEC, Mr. Douglas Pickett at (301) 415-1364.

Sincerely,

/ra/

Michele G. Evans, Director
Division of Operating Reactors Licensing
Office of Nuclear Reactor Regulation

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ADAMS ACCESSION NO.: ML14069A370

OFFICE	LPL1-1/PM	LPL1-1/LA	LPL1-1/BC	NRR/DORL/D
NAME	DPickett	KGoldstein	BBeasley	MEvans
DATE	03 /14/ 2014	03 / 11 / 2014	03 / 14 / 2014	03 /20/ 2014

OFFICIAL RECORD COPY

Conference call request



From **DHS.IGA** DHS.IGA@HQ.DHS.GOV [hide details](#)

Fri, Mar 20, 2015 2:42 pm

Exhibit 2-000077

To **amyrosmarin** amyrosmarin@aol.com

Dear Councilwoman Rosmarin,

We received your request for a conference call with Secretary Johnson and Assistant Secretary Durkovich to discuss the Indian Point Nuclear Facility and the proposed gas pipeline. The U.S. Nuclear Regulatory Commission (NRC) is responsible for ensuring the safety and security of commercial nuclear power plants. As such, we recommend you follow up with the NRC to address your concerns.

Regards,

Brian Hyer

Office of Intergovernmental Affairs
U.S. Department of Homeland Security
Phone: 202-282-9310

Statement of Facts on AIM Gas
Transmission Project and Indian Point Nuclear Plant

Date	Statement of Fact	Comments	Reference
January 16, 2004	LES gas line analysis in Eunice NM of a 16 inch 50 PSI line located more than a mile from a proposed nuclear facility found to be unacceptable due to the potential of a rupture of this 16 inch line.	Nuclear facility located one mile from 16 inch gas line and found to be unacceptable. The analyzed line was 16 inches diameter operating at 50 PSI. The closest critical structure was 1800 feet from the pipeline. The probability of an explosion impacting the facility was calculated at about 1e-5 per year.	LES analysis
June 30, 2009	License application for new Turkey Point 6 & 7 plants within the vicinity of a 24 inch 772 PSI pipeline located about 4000 feet from the gas line.	In its application, Turkey Point clearly states that the damaging blast radius is 3097 feet. The damaging blast radius from this 24 inch 772 PSI line is calculated to be 3097 feet however the proposed plant is to be located more than 4000 feet to the closest gas line.	Turkey Point COLA Application
January 23, 2014	Assemblywoman Sandy Galef writes to Chairman Macfarlane of the NRC re: AIM, WPP and IP	Letter states that NRC and FERC signed a MOA in 2009 and that "they may consult with each other with regard to the availability of technical information that would be useful in areas of mutual interest, and we promote and encourage a free flow of such information."	
March 20, 2014	Letter from NRC in response to Galef letter of 1/23/14 from Michele Evans, Director, Division of Operating Reactors Licensing, Office of Nuclear Reactor Regulation		

Statement of Facts on AIM Gas
Transmission Project and Indian Point Nuclear Plant

May 19, 2014	Paul Blanch requests the NRC perform an analysis assuring the safety of the addition of a new 42 inch gas line in the vicinity of Indian Point	PMB believed change can't be made without license amending. NRC agrees that 10 CFR 50.59 analysis will be required	https://www.dropbox.com/s/0oyjrmhugm5exlp/Response%20Letter%20IP%20gas%20line.pdf?dl=0
June 27, 2014	Paul Blanch writes letter to Westchester County Board of Legislators following his presentation to the Energy & Environment Committee the prior week		
August 21, 2014	Entergy and the NRC state the new gas line can be isolated within 3 minutes. Review of all pipeline ruptures by the NTSB from 1990 to present, show the time to terminate gas flow is in the range from 30 minutes to 150 minutes.	NRC requires a minimum of 10 to 20 minutes for nuclear plant operators to perform manual actions. These valves are required to mitigate the consequences of a nuclear accident as defined by 10 CF 50.2, therefore must meet the requirements for nuclear plants. This includes the single failure considerations defined in 10 CFR 50, Appendix A, Appendix K, IEEE 279, and subjected to the design and testing requirements of 10 CFR 50.49, 10 CFR 50.65 and also 10 CFR 50.49	Entergy 50.59 Analysis
August 21, 2014	Entergy submits its analysis and a summary if its 10 CFR 50.59 analysis to the NRC and makes the summary public.		Entergy's 50.59 Analysis
August 21, 2014	Entergy calculates the maximum damage radius to be 1195 feet based on a three minute release.	Regulatory Guide 1.91	Entergy 50.59 Analysis

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August 21, 2014	Entergy states that the gas flow will be terminated within 3 minutes should a rupture occur. NRC concurs that all natural gas releases will be "instantaneous."	<p>It is unlikely or not possible to terminate the "event" within 3 minutes. It is not supported by any submitted documentation or verification to support frequency of application for "RUPTURE" to closure. Even in the unlikely event the valves are closed within 3 minutes, the blowdown time of the high pressure gas will continue for a prolonged period of time.</p> <p>Entergy concludes the event will be terminated within three minutes by stating "the event to be terminated by manual action within 3 minutes after any pipeline rupture."</p> <p>The NRC states that closure of the valves will occur within 3 minutes of alarm, not rupture.</p>	Entergy 50.59 Analysis
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August 21, 2014	Entergy's 50.59 analysis states that the damage radius would be 1266 feet for a jet fire and 115 feet for a vapor cloud explosion. The switchyard is located 115 feet from the new gas line and the fuel oil supply is located 105 feet from the gas line. Both of these SSC ITS would be compromised, rendered useless or possibly destroyed resulting in a loss of offsite power. Both Entergy and the NRC assume the gas flow would be terminated within 3 minutes. There is no documentation to support this isolation time and NTSB investigations of major gas line accidents show typical isolation times from 1 to 3 hours. The NRC's cited reference "Handbook of Chemical Hazard Analysis Procedures" is apparently dated circa 1987 and does not consider subsequent major gas-line explosions such as the San Bruno, CA, Sissonville WV, Cleburne TX, Carlsbad NM, and the Edison, NJ transmission and distribution explosions.		Entergy 50.59 Analysis
October 6, 2014	Congresswoman Lowey letter to FERC requesting health and safety assessment, mentions IP and AIM	Urges FERC to withdraw current DEIS, evaluate and review potential health and safety impacts and issue Supplemental DEIS	https://www.dropbox.com/s/6a21wzd6snuej8y/Letter%20to%20FERC%2010.6.14.pdf?dl=0
October 15, 2014	Paul Blanch files a 10 CFR 2.206 petition with the NRC questioning the safety of the new 42 inch gas line		PMB 2.206 petition
November 3, 2014	Accufacts submits report to FERC docket CP14-96 via Town of Cortlandt attorney Tom Wood		https://sape2016.files.wordpress.com
November 6, 2014	Letter from FERC Chairman to Congresswoman Lowey	FERC Chairman responds to Congresswoman that they will consider Safety Evaluation conducted by Entergy. No mention of NRC Evaluation	https://www.dropbox.com/s/w5e0eqtzbapriik/FERC_Response_to_Nita_Lowey.pdf?dl=0

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November 7, 2014	NRC inspection report reaffirms acceptance of Entergy analysis. Mr. Tammara, the principal contributor was not part of the inspection team, and may not have viewed the conditions at the site, which he is claiming is safe per his analysis.		NRC Inspection report approving analysis.
November 7, 2014	Entergy and the NRC use the EPA ALOHA computer program for risk analysis. ALOHA program specifically excludes the use of this program for pipe breaks between isolation valves.	The NRC analyzed two different scenarios one for a pipe end break and one for a mid line break. The ALOHA program is not suitable for either. Page 146 of the EPA ALOHA manual states: "ALOHA cannot model gas release from a pipe that has broken in the middle and is leaking from both broken ends."	NRC Inspection Report
November 7, 2014	The NRC acknowledges that Systems, Structures and Components "SSCs important-to-safety outside the SOCA" may be impacted by a detonation of the gas line.		NRC Inspection report
November 7, 2014	NRC confirms acceptability of Entergy analysis based on the use of the EPA ALOHA program. <u>Aloha specifically prohibits the use of this program for this type of event.</u>	"ALOHA cannot model gas release from a pipe that has broken in the middle and is leaking from both broken ends." It is clear that the NRC used ALOHA to model two different events. The Entergy analysis summary did not mention or reference ALOHA. This is the first mention of the use of the prohibited ALOHA code	NRC Inspection report
November 17, 2014	Letter from Congresswoman Lowey to NRC Chairman	Requests an independent, comprehensive risk assessment of gas line on Indian Point	https://www.dropbox.com/s/o5iutcb9nslfbhg/Letter%20to%20NRC%2011.17.14-5.pdf?dl=0
November 18, 2014 Paul Blanch writes letter to Governor Cuomo			
November 20, 2014	Paul Blanch files FOIA request FOIA 2015-0062 for NRC's Analysis	FOIA request rejected and appealed	NRC Records of FOIA 2015-0062

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December 2, 2014	Paul Blanch Letter to ACRS Chairman	Request that ACRS review technical Issues with pipeline risks	https://www.dropbox.com/s/3g0gawe6a9t19v4/20141202%20Letter%20to%20ACRS%20Chairman.pdf?dl=0
December 2, 2014	FOIA Request for copy of NRC's analysis received by Blanch		Withheld all information as "Security Related Information"
December 2, 2014	Letter to Homeland Security signed by 15 elected officials	Letter requests DHS takes acts proactively to protect the region by halting the project until there is a comprehensive, transparent, independent risk assessment.	
December 30, 2014	Accufacts President letter to FERC Secretary	Point out deficiencies in present analysis and requests independent risk assessment.	https://www.dropbox.com/s/k48rk8syi445qfy/Accufacts%20Response%20to%20FERC%20on%20IP%20RA.pdf?dl=0
December 30, 2014	Letter from NRC Chairman to Congresswoman Lowey	NRC Staff concludes that Entergy's analysis is valid	https://www.dropbox.com/s/pd4o7nt0vkg6l2z/NRC%20response%2012.30.14-2.pdf?dl=0
January 5, 2015	Paul Blanch writes letter to Bill Dean and Region 1 Administrator requesting why gas line isolation valves are not considered and treated as safety related as defined in 10 CFR 50.2	Because the gas line rupture is a Design Bases Event and credit is taken for the closure of the isolation valves, the valves must meet the requirements of safety related components as defined in 10 CFR 50.2. No response has been received from the NRC.	https://www.dropbox.com/s/1iwwr8t7qks61iw/Bill%20Dean%20Safety%20Related%20Gas%20lines%20Rev%201.pdf?dl=0
January 6, 2015	Letter to FERC Chairman transmitting Accufacts letter	Identifies shortcomings and other technical issues with AIM project	https://www.dropbox.com/s/69rn315a5qwfunj/Cortlandt%20Accufacts%20reply%20report%20Jan%207%202015%20%2020150107-5022%2830036830%29.pdf?dl=0
January 12, 2015	Response letter from DHS		States that the NRC is responsible for ensuring the safety and security of commercial nuclear plants and to follow up with the NRC.

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January 15, 2015	Letter from Assemblywoman Galef to NRC Chair and FERC Secretary	Requests independent risk assessment	https://www.dropbox.com/s/4fm2ro38heidd5h/20150127-0051%2830100672%29-3.pdf?dl=0
January 20, 2015	Paul Blanch files appeal of FOIA response	NRC Chairman directed staff to reconsider initial FOIA rejection. Information conveyed from Chairman to Dave Lochbaum during private meeting,	PMB FOIA Appeal Letter
January 28, 2015	10 CFR 2.206 Petition Review Board Meeting	Transcript discussing problems with Entergy's Analyzes	PRB Transcript
February 13, 2015	Letter from NRC to Assemblywoman Sandy Galef from the NRC	Letter states there is no problem even using a release of 60 minutes. Using similar numbers from Regulatory Guide 1.91, results in more than doubling blast radius. It appears that the NRC used the EPA prohibited ALOHA code to come up with a number that met its predetermined outcome of "no problems."	NRC Inspection report
February 9, 2015	Letter from Senators Schumer and Gillibrand to FERC Chairwoman	Requests final decision be withheld until independent review is conducted	https://www.dropbox.com/s/wkx9sn9o2o82ckt/AIM%20Letter.pdf?dl=0
February 19, 2015	The NRC references "Handbook of Chemical Hazard Analysis Procedures" published by FERC, DOT and EPA. This handbook has no references later than 1987 and does not discuss any accidents occurring in the past 25 years.	Email exchange between Paul Blanch and Doug Pickett where Pickett cites handbook and Spectra Resource Report as basis for 3 min.	
February 20, 2015	FERC Chairman Response to Senator Schumer and Gillibrand	Chairman of FERC assures Schumer and Gillibrand that all comments will be considered and reiterated that the NRC has conducted risk analysis and is OK.	https://www.dropbox.com/s/bs6mosu7t1hxrjh/FERC%20Response%20to%20Schumer%20Letter-2.pdf?dl=0
February 26, 2015	NRC grants FOIA appeal and provides a copy of NRC's Risk analysis (redacted)	Analysis not signed, dated, or approved	NRC grant appeal to FOIA 2015-0062

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February 26, 2015	Letter from Assemblywoman Galef to NRC Chair and FERC Chair	Questions the origin of the 3 minute closure and isolation time.	
March 5, 2015 NRC grants FOIA appeal			
March 3, 2015	FERC approves AIM project and states: "The NRC concluded that a breach and explosion of the proposed 42-inch-diameter natural gas pipeline would not adversely impact the safe operation of the Indian Point facility."	On August 21, 2014, Entergy filed its Safety Evaluation for the AIM Project with the Nuclear Regulatory Commission (NRC). The NRC reviewed the site hazards analysis performed by Entergy and performed an independent confirmatory analysis of the blast analysis as well. The NRC's analysis did not account for the additional pipeline design measures identified by Entergy and committed to by Algonquin, and assumed a pipeline catastrophic failure. The review covered everything within the Security Owner Controlled Area, which encompasses everything inside the outermost fenced area of the facility including the area with the spent fuel rods. The NRC concluded that a breach and explosion of the proposed 42-inch-diameter natural gas pipeline would not adversely impact the safe operation of the Indian Point facility. Therefore, the final EIS concludes that the project will not result in increased safety impacts at the Indian Point facility.	http://elibrary.ferc.gov/idmws/file_list.asp?accession_num=20150303-3044
March 6, 2015	Paul Blanch letter to Federal Officials	Letter outlines major problems with gas line requesting action and require independent risk analysis.	PMB Letter to Senators

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March 9, 2015	Paul Blanch conversation with Rao Tammara	Rao Tammara did not question the Entergy supplied 3 minute isolation time and stated he was not aware of any regulations requiring 20 minute operator response time. Because the isolation of the gas line is required to mitigate the consequences of a Design Bases Event (DBE) it must meet the same requirements as required for nuclear operations and components So was the Entergy analysis not to NRC requirements?	
March 13, 2015	Letter from Michele Evans to Assemblywoman Galef	NRC Staff recalculates damage radius distance assuming a 60 minute gas release and, using ALOHA concludes the damage radius id only slightly increased. Again the use of ALOHA is prohibited. A confirmatory, unverified calculation using the equation from RG 1.91 shows that if the release continues for 60 minutes vs 3 minutes, almost 20 times the energy will be released. This results in a damaging blast radius almost doubling to more than 2000 feet.	https://www.dropbox.com/s/gue9yw0l3qlwvfi/Response%20from%20NRC%20re%20AIM%20to%20Galef%20Letters%20of%201%20%26%202-15-2.pdf?dl=0
March 17, 2015	Paul Blanch writes letter to all NRC Commissioners	Paul Blanch writes letter to NRC Commissioners requesting accelerated review of 2.206 petition and that the NRC's approval to FERC be rescinded until all issues are resolved.	PMB Letter to Commissioners

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March 23, 2015	NRC Chairman statement at Congressional hearing	<p>Chairman stated that ALOHA was used because RG 1.91 does not calculate the real heat flux or gas flow from a ruptured gas line. Reference to NUREG 1805 states how to calculate. Chairman states that ALOHA was used to calculate gas energy released and heat flux generated.</p> <p>ALOHA use is prohibited for this scernio.</p> <p>RD 1.91 lists 17 different references that could assist in calculation gas flow and heat flux.</p> <p>ALOHA is not listed as an acceptable reference.</p> <p>Mr. Doug Tifft clairfies Chairmans statement as follows</p> <p>“ I did have the chance to check with our headquarters group that performed the analysis. ALOHA is used to calculate the amount of gas that would be released during a pipe break. That amount of gas is converted into pounds of TNT by our technical group. The pounds of TNT is used in the Reg Guide 1.91 formulas to determine the minimum safe distance.”</p>	Chairman's statement
TBD	Paul Blanch writes letter to NRC Chairman pointing out that his statements to Nita Lowey are based on misinformation from the NRC Staff.		Later
	Additional Facts and Findings Risk and Failure Probability		

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	<p>The NRC references only the "Handbook of Chemical Hazard Analysis Procedures" published by FERC, DOT and EPA. While websites indicate the handbook was updated as recently as 2013, this handbook has no references later than 1987 and does not discuss any accidents occurring in the past 25 years.</p>		
	<p>There is NO physical protection of the gas lines in the vicinity of Indian Point and elsewhere. Anyone wishing harm could easily cause a detonation and rupture of one or more gas lines</p>		
	<p>At least two Systems, Structures, and Components Important To Safety (SSC ITS) (Main Switchyard and Diesel Oil Storage Tanks) are located within 115 feet of the proposed 42 inch gas line.</p>		<p>Entergy's August 21, 2014 50.59 summary of analysis.</p>

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	<p>Indian Point (with its 2 or 3 nuclear reactors) is the only nuclear power facility, of 101 operating nuclear plants located in the United States, with one or more gas transmission lines located within protected areas of the nuclear power plant</p>		
	<p>Spectra is proposing to "enhance" the pipeline in the proximity of Indian Point with the installation of Precast Reinforced Concrete plates buried above the pipeline. This may reduce the probability of damage to the pipe from construction events however does not prevent corrosion, the primary cause of pipe failures. There is no documentation referenced in the analysis quantifying the reduced failure probability that appears to be at least one order of magnitude.</p>	<p>There is no data provided or referenced that the addition of plates reduces the gas flow or changes the probability of a rupture or explosion.</p>	

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	<p>Negating the 3 minute isolation time and assuming a more realistic time of 60 minutes based on NTSB investigations, the amount of gas expelled would be significantly greater than the amount calculated by Entergy/NRC. The additional gas could potentially at least double and would increase the damage radius significantly. and encompass the city water tank, Emergency Operations Facility, and possibly the CST and the RWST, the primary sources for reactor core cooling.</p>	<p>A similar explosion occurred in Edison NJ in 1994 that was investigated by the National Transportation Board (NTSB). This event was the failure of a 36 inch pipe operating at about 900 PSI. According to the NTSB, it took 180 minutes to isolate the ruptured line plus an unspecified time to blow down the residual gas. Another example was a pipe rupture in May 2009 near Palm City FL. After failure, no alarms were observed in Houston TX and it took 140 minutes to terminate the gas flow even though these lines were equipped with automatic shut off valves.</p>	
	<p>The IP-2 station blackout diesel depends on the city water tank for its cooling water and IP-2 may experience a prolonged SBO along with a possible loss of all core cooling.</p>	<p>Tank is required to provide once through cooling to the SBO. Loss of this tank will disable the SBO leaving Unit 2 without any AC power.</p>	

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	Failure of any of the gas pipelines could lead to a total loss of cooling due to a station blackout caused by the loss of the switchyards and the oil supply to the DG fuel oil tanks, to the reactor cores and the spent fuel inventory. A pipeline fire or explosion at Indian Point could result in loss of power to the entire site, secondary fires from liquid fuel storage tanks, reactor core damage and melting, asphyxiation of site personnel, spent fuel radioactivity release and massive social and economic damage for generations.		
	The NRC's analysis assumes that 1% of pipeline accidents result in a complete pipe break and that 5% of the accidents result in a fire/explosion. These statements are unsupported by any of the cited references.		Undated NRC Analysis

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	<p>The Safety Evaluation for the Indian Point nuclear power plant submitted by Entergy concerning the risk associated with the proposed Algonquin pipeline expansion is “seriously deficient and inadequate.” The analysis assumption of a 3-minute response is considered highly inappropriate and unrealistic for this 42” diameter, high pressure pipeline and this sensitive infrastructure given substantial data of gas transmission pipeline ruptures generating high heat flux well past one hour. This could result in loss of power to Indian Point, system failure or block emergency access. A comprehensive independent risk assessment is necessary to ensure that any equipment loss impacted by a pipeline rupture would not prevent “failsafe” shutdown of Indian Point or loss of radiation storage containment that could result in a radiation release in this densely populated region. Data repeatedly demonstrate that with complex systems, low probability events can be easily connected, significantly increasing probability and risks and may result in a disastrous failure with catastrophic consequences</p>		
	<p>There is no discussion or even a reference within the NRC/Entergy analysis as to how the radiant heat flux was calculated.</p>	<p>In many places, they assume the methane plume is bouyant and rises aloft quickly, and burns rather rapidly in seconds FAR above the ground without challenging the structures or components, if enough oxygen is available. What about the other part of the equation - the soft and human targets needed to execute the plans?</p>	<p>Where is the verification? Based upon what standard? What analysis and modeling?</p>

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	There is no simple statement that the cumulative impacts or possible loss of both lines has been considered and evaluated. Everything to date appears to be compartmentalized. The 42 s this, the 30 inch is in the IPEC eval, but what if ?? Is this valid? Thoughts?		
	Failure Consequences		

EXHIBIT 4:

Points Summarizing the Need for Further
Information on AIM Project Health and Safety
Impacts

March 22, 2015

Points Summarizing the Need for Further Information Based on Various AIM Project Documents

a. EPA Memo on Air Quality.

- i. Contribution of diesel and gasoline engine gas and particle (e.g., fine particle diesel emissions) to local and state air quality during the West Roxbury Lateral (WRL) construction phase of the project, in the 2015 and 2016 "ozone seasons".
- ii. Quantitative information, not just incremental criteria pollutant, methane and other GHGs emissions, but also associated ambient concentrations of these pollutants for environmental and health impact assessment analyses is needed.
- iii. Ultrafine particles from diesel construction equipment contribute emissions are associated with increases in respiratory diseases (such as asthma) and hospitalizations, especially for at risk populations, like children, elderly, etc. Impacts on population health residing near the WRL have not been addressed.

b. GZA Report.

- i. Addresses a single incident that was observed and reported from quarry impact blasting. But calculation of risks from fly-rock to M & R station does not address probabilities of likely to be many more incidents that were not observed or reported.
- ii. Calculations (and assumptions) leading to the conclusion 1 in a 10,000,000 chance of M & R station may be hit from a fly-rock during the quarry blasting operation, have not been shown or explained.
- iii. Leaks, especially related to M&R Station and periodic maintenance have not been fully characterized or their impacts assessed.
- iv. Cumulative effects cannot be ignored. The AIM report needs to quantify for its own contribution of GHG emissions to the atmosphere and its potential cumulative impacts due to other local or regional sources.
- vi. EPA rule-making/guidance for pipeline project leak mitigation requirements is scheduled for this year. In light of this important document it is reasonable to consider delay administrative and operational actions until such guidance is available.
- vii. West Roxbury and Suffolk County currently faces a variety of additional stresses due to heavy traffic, poor air quality as an environmental justice community. Moreover, it is the most sensitive community among all of the counties impacted by the AIP project in terms of high population density, highest concentration of buildings, schools, elderly residences nearby the WRL. Both incremental and cumulative impacts from WRL activities affecting a high at risk community such as West Roxbury require a more comprehensive assessment.

c. FERC Report.

i. Table 4.11.1-6 indicates that projected direct + indirect CO, NO_x emissions during the construction Phases (2015 and 2016) exceed or at the conformity thresholds these pollutants in Suffolk County, MA WRL AIM portion. According to EPA, the purpose of the general conformity rule is to: 1) Ensure that federal activities do not cause or contribute to new violation of National Ambient Air Quality Standards (NAAQS, 2) Ensure that actions do not cause additional or worsen existing violations of or contribute to new violations the NAAQS, and 3) Ensure that attainment of the NAAQSs (e.g., for ozone in the Boston Metropolitan area) is not delayed. These considerations and the emissions data provided support the earlier statements made for the need for more comprehensive air quality and health risk evaluations.

ii. Report does not provide predicted air quality (AQ) concentration increases due to construction and operation of the WRL portion of the proposed pipeline within an area already in non-attainment of the ozone National Ambient Air Quality Standard (NAAQS).

iii. In page 3-16 of the report, it is stated that that: "...any alternatives to WRL will increase the pipeline length and AIM has not identified an alternative starting point for the West Roxbury Lateral that would be preferable to the proposed route". This is neither a proper justification nor a demonstration of whether suitable alternatives to WRL were considered (and how), in particular from the perspective of community environment and health in West Roxbury, MA near the chosen WRL route.

iv. Estimated high levels of fugitive dust to be emitted during construction: Most of these will be in the form of coarse size particles, but fugitive dust could still be an issue beyond the nuisance factor and local deposition impacts. Mitigation approaches like watering things down may help some, but these emissions may still lead to releases of finer and inhalable dust particles as well. These fine particles could also contain metals and organic contaminants in soil which may result in allergic or respiratory symptoms among the nearby sensitive populations.

EXHIBIT 5:

Table Comparing Observations of Dr. Kiviat
Regarding Species of Special Concern to Information
in Table 4.7.1 and in Accompanying Text in Final EIS

Comparison of observations of Dr. Kiviat regarding species of special concern to the information in Table 4.7.1-1 and in the accompanying text in the Final EIS.

SPECIAL STATUS ANIMALS

1. SPECIES	2. FINAL EIS ANALYSIS	3. DR. KIVIAT'S ANALYSIS
4. BIRDS		
5. Piping Plover	6. Federal Threatened and NYS Endangered listed - no effect	7.
8. Roseate Tern	9. Federal and NYS Endangered listed - no effect	10.
11. Sedge Wren	12. None	13. (Threatened) could nest on the ROW
14. Cooper's Hawk	15. None	16. (Special Concern) - could nest in woodland next to ROW
17. Northern Harrier	18. None	19. (Threatened) - could forage for meadow voles and other small mammals and birds along the ROW
20. Whip-Poor-Will	21. None	22. (Special Concern) - could breed in BMR next to ROW)
23. Bald Eagle	<p>24. "Protected under the BGEPA (16 USC 668-668d), which prohibits the taking of eagles, their eggs, or their nests. Bald eagles are also state-listed as threatened in all states crossed by the Project.</p> <p>25. On October 24, 2014, FERC consulted with the FWS and the FWS concluded that the Project would not</p>	26. May be present in ROW

	result in harm to bald eagles (FWS, 2014)."	
27. Least Bittern	28. Field Survey Results: None present	29. "That DEC reported no records of least bittern near the pipeline does not mean they are not in Lent's Cove (West of Route 9 from RH). The least bittern is a difficult species to detect because it hides in the cattails and reeds, and may not vocalize much."
30. Peregrine Falcon	31. None	32. May be present in ROW
33. Common Raven	34. None	35. (Listed as Threatened by the Westchester County Dept. of Parks) Saw and heard fly over the ROW at UTM ca. 4568274, 590514. This species is
36. Scarlet Tanager	37. None	38. (SGCN) - forest adjoining the Algonquin ROW west of Stoney Street supports
39. Wood Thrush	40. None	41. (SGCN) - forest adjoining the Algonquin ROW west of Stoney Street supports
42. BUTTERFLIES		
43. Northern metalmark	44. None	45. (SGCN) is a very rare butterfly that may occur in transmission ROW habitat

46. BATS		
47. Indiana Bat	<p>48. (E) Endangered - Present. Not likely to adversely affect.</p> <p>49. _____</p> <p>50. "FWS identified a section of the Stony Point to Yorktown Take-up and Relay segment as having the potential to provide suitable summer habitat for the Indiana bat."</p>	51. (Federally and NYS listed as Endangered, SGCN) Trees in the south-facing forest edge (northern ROW edge), may provide summer roosts and nursery sites
52. Northern Long-Eared Bat	<p>53. (PE) Proposed Endangered - Present. Not likely to adversely affect</p> <p>54. _____</p> <p>55. "Algonquin would conduct any required tree clearing for the Project within the 3-mile known bat habitat protection area between October 1 and March 31 when the bats are in hibernation"</p> <p>56. _____</p> <p>57. "[W]e have concluded that the Project would <i>not likely jeopardize the continued existence</i> of the northern long-eared bat"</p>	58. (Candidate for Federal listing, SGCN). Trees in the south-facing forest edge (northern ROW edge), may provide summer roosts and nursery sites
59. Small-Footed Bat	60. None	61. (New York State species of Special Concern and SGCN) Rocks with centimeter-wide cracks and a south-facing exposure are potential summer

		roosting habitat
62. REPTILES & AMPHIBIANS		
63. Eastern Fence Lizard	64. None	65. (State Threatened Species, SGCN); extant population on Anthony's Nose and historic record from Dickerson Mountain, both nearby, potential habitat (sun-exposed rock outcrops and boulder piles) along the ROW
66. Marbled Salamander	67. None	68. (State Special Concern, SGCN) - The wooded swamp between the ROW and Montrose Station Road at UTM ca. 4568521, 541292 contains potential breeding habitat for these species, as does the extensive swamp south of the ROW at UTM ca. 4568850, 591820.
69. Jefferson Salamander	70. None	71. (State Special Concern, SGCN) - The wooded swamp between the ROW and Montrose Station Road at UTM ca. 4568521, 541292 contains potential breeding habitat for these species, as does the extensive swamp south of the ROW at UTM

		ca. 4568850, 591820.
72. Blue-Spotted Salamander	73. None	74. (Special Concern) - The wooded swamp between the ROW and Montrose Station Road at UTM ca. 4568521, 541292 contains potential breeding habitat for these species, as does the extensive swamp south of the ROW at UTM ca. 4568850, 591820.
75. Four-Toed Salamander	76. None	77. (SGCN), - The wooded swamp between the ROW and Montrose Station Road at UTM ca. 4568521, 541292 contains potential breeding habitat for these species, as does the extensive swamp south of the ROW at UTM ca. 4568850, 591820.
78. Wood Frog	79. None	80. Lay eggs and develop as larvae in pools - The wooded swamp between the ROW and Montrose Station Road at UTM ca. 4568521, 541292 contains potential breeding habitat for these species, as does the extensive swamp south of the ROW at UTM ca.

		4568850, 591820.
81. Spotted Turtle	82. None	83. (Special Concern), I observed the remains of depredated turtle eggs from three or more nests in one spot on the ROW in the eastern portion of Blue Mountain Reservation (probably at about UTM 4569218, 592162). These were not snapping turtle eggs. The eggs could have been from spotted turtle, wood turtle, or box turtle, all Special Concern and SGCN in New York, or from painted turtle, an unlisted species.
84. Wood Turtle	85. None	86. (Special Concern), could occur on the ROW see above
87. Box Turtle	88. None	89. (Special Concern), could occur on the ROW see above
90. Bog Turtle	91. Federal and NYS (T) Threatened - Could be Present. Not likely to be adversely affect 92. _____ 93. "[We] conclude that the Project <i>may affect, but would not likely adversely affect</i> the bog turtle."	94. (Federal and NYS Threatened) Could occur on the ROW
95. Worm Snake	96. None	97. (Special Concern) -

		worm snake could occur in Blue Mountain Reservation
98. Timber Rattlesnake	<p>99. No habitat identified in workspace; habitat identified adjacent to Algonquin's existing rights-of-way</p> <p>100. _____</p> <p>101. "Given the complex construction schedule that includes pipeline outages, Algonquin <i>would not be able to adhere to the</i> NYSDEC's recommended seasonal restrictions for timber rattlesnakes."</p>	102. (State Threatened, SGCN) occurs in the Hudson Highlands in Putnam and Dutchess counties. There is potential habitat in Blue Mountain Reservation
103. OTHER ANIMALS		
104. New England Cottontail	<p>105. (C) Candidate Endangered - <i>would not contribute to a trend toward federal listing</i></p> <p>106. _____</p> <p>107. "the FWS explained that the final rule and list status for New England Cottontail would not likely occur until after the AIM Project completed construction (FWS, 2014f; FWS, 2014g). As such, the FWS indicated that the New England cottontail was not an issue for the Project"</p>	108. (Special Concern), - could occur on shrubby portions of ROW such as in Yorktown west of Lexington Avenue - is a candidate for federal listing
109.	110.	111.

SPECIAL STATUS PLANTS

112. SPECIES	113. FINAL EIS ANALYSIS	114. DR. KIVIAT'S ANALYSIS
115. Virginia snakeroot (<i>Aristolochia serpentaria</i>)	116. None	117. NYS S2 Endangered - ROW is less than 4 km from a large population of the rare plant; inconspicuous herbaceous plant could occur in rocky woods adjoining the ROW
118. pinesap (<i>Monotropa hypopitys</i>)	119. None	120. regionally-rare plant; found near the "Maint. Area" stake
121. Little bluestem (<i>Schizachyrium scoparium</i>)	122. None	123. the sole larval food plant of multiple species of rare butterflies
124. Small whorled pogonia 125. (<i>Isotria medeolodes</i>)	126. (E) Endangered - No effect	127.
128. FOUND IN SIMILAR HABITAT (DURING SUMMER REVIEW)		
129. Sedges (<i>Carex</i> spp.)	130. None	131. Few were recorded on the wetland field data sheets in the delineation report (TRC 2014a), despite the abundance and diversity of sedges on upland and wetland habitats of the ROW
132. Bush's Sedge (<i>Carex bushii</i>);	133. None	134. (New York Natural Heritage Program rank S3) - on right-of-way west of Stony Street; two locations between Stony Street and Lexington Avenue
135. Narrow- leaved sedge (<i>Carex amphibola</i>)	136. None	137. (NYNHP rank S1, listed as Endangered in New York). - species at two locations on the right-of-way
138. New Jersey tea (<i>Ceanothus</i>)	139. None	140. (regionally-rare). - I found several clumps of this

<i>americanus)</i>		small subshrub, in flower, on a south-facing slope in the northern part of the right-of-way between Stony Street and Lexington Avenue
141. butterfly-weed (orange milkweed; <i>Asclepias tuberosa</i>),	142. None	143. (regionally-rare) - south-facing slope in the northern part of the right-of-way between Stony Street and Lexington Avenue
144. Dodder (<i>Cuscuta</i>).	145. None	146. At least two plants of dodder on the ROW on an upland slope west of Wetland A-10 may be one of several rare dodder species that occur in the Hudson Valley: <i>Cuscuta campestris</i> [S1, State Endangered], <i>Cuscuta compacta</i> [S3], <i>Cuscuta pentagona</i> [S3], and <i>Cuscuta polygonorum</i> [S1, State Endangered]
147. River birch (<i>Betula nigra</i>);	148. None	149. Rare S3) was reported in Wetland B13 in the Town of Cortlandt (TRC 2014a). Inasmuch as " <i>nigra</i> " means black, this could be a recording error for black birch (<i>Betula lenta</i> , a common species)

EXHIBIT 6:
Table of Supplemental Submissions

Exhibit 5 - Table of Supplemental Submissions

Date	Submittal	Class/Type	Description	Public
09/02/2014	20140902-529309	Applicant Correspondence/ Supplemental/Additional Information	Algonquin submits its responses to the NYSDEC request for additional information	Public
09/02/2014	20140902-5292	Applicant Correspondence/ Supplemental/Additional Information	Algonquin submits its responses to the USACE New York District's request for additional information.	Public
09/02/2014	20140902-5289	Applicant Correspondence/ Supplemental/Additional Information	Algonquin submits its responses to CTDEEP request for additional information for the Algonquin Incremental Market Project.	Public
09/02/2014	20140902-5280	Applicant Correspondence/ Supplemental/Additional Information	Algonquin submits supplemental information including a response to Condition Number 31 of the DEIS.	Public
09/03/2014	20140903-5049	Report	Algonquin submits its Final Survey Reports for Federally-Listed Species for the Algonquin Incremental Market Project.	No
09/03/2014	20140903-5048	Report	Algonquin submits its Final Survey Reports for Federally-Listed Species for the Algonquin Incremental Market Project.	Public
09/11/2014	20140911-5188	Pleading/Motion/Answer/ Response to a Pleading/Motion	Algonquin submits its response to FERC Data Request issued on August 28, 2014.	Public
09/19/2014	20140919-5149	Correspondence/ Supplemental/Additional Information	Algonquin submits supplemental information including responses to Conditions Number 29, 30, & 31 of the DEIS.	Public
09/29/2014	20140929-5333	Report/Form / Certificate of Compliance Report	Algonquin - Response to DEIS, Docket No. CP14-96.	Public
09/29/2014	20140929-5299	Applicant Correspondence/ Supplemental/Additional Information	Algonquin submits supplemental information.	Public
10/14/2014	20141014-5494	Pleading/Motion/ Answer/Response to a Pleading/Motion	Response to Comments on the Draft Environmental Impact Statement of Algonquin under Docket No. CP14-96.	Public
10/20/2014	20141020-5195	Applicant Correspondence/ Supplemental/Additional Information	Algonquin submits as supplemental information under CP14-96 its responses to data requests from CT DEEP and additional information filed with CT DEEP as part of its 401 Water Quality Certification.	Public
10/20/2014	20141020-5179	Applicant Correspondence/ Supplemental/Additional Information	Algonquin submits as supplemental information under CP14-96 its responses to USACE-NE requests for additional information.	Public
10/29/2014	20141029-5100	Applicant Correspondence/ Supplemental/Additional Information	Supplemental Information of Algonquin.	Public

10/31/2014	20141031-5297	Applicant Correspondence/ Deficiency Letter/Data Response	Algonquin submits its response to FERC Data Request issued on October 22, 2014.	No
10/31/2014	20141031-5296	Applicant Correspondence/ Deficiency Letter/Data Response	Algonquin submits its response to FERC Data Request issued on October 22, 2014.	Public
12/02/2014	20141202-5173	Applicant Correspondence/ Supplemental/Additional Information	Algonquin submits supplemental information.	Public
12/11/2014	20141211-5160	Report/Form/ Certificate of Compliance Report	Algonquin submits its response to the FERC Data Request issued on December 2, 2014.	No
12/11/2014	20141211-5159	Report/Form/ Certificate of Compliance Report	Algonquin submits its response to the FERC Data Request issued on December 2, 2014.	Public
12/16/2014	20141216-5325	Applicant Correspondence/ Supplemental/Additional Information	Algonquin hereby submits supplemental information for its AIM Project.	Public
12/16/2014	20141216-5228	Applicant Correspondence/ Supplemental/Additional Information	Algonquin hereby submits a letter to FERC.	Public
12/19/2014	20141219-5418	Applicant Correspondence/ Supplemental/Additional Information	Algonquin hereby submits supplemental information regarding cultural resources for its AIM Project.	No
12/19/2014	20141219-5417	Applicant Correspondence/ Supplemental/Additional Information	Algonquin hereby submits supplemental information regarding cultural resources for its AIM Project.	Public
12/19/2014	20141219-5370	Applicant Correspondence/ Supplemental/Additional Information	Algonquin re-submits as public its response to the FERC Data Request issued on December 2, 2014.	Public
12/22/2014	20141222-5373	Applicant Correspondence/ Supplemental/Additional Information	Algonquin submits as supplemental information its final consolidated wetland mitigation plan.	Public
12/23/2014	20141223-5262	Applicant Correspondence/ Supplemental/Additional Information	Algonquin submits its response to the FERC Data Request issued on December 18, 2014.	Public
01/16/2015	20150116-5127	Applicant Correspondence/ Supplemental/Additional Information	Supplemental Information of Algonquin under the AIM Project, Docket No. CP14-96.	No

01/16/2015	20150116-5126	Applicant Correspondence/ Supplemental/Additional Information	Supplemental Information of Algonquin under the AIM Project, Docket No. CP14-96.	Public
01/21/2015	20150121-5200	Applicant Correspondence/ Supplemental/Additional Information	Algonquin submits its response to the FERC Data Request issued on January 16, 2015.	Public
01/23/2015	20150123-4001	FEIS Report	Final Environmental Impact Statement for the Algonquin Incremental Market Project.	Public
02/20/2015	20150220-5237	Applicant Correspondence/ Supplemental/Additional Information	Algonquin submits supplemental information on additional correspondence and documentation of consultation with State Historic Preservation Officers, Native American tribes, and consulting parties.	No
02/20/2015	20150220-5236	Applicant Correspondence/ Supplemental/Additional Information	Algonquin submits supplemental information on additional correspondence and documentation of consultation with State Historic Preservation Officers, Native American tribes, and consulting parties.	Public
02/27/2015	20150227-5422	Applicant Correspondence/ Supplemental/Additional Information	Supplemental Information of Algonquin.	No
02/27/2015	20150227-5421	Applicant Correspondence/ Supplemental/Additional Information	Supplemental Information of Algonquin.	Public
03/03/2015	20150303-3044	Commission Order	Order issuing certificate and approving abandonment re Algonquin.	Public
03/23/2015	20150324-5020	Applicant Correspondence/ Supplemental/Additional Information	Algonquin submits supplemental information.	No
03/23/2015	20150324-5019	Applicant Correspondence/ Supplemental/Additional Information	Algonquin submits supplemental information.	Public

EXHIBIT 7:
NY State Attorney General's comments to FERC



STATE OF NEW YORK
OFFICE OF THE ATTORNEY GENERAL

ERIC T. SCHNEIDERMAN
ATTORNEY GENERAL

DIVISION OF SOCIAL JUSTICE
ENVIRONMENTAL PROTECTION BUREAU

September 29, 2014

Via Electronic Submission

The Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
Room 1A East
888 First Street, N.E.
Washington, D.C. 20426

Re: Electronic Filing:
Algonquin Gas Transmission, LLC, Docket No. CP14-96-000,
New York State Office of the Attorney General
Comments on Draft Environmental Impact Statement

Dear Secretary Bose:

Enclosed is the New York State Office of the Attorney General's comments on the draft environmental impact statement for the Algonquin gas pipeline project, submitted by electronic filing.

Please contact us should you have any questions concerning this filing or encounter difficulty opening the document or locating the cited references.

Respectfully submitted,

Philip Bein

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**UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION**

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In the Matter of:

Docket No: CP14-96-000

Algonquin Gas Transmission, LLC

September 29, 2014

For a Certificate of Public Convenience and Necessity.

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**COMMENTS OF THE NEW YORK STATE OFFICE OF THE
ATTORNEY GENERAL ON THE DRAFT ENVIRONMENTAL IMPACT
STATEMENT FOR THE ALGONQUIN INCREMENTAL MARKET PROJECT**

Intervener New York State Office of the Attorney General (N.Y. Attorney General) respectfully submits these comments concerning the draft environmental impact statement (DEIS) for the Algonquin natural gas pipeline Incremental Market Project (the Algonquin Project). The N.Y. Attorney General is the chief legal officer of the State of New York whose responsibilities include intervention in legal and administrative proceedings to advance the interests of the State, enforce State laws as well as Federal laws such as the National Environmental Policy Act, and protect the public health, environment, and economic interests of New York citizens.

The New York Attorney General moved to intervene in this proceeding to protect the State and its citizens from the Algonquin Project's potential adverse impacts: (i) to water quality in the New York City Watershed, the source of

drinking water for nine million State residents; (ii) to climate change as a result of increased greenhouse gas emissions; and (iii) to operations of the Indian Point nuclear facilities and systems which could impair public safety. See N.Y. Attorney General Motion to Intervene, FERC Docket CP14-96-000 (April 8, 2014) (hereby incorporated by reference).

Upon review of the DEIS, several issues of concern remain. The Algonquin Project's plans for preventing stormwater pollution are deficient in significant respects and need to be modified to mitigate the potential for adverse impacts to water quality. In addition, the Algonquin Project needs to employ specific cost effective technologies and practices to mitigate carbon dioxide and methane emissions that contribute to climate change. Also, fifty years ago, the federal government authorized the construction of the Algonquin pipeline and the Indian Point nuclear facility in close proximity to one another. The government's current DEIS is vague, incomplete, and deficient concerning the interaction of the project, the existing pipeline, and their alternatives with the nuclear facilities' systems, structures, and operations.

REGULATORY FRAMEWORK

The National Environmental Policy Act, 42 U.S.C. §§ 4321-37, requires all federal agencies to examine environmental impacts that could be caused by their discretionary actions. As a federal agency, the FERC must comply with NEPA. *Calvert Cliffs Coordinating Comm. v. U.S. Atomic Energy Commission*, 449 F.2d

1109 (D.C. Cir. 1971); 18 C.F.R. Part 380. As made clear in the regulations promulgated by the President’s Council on Environmental Quality (“CEQ”), NEPA was designed to “provide a full and fair discussion of significant environmental impacts and shall inform decision makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.” 40 C.F.R. § 1502.1. NEPA directs all federal agencies, “to the fullest extent possible” to comply with this policy and, *inter alia*, to use a systematic and interdisciplinary approach in considering environmental issues, and, before taking any major Federal action significantly affecting the quality of the human environment, to generate a detailed environmental impact statement. 42 U.S.C. § 4332(2)(A), (C) and (E). NEPA also requires a comparative analysis of the environmental consequences of the alternatives before the agency. 42 U.S.C. § 4332(2)(C)(iii); 40 C.F.R. § 1502.14(d).

The EIS is intended to guarantee that the relevant information regarding the costs and benefits of federal action and its alternatives will be made available to the larger audience that may also play a role in both the decision-making process and the implementation of that decision. *Center for Biological Diversity v. U.S. Dept. of Interior*, 623 F.3d 633 (9th Cir. 2010) (*citing Dep’t of Transp. v. Pub. Citizen*, 541 U.S. 752, 768 (2004)). Publication of an EIS, both in draft and final form, also serves a larger informational role. It gives the public the assurance that the agency has indeed considered environmental concerns in its decision making process, and,

perhaps more significantly, provides a springboard for public comment. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 348-349 (1989). NEPA requires federal agencies to stop and objectively identify the environmental effects of their discretionary actions and consider alternative means to mitigate those effects – before approving or undertaking any major action that may affect the environment.

CEQ has promulgated regulations pursuant to NEPA (40 C.F.R. Parts 1500-1508) as has FERC (18 C.F.R. Part 380). Although FERC allows applicants to prepare an initial draft of the environmental review documents, the duty to comply with NEPA rests with the federal agency itself.

THE ALGONQUIN PROJECT

Algonquin has applied for approval of the project pursuant to sections 7(b) and 7(c) of the Natural Gas Act. The Algonquin Project would (i) construct, install, operate, and maintain approximately 37.6 miles of take-up and relay, loop, and lateral pipeline facilities, and appurtenances in New York, Connecticut, and Massachusetts; (ii) modify six existing compressor stations in New York, Connecticut, and Rhode Island, resulting in the addition of 81,620 horsepower (HP) of compression; (iii) modify 24 existing metering and regulating (M&R) stations and construct three new M&R stations; (iv) abandon certain existing facilities; and (v) approve certain rates. The Algonquin Project seeks to facilitate the transportation of large amounts of natural gas from the Southeast and Midwest to New England.

The project's activities in New York State include take up and relay of more than 15 miles of pipeline, a new 1.2 mile crossing under the Hudson River, upgrade of two compressor stations, and upgrade of two metering and regulating stations. Much of these activities would occur within the East of Hudson portion of the New York City Watershed.

JUNE 4, 2014 MEETING WITH ALGONQUIN

The N.Y. Attorney General and its consultant met with Algonquin's representatives and technical consultants about the project on June 4, 2014, and expressed its concerns about the project's potential adverse environmental impacts relating to the New York City Watershed, methane emissions, and the Indian Point nuclear facilities. The N.Y. Attorney General's consultant on stormwater pollution issues, Donald Lake, P.E., reviewed Algonquin's prior submittals to FERC, including the project's Erosion and Sedimentation Control Plan, dated October 8, 2013, and provided a list of seven preliminary issues of concern at the meeting. Additional documents were subsequently reviewed by the N.Y. Attorney General, including the DEIS, the Stormwater Pollution Prevention Plan (SWPPP) for the project (other than the Southeast Compressor station), dated August 2014, and the SWPPP for the Southeast Compressor station, dated August 2014. Algonquin made the SWPPPs available for review on September 2, 2014. The SWPPPs addressed some, but not all, of the preliminary issues raised by Mr. Lake at the June meeting.

At the meeting, Algonquin informally shared its plans to mitigate the project's direct, fugitive, and vented methane emissions using best practices. However, these plans have not been incorporated into the DEIS. Algonquin also confirmed that the preferred route for the Hudson River crossing and east-of-Hudson connection would be further away from the Indian Point Unit 3 nuclear reactor and spent fuel pool than the existing river crossing and connection.

STORMWATER POLLUTION AND THE NEW YORK CITY WATERSHED

As discussed below and in the Technical Appendix Concerning Stormwater Pollution, Algonquin's plans for addressing stormwater pollution are deficient in significant respects and need to be revised to mitigate the likelihood of adverse water quality impacts in the New York City Watershed.

The proposed Algonquin Project includes 2.3 miles of new pipeline and a new compressor station to be located within the Croton System in the East of Hudson portion of the New York City Watershed. Stormwater runoff from these portions of the project will drain to the East Branch and New Croton Reservoirs within the Croton system. The Croton System can supply as much as thirty percent of the water relied on by New York City and other communities each day. *Friends of Van Cortlandt Park v. City of N.Y.*, 95 N.Y. 623, 626 (2001).

The East Branch and New Croton reservoirs, like other reservoirs within the Croton System, are "eutrophic," having excessive algae growth in the growing season because of discharges of the pollutant phosphorus into these reservoirs.

Excessive algae growth impairs the taste and odor of reservoir water and depletes levels of dissolved oxygen in the reservoir's bottom waters, impairing aquatic life and releasing metals into the water.¹ Eutrophic conditions also result in increased levels of organic carbon in the water.²

As a result of phosphorus pollution, these reservoirs fail to comply with water quality guidelines and standards established by the New York State Department of Environmental Conservation (DEC) pursuant to State law and the federal Clean Water Act, 33 U.S.C. § 1251 *et seq.* The watershed of the East Branch and New Croton reservoirs are “phosphorus restricted basins” because phosphorus concentrations exceed DEC guidelines. *See* 10 NYCRR §§ 128-1.6(a)(80), 4.1(c). The sources of the phosphorus pollution include upstream wastewater treatment plants and other point sources (including stormwater runoff discharged from municipal storm sewer pipes) and non-channelized stormwater runoff.

The construction and development of land is a major source of phosphorus and other pollutants, which discharge into the reservoirs in stormwater runoff. “Stormwater pollution is one of the most significant sources of water pollution in the nation.” *Environmental Def. Ctr., Inc. v. EPA*, 344 F.3d 832, 840 (9th Cir. 2003). According to EPA, “[u]ncontrolled storm water discharges from areas of urban development and construction activity negatively impact receiving waters by

¹ *Watershed Management for Potable Water Supply: Assessing the New York City Strategy*, National Research Council, at 106-07 (2000) (hereinafter NRC Study).

² *See* NRC Study, *supra*, at 2.

changing the physical, biological, and chemical composition of the water, resulting in an unhealthy environment for aquatic organisms, wildlife and humans,” and can “severely compromise” water quality.³

Discharges of stormwater from construction sites include sediment, a pollutant which also serves as a carrier of other pollutants, such as nutrients (including phosphorus), metals, organic compounds, and pathogens. “It is generally acknowledged that erosion rates from construction sites are much greater than from almost any other land use.”⁴ Sediment loads in stormwater discharges from construction sites are typically 1,000 to 2,000 times the sediment loads in discharges from undeveloped forested land.⁵

Post-construction stormwater discharges from developed areas are also a major source of pollution to the waters of the United States. “Urbanization alters the natural infiltration capability of the land and generates a host of pollutants . . . thus causing an increase in storm water runoff volumes and pollutant loadings.”⁶ Land development “can result in both short- and long-term adverse impacts to water quality in lakes, rivers and streams within the affected watershed by

³ “National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Stormwater Discharges; Final Rule,” 64 Fed. Reg. 68722, 68724, 68728. (Dec. 8, 1999) (hereinafter, 1999 Preamble & Rule).

⁴ *Id.*

⁵ EPA, “Storm Water Phase II Final Rule: Small Construction Program Overview (Fact Sheet 3.0),” EPA 833-F-00-013 (Jan. 2000), available at <http://www.epa.gov/npdes/pubs/fact3-0.pdf>.

⁶ 1999 Preamble & Rule, 64 Fed. Reg. at 68725.

increasing the load of various pollutants in receiving water bodies, including sediments, metals, organic compounds, pathogens, and nutrients.”⁷ EPA has determined that urban runoff and storm sewer discharges were the second leading source of water quality impairment in estuaries and the third leading source of such impairment in lakes, ponds and reservoirs.⁸

Stormwater pollution to the East Branch and New Croton reservoirs is also of great concern because it carries pathogens. The watersheds for these reservoirs lie within the “60 day travel time” to consumers of New York City water . Discharges within this geographic area raise heightened concerns because 60 days is generally viewed as the life span for many disease-causing microbes in fresh water. The pathogens of central concern in the Watershed are *Cryptosporidium* oocysts and *Giardia* cysts. These microbes can cause severe intestinal distress and can be deadly for persons with compromised immune systems. These pathogens are highly resistant to destruction by chlorination, the disinfectant relied on to treat Croton System water.

The Algonquin Project’s plans for preventing stormwater pollution of the East Branch and New Croton Reservoirs are inadequate. As discussed in detail in the Technical Appendix Concerning Stormwater Pollution, the SWPPPs developed

⁷ EPA, Draft Proposed Rule for Effluent Limitations Guidelines and New Source Performance Standards for the Construction and Development Category, Docket No. 01644, at 49-50. February 12, 2002.

⁸ EPA, “National Water Quality Inventory: 2000 Report at 22 & 30,” EPA-841-R-02-001 (Aug. 2002), available at <http://www.epa.gov/305b/2000report/chp3.pdf> & <http://www.epa.gov/305b/2000report/chp4.pdf>.

by Algonquin's consultants contain numerous deficiencies and internal contradictions. For example, details for stormwater management practices are absent and applicable infiltration basin design requirements are not satisfied. No soil testing has been performed to justify the use of infiltration treatment practices, inconsistent infiltration rates are employed, and the time of concentration for individual drainage areas has not been calculated. These and other deficiencies mean that the project cannot be expected to prevent stormwater pollution as required by DEC's General Permit for Stormwater Discharges from Construction Activities.

Accordingly, unless these deficiencies are corrected in accordance with the detailed comments set forth in the Technical Appendix (accompanying this submission), the Algonquin Project will exacerbate existing water quality problems in the East Branch and New Croton Reservoirs. More phosphorus, metals, and other pollutants – possibly including pathogens -- will discharge into these waterbodies, contributing to the impairment of these vital drinking water supplies.

GREENHOUSE GAS EMISSIONS INCLUDING METHANE

Climate change is a reality and is occurring now primarily due to human-induced emissions of greenhouse gases (or GHGs).⁹ The rate and magnitude of how climate continues to change will be greatly influenced by the amount of greenhouse gases emitted to the atmosphere. President Obama's Climate Action Plan calls on

⁹ United States Third National Climate Assessment, 2014.

the nation to reduce our greenhouse gas emissions by 17% below 2005 levels by year 2020.¹⁰

The Algonquin Project will use and transport natural gas, which is primarily composed of methane. Methane is a potent greenhouse gas that comprises nearly nine percent of total U.S. GHG emissions.¹¹ In 2012, over 22% of U.S. methane emissions were from the natural gas industry, with the transmission and storage sector accounting for the largest percentage (34%) of these emissions.¹² With a global warming potential at least 25 times greater than that of carbon dioxide,¹³ methane emissions play an important role in driving climate change. The federal government's Climate Action Plan Strategy to Reduce Methane Emissions concludes methane reduction steps will be necessary to help meet the Administration's goal of reducing U.S. GHG emissions in the range of 17% below 2005 levels by 2020.¹⁴ Reductions of GHG emissions to such levels are needed to lessen the likelihood of the most severe effects of climate change. Thus, FERC must take a "hard look" at direct emission of methane, carbon dioxide emissions resulting

¹⁰ The President's Climate Action Plan, June 2013, *available at* www.whitehouse.gov/energy/climate-change. New York State seeks to reduce greenhouse gas emissions by 80 percent below 1990 levels by 2050.

¹¹ Climate Action Plan: Strategy to Reduce Methane Emissions, March 2014, *available at* www.whitehouse.gov/blog/2014/03/28/strategy-cut-methane-emissions.

¹² *Id.*

¹³ 40 C.F.R. Part 98 , Table A-1 to Subpart A.

¹⁴ Climate Action Plan: Strategy to Reduce Methane Emissions, March 2014.

from compressors stations and other GHG emissions associated with the Project and consider mitigation options.

Algonquin Project Greenhouse Gas Emissions

The Algonquin Project will be a large source of greenhouse gas emissions, resulting in the generation of a maximum of 1,030,133 tons CO₂e per year (934,521 metric tons). The DEIS concludes “Although the GHG emissions appear large, the emissions are very small (0.4) in comparison to the 2000 inventory of GHG emissions in the New England region of the United States of 224.01 metric tons of CO₂e (NESCAUM, 2004).”¹⁵ FERC’s DEIS is deficient in that it provides no analysis of greenhouse gas mitigation options and proposes no greenhouse gas mitigation measures.

Significance of the Project’s Greenhouse Gas Emissions Relative to Northeast U.S. Emissions

The DEIS’s evaluation of the Algonquin Project’s GHG emissions relative to Northeast U.S. GHG emissions in order to create the perception that these emissions are “very small” is misplaced. The vast array of individual GHG emission sources across the Northeast U.S. economy precludes using relative percentages for individual projects to determine significance. Such an approach would impermissibly allow a reviewing agency to find nearly all potential GHG emission sources insignificant and is contrary to 40 C.F.R. § 1508.7. *See Center for Biodiversity v. Nat’l Highway Traffic Safety Admin.*, 538. F.3d 1172, 1217 (9th Cir.

¹⁵ DEIS p. 4-236.

2008)(agency rules or actions might have an “individually minor” effect on the environment, but are “collectively significant actions taking place over a period of time”).

The DEIS uses an incorrect yardstick to measure significance. Instead, of dismissing the project’s GHG emissions as “very small,” NEPA requires FERC to identify, analyze, and develop mitigation alternatives for such cumulative impacts, which are defined as:

the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

40 C.F.R. § 1508.7. Indeed, FERC is currently reviewing applications for the construction and operation of several interstate natural gas pipelines and associated compressor stations that involve significant cumulative impacts in the context of greenhouse gases.. *See, e.g.*, Constitution Pipeline (New York), Tennessee Gas Pipeline (New York), UTOPIA Gas Pipeline (Ohio to Michigan). The Algonquin Project, the existing Algonquin Pipeline, and other gas pipelines share a common objective: to facilitate the transportation of natural gas to market. Given the common objective across these projects, the FERC must identify, analyze, and develop mitigation alternatives for the greenhouse gas emissions.

Failure to Evaluate the Project's Greenhouse Gas Mitigation Options

The DEIS's omission of any consideration of mitigation options for methane and other GHG emissions from the Algonquin Project compressor stations, pipeline, and metering and regulating stations (M&R stations) is a material deficiency, and is inconsistent with the Commission's recent approach to mitigation, even in a case where "significant" GHG impact is unlikely. In the *Sabine Pass* proceeding, FERC performed an environmental assessment for a proposal to construct and operate a natural gas liquefaction and export facility in Cameron Parish, Louisiana. There, FERC examined, among other things, GHG emissions associated with the new facility. *Sabine Pass*, Environmental Assessment, § 2.7. Although FERC determined that the GHG emissions of the Sabine Pass project did not rise to the level of "significance" warranting a full EIS, it nonetheless identified and required the applicant to comply with mitigation measures to reduce GHG emissions, including the selection of turbines which have a better thermal efficiency and reduced CO₂ emissions. *See Sabine Pass*, 140 FERC ¶ 61,076 at 9-10. The *Sabine Pass* decision demonstrates the ability to mitigate carbon dioxide and methane emissions and should inform the regulatory and decisional process for the Project.

The National Gas Act and NEPA require FERC to acknowledge the potential impacts and to identify alternatives to mitigate such impacts. Clearly, it is within FERC's broad authority to require the applicant to implement mitigation practices.

The DEIS should identify and consider a variety of mitigation options for the entire extent of the project. Compressor stations should consider use of appropriately-sized, high efficiency gas turbines and low-leak equipment, such as centrifugal compressors with dry seals as discussed in a recent EPA Whitepaper.¹⁶ To minimize emissions from the pipelines, the U.S. Environmental Protection Agency (USEPA) Natural Gas STAR program identifies a number of cost-effective methane reduction technologies and practices for the natural gas industry, with estimated payback values.¹⁷ Similarly, a recent report by ICF International on the economic analysis of methane emission reduction opportunities in the U.S. oil and gas industry identifies a range of cost-effective technologies and practices to mitigate methane releases, including emissions from blowdowns and other pipeline venting practices, and compressor station upgrades.¹⁸ Given these deficiencies, FERC should revise and supplement its draft EIS and take a hard look at such mitigation options and alternatives. Based upon that review and analysis, FERC should then require the project to implement cost effective greenhouse gas reduction technologies and practices.

¹⁶ EPA Whitepaper, Oil and Natural Gas Sector Compressors, April 2014 *available at* www.epa.gov/airquality/oilandgas/whitepapers.html

¹⁷ See <http://www.epa.gov/gasstar/tools/recommended.html>.

¹⁸ ICF International, March 2014, Economic Analysis of Methane Emission Reduction Opportunities in the U.S. Onshore Oil and Natural Gas Industries.

ENVIRONMENTAL IMPACTS AND INTERACTIONS BETWEEN INDIAN POINT FACILITIES AND ALGONQUIN PIPELINES

The federal government has authorized the construction and operation of large interstate gas pipelines and nuclear power facilities in the same area of the Village of Buchanan.

Background

In 1951, the federal government authorized the Algonquin Gas Transmission Corporation to construct and operate an interstate pipeline from New Jersey to Massachusetts designed to convey natural gas to New England.¹⁹ As authorized by the Federal Power Commission, the Algonquin pipe line route traverses southern New York State, crosses the Hudson River at river mile 43 between the Town of Stony Point and the Village of Buchanan, bisects the former Indian Point amusement park site in Buchanan, and continues on to the Towns of Cortlandt and Southeast, before heading into Connecticut.²⁰

Soon after the passage of the Atomic Energy Act of 1954, the federal government authorized the Consolidated Edison Company to construct one of the first nuclear power reactors in the Nation on the east bank of the Hudson River at river mile 43 in the Village of Buchanan at the Indian Point park site.²¹ At that

¹⁹ *In re United Gas Pipe Line Co., Texas Eastern Transmission Corp., and Algonquin Gas Transmission Corp.*, 10 F.P.C. 35, 1951 FPC LEXIS 3 at * 72-74 (March 27, 1951).

²⁰ The Algonquin pipeline's Hudson River crossing includes three separate pipes: two 24-inch-diameter pipelines and one 30-inch-diameter pipeline. FERC DEIS at 3-18.

²¹ 21 Fed. Reg. 3,085 (May 9, 1956) (Indian Point Unit 1).

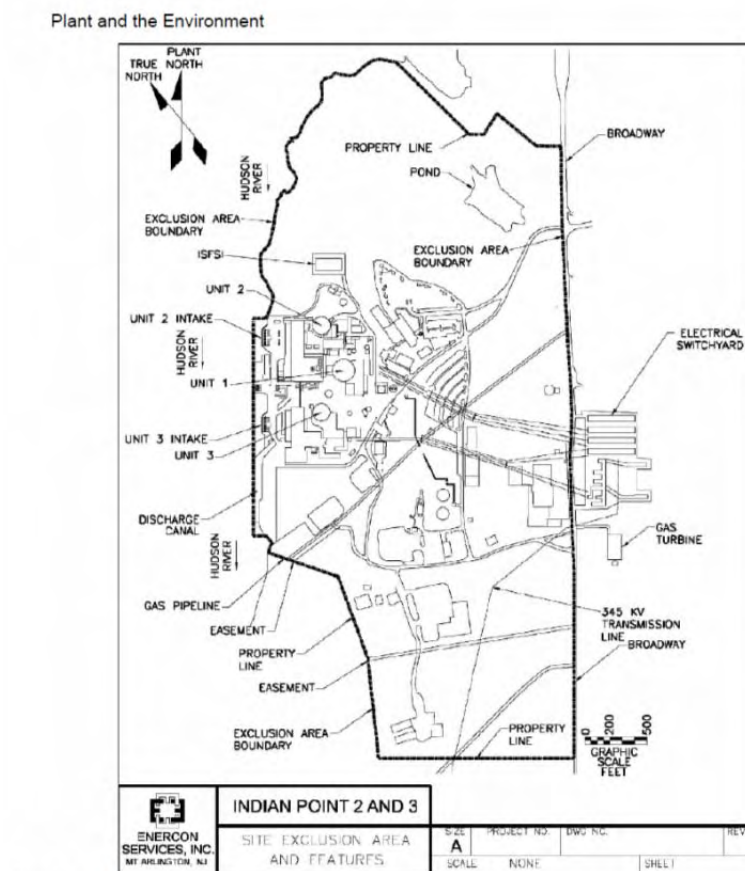
time, the federal government did not have siting regulations or restrictions for nuclear reactors – to address site-specific issues such as nearby hazards, seismicity, sabotage, and population risks. One site-specific factor at Indian Point is the three Algonquin gas pipelines, which cross the Hudson River near the nuclear reactor and continue eastward under the site. In the 1960s, the Atomic Energy Commission authorized Con Edison to construct two additional nuclear reactors at the same site, one of which was located even closer to the Algonquin pipelines.²² Although the federal government initially told “host” communities that radioactive spent fuel waste would be promptly removed from reactor sites,²³ the Nuclear Regulatory Commission later authorized the spent fuel pools at Indian Point to store five times more spent nuclear fuel than they were designed for.²⁴ Today, the two spent fuel pools there each hold almost four decades worth of spent fuel.

²² 31 Fed. Reg. 13,616-17 (Oct. 21, 1966) (Indian Point Unit 2); 34 Fed. Reg. 13,437 (Aug. 20, 1969) (Indian Point Unit 3).

²³ See, e.g., *Vermont Yankee Nuclear Power Station Final Environmental Impact Statement*, U.S. Atomic Energy Commission, at 93-94, ML061880207 (July 1972) (irradiated fuel elements will be shipped after minimum 90-day cooling period); *Prairie Island Final Environmental Statement*, U.S. Atomic Energy Commission, at 192, ML081840311 (May 1973) (spent nuclear fuel elements will be shipped to Nuclear Fuel Services Preprocessing Plant at West Valley, NY); *Final Environmental Statement for Indian Point, Unit 2*, Volume I, U.S. Atomic Energy Commission, at 257, 258, 298, ML072390276 (Sept. 1972) (approximately 35 truckloads of irradiated fuel per year will be transported to Midwest Fuel Recovery Plant in Morris, IL); *Final Environmental Statement for Indian Point, Unit 3*, Volume I, U.S. Nuclear Regulatory Commission, NUREG-75/002, at 412, ML072390284 (Feb. 1975) (irradiated fuel could be transported to the Allied-Gulf Nuclear Services Plant in Barnwell, SC); see also Blue Ribbon Commission on America’s Nuclear Future, Transportation and Storage Committee, Draft Report to the Full Commission, at 2 (“*Storage Committee Report*”)(May 31, 2011) (“These pools were not intended or designed for permanent storage; the assumption was that spent fuel assemblies would spend a few years immersed in the pools before being transferred out for reprocessing or final disposition.”).

²⁴ See Consolidated Edison, Final Design Report for Reracking the Indian Point Unit No. 2 Spent Fuel Pool, at 1, ML100200292 (May 1980); Consolidated Edison, Supplemental Spent Fuel

This diagram depicts the relative location of the Algonquin pipeline within the Indian Point site.



1 Source: Entergy 2007a

2 **Figure 2-3. IP2 and IP3 property boundaries and environs**

Safety Analysis, at 3-1, ML100350310 (Nov. 1985); and Consolidated Edison, Indian Point Unit 2 Spent Fuel Pool Increased Storage Capacity Licensing Report, at 1-2, ML100200114 (June 1989) and USAEC, Safety Evaluation Report by the Directorate of Licensing U.S. AEC In the Matter of Consolidated Edison Co. of New York, Inc. Indian Point Nuclear Generating Unit No. 3, at 4-1, 9-2, ML072260465 (Sept. 21, 1973); USNRC, Indian Point, Unit 3, Amendment 13, Authorizing Modifications to the Spent Fuel Pool, Increasing Capacity from 264 to 840 Fuel Assemblies, attached to Letter from A. Schwencer, NRC to New York State Power Authority, ML003778668 (Mar. 22, 1978); and USNRC, Indian Point, Unit 3, Amendment 90, Allowing for the Expansion of the Spent Fuel Pool Storage Capacity, attached to Letter from Joseph Neighbors, NRC to New York Power Authority, ML003778816 (Oct. 12, 1989).

Need for Precise Terminology and Removal of Vague Terms

The DEIS uses vague and imprecise terms to discuss the diverse operations, systems, and structures at the Indian Point site. Such imprecise terminology makes it difficult for the public and decision makers to understand the EIS and frustrates NEPA's objectives. For example, the DEIS refers to a collection of power generation, radioactive waste storage, and transmission facilities located in the Village of Buchanan as the "Indian Point Energy Center" or "IPEC." *See, e.g.*, xv, 4-154 – 4-155. However, there is no such federally-licensed entity as the "Indian Point Energy Center." Under the licensing provisions of the federal Atomic Energy Act, the federal government officially refers to the various facilities by the names that appear on their operating licenses and dockets, *i.e.*, Indian Point Unit 1 (AEC Docket 50-003), Indian Point Unit 2 (AEC Docket 50-247, DPR-26), Indian Point Unit 3 (NRC Docket 50-286), and Indian Point Entergy Nuclear Operations, Inc. (NRC Docket 72-051(dry cask spent fuel storage facility)).²⁵ In addition, the DEIS refers to "power plant structures" (4-154) and "generating facilities" (ES-8), but these terms are also vague and imprecise. In addition, to three nuclear power reactors, the site contains office buildings, security structures for certain threats (10 C.F.R. Part 73), turbine buildings, buried pipes, as well electrical transmission

²⁵ *See generally* NRC Information Digest 2014-2015, NUREG-1350 (Volume 26), Appendices A, C, P (Aug. 2014) ML14240A480.

lines and towers that link the facilities to the Buchanan substation and vice versa.²⁶

The OAG requests that FERC revise the DEIS to reflect the reality of the specific infrastructure and improvements on the Indian Point site. Accordingly, the DEIS should use the term “Indian Point site,” “Indian Point property,” or use the precise terms of the specific system, structure, operation, or licensed facility at issue (*e.g.*, Indian Point Unit 3 spent fuel pool) to assist the public to better understand the interactions between the pipeline, the project, and their potential alternatives, and the diverse operations, systems, and structures related to nuclear energy and radioactive waste storage at the Indian Point site.

Closed-Cycle Cooling Facilities

As a result of the NEPA process, the DEIS states that FERC, Algonquin, and Entergy (the operator of the Indian Point facilities) have determined that “the proposed southern route for the AIM pipeline would not interfere with plans to construct closed-cycle cooling towers.” 4-155. This statement and finding should also be included in the Final EIS.

Site Hazards Analysis and Environmental Impacts

The DEIS states that “Algonquin is engaged in ongoing consultations with [Entergy]” regarding the impact of the proposed Algonquin Project on the safety and

²⁶ This Office’s motion to intervene provided FERC with a description of various infrastructure improvements on the Indian Point site – including buried piping. *See* New York State Office of the Attorney General Motion to Intervene, at ¶ 6 (April 8, 2014). The Algonquin pipeline traverses the Indian Point site and comes in close proximity to the buried piping systems for the Indian Point facilities. The interaction of different piping systems can contribute to age-related degradation and corrosion of the piping systems. Transcript of Indian Point Evidentiary Hearing (“Tr.”) at 3708-13, 3715 (Dec. 11, 2012).

security of the various Indian Point facilities. Presumably, such consultations should and will involve the Nuclear Regulatory Commission. The N.Y. Attorney General understands that Entergy is undertaking a site hazards impact analysis concerning the pre-existing Algonquin pipeline and the proposed (southern) AIM pipeline, and the alternative (northern) AIM pipeline. ES-8. Until that site hazards analysis is completed and reviewed by NRC, the N.Y. Attorney General is unable to comment on the integrity of that assessment – and requests and reserves the opportunity to do so before the completion of the EIS and NEPA process. Also, in light of this pending analysis and review, NRC should consult with FERC and the EPA regional offices before the federal government completes the NEPA process.

Based on the wording of FERC's DEIS, it appears that site hazards analysis will focus on "*new* safety hazards" to Indian Point posed by the "proposed route." ES-8 (emphasis added). The implication is that the site hazards analysis and the NEPA analysis will only examine the preferred southern route and will not consider any hazards impacts posed by the alternative northern route. In addition, the statement implies that the site hazards analysis and the NEPA analysis will not take a hard look at the cumulative impacts and risks posed by the existing Algonquin pipeline, the alternative northern route, and the proposed southern route. The N.Y. Attorney General respectfully submits that excluding the

consideration of such hazards and impacts from cumulative and alternative impact analyses is inconsistent with NEPA and its implementing regulations.

Separate and apart from these concerns, the DEIS implies that the site hazard analysis is limited to the Indian Point “generating facilities” *i.e.*, the operating power reactors within Indian Point Unit 2 and Indian Point Unit 3. ES-8. FERC and other agencies should also examine the impact of the Algonquin pipeline, the alternative northern AIM route, and the proposed southern AIM route on the spent fuel pools, the turbine buildings, the piping systems, access and evacuation routes, the security area and security force, and the transmission lines that convey electrical power into and out of the Indian Point facilities. Although the Indian Point spent fuel pools do not generate electricity for the power grid, each contains almost 40-years-worth of densely-packed spent nuclear fuel. Both of these densely-packed operating spent fuel pools are located *outside* of the concrete domes around the generating power reactors. Given that the federal government authorized the interstate gas pipeline and nuclear power facilities to operate side-by-side in the Village of Buchanan, FERC should undertake a severe accident mitigation alternatives analysis to identify measures to mitigate the environmental impacts posed by their close proximity to one another. *See* 10 C.F.R. § 51.53(c)(3)(ii)(L); *Limerick Ecology Action, Inc. v. NRC*, (3d Cir. 1989) (holding that NEPA required NRC to conduct a severe accident mitigation alternatives analysis when issuing a license).

Alternatives Analysis

The potential for interaction between nuclear power reactors, radioactive waste storage facilities, physical security systems, and electrical power lines on the one hand and large-diameter natural gas pipelines on the other is the unfortunate result of previous federal siting decisions. One alternative that could mitigate the potential hazardous interactions between the Indian Point facilities and the Algonquin pipelines is the re-routing of the three existing Algonquin pipelines to the proposed southern route for the AIM pipeline. This alternative would move the pipelines away from the Indian Point reactors, spent fuel storage facilities, buried and underground pipes, security area/ structures, and electrical power lines – and would also remove any argument that the existing gas lines impede the construction of closed-cycle cooling systems for Indian Point Unit 3. *See* 3-20, Figure 3.5.1-1. Such an alternative should also avoid schools, hospitals, and community centers, as well as fire, emergency services, and police stations.

The EIS should contain a comparison of each of these pipeline alternatives focusing on how close they each approach the various Indian Point structures and systems. Only through such a direct comparison can the public and the agency decision makers weigh the direct effects, the indirect effects, the alternatives, and the potential mitigation measures. 40 C.F.R. §§ 1502.14, 1502.16. At present, the DEIS contains an incomplete and artificially narrow discussion of the relationship

of only the proposed southern pipeline and its relationship to undefined “power plant structures” (4-154) or “generating facilities” (ES-8).

CONCLUSION

In conclusion, the N.Y. Attorney General requests that FERC address in the FEIS the serious deficiencies in the DEIS identified above to mitigate the risks of adverse impacts posed by the Project to the New York City Watershed, climate change, and public safety and the environment given the interaction of the Algonquin pipeline and the Algonquin Project with the Indian Point nuclear facilities.

Respectfully submitted,

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TECHNICAL APPENDIX CONCERNING

STORMWATER POLLUTION

By Donald Lake, P.E.

Introduction

The following documents were reviewed:

1. 01-Volume ii-A Resource Reports dated April 2014
2. Algonquin Incremental Market (AIM) Project New York Storm Water Pollution Prevention Plan (SWPPP), dated August 2014, prepared by TRC Environmental Corporation; Sections 1-7.
3. Appendix C of the AIM Project NY SWPPP entitled “Erosion and Sediment Control Plan and Spill Prevention Control and Countermeasure Plan” dated August 2014.
4. Part of Appendix E (that corresponds to the NYC Watershed) of the AIM Project NY SWPPP, Construction Drawings S7-E-8002 through S7-E-8010, Rev. B, dated 6/30/14, prepared by Spectra Energy Partners, detailing plan views and profiles of the AIM project, with profiles that locate site specific erosion and sediment control practices along the pipeline route within the New York City Watershed.
5. Part of Appendix F (that corresponds to the NYC Watershed) of the AIM Project NY SWPPP entitled “The Stormwater Pollution Prevention Plan for the Southeast Station”, Putnam County, dated August 2014, by Michael Baker, White Plains, New York.
6. A seven sheet set of Construction Drawings titled, “Southeast Compressor Station, Stormwater Pollution Prevention Plan”. One sheet, the topographic survey of existing site conditions, prepared by LRC Consultants, is dated 1/15/14. The remaining six sheets, prepared by Michael Baker, are neither dated nor numbered but are referenced on the cover sheet.
7. AIM Erosion and Sedimentation Control Plan dated October 8, 2013, prepared by Environmental Construction Permitting.

Technical Comments

1. No more than 5 acres of soil can be disturbed during normal construction activities and for linear projects tributary to AA or AA-s waters no more than 2 acres of disturbance are allowed on slopes greater than 25%, without receiving written authorization from the New York State Department of Environmental Conservation as required in the General Permit GP-0-10-00, Part 1.D.7.b and Part II.C.3. The documentation reviewed did not define the specific incremental phases of the project. An example of what we are seeking is: “Phase 1 will be from Station 2+00 extending 500 feet to Station 7+00”, so that a determination can be made on how much soil would be exposed at one time.

2. Information concerning interceptor dikes (section 6.1), qualified inspectors (section 6.1) and stabilization criteria (section 6.3.4) presented in the main body of the AIM Project NY SWPPP, dated August 2014, excluding Appendix C, is correct. Appendix C of the AIM Project NY SWPPP entitled “Erosion and Sedimentation Control Plan” contradicts this information. The following sections of Appendix C need to be revised to agree with the information presented in the main body of the AIM Project NY SWPPP: section 3.6.1.1 and Figure 12 (ES-0012) for the interceptor dikes, section

2.0 for the qualified inspector, and section 8.1.3 for the stabilization criteria.

In addition, Appendix F of the AIM Project NY SWPPP titled “The Stormwater Pollution Prevention Plan for the Southeast Station”, Putnam County, and dated August 2014 also contradicts the information provided in the main body of the AIM Project NY SWPPP. The following sections of Appendix F need to be revised to agree with the information presented in the main body of the AIM Project NY SWPPP: section 4.5 for the qualified inspector and section 4.3 for the stabilization criteria. In addition, section 5.3.1 of Appendix F needs to reference New York General Permit GP-0-10-001 as the source for site compliance inspections.

3. Appendix F, which is the Southeast Station SWPPP, needs to expand sections 3.6.0 and 4.1.3 to remediate all compacted soils caused by construction activities. Currently, the SWPPP only addresses soil restoration in agricultural areas. The SWPPP should be revised to remediate other areas of compacted soils caused by the project in the NYC Watershed, such as lawns in residential locations.
4. Section 3.6.3.1.a of Appendix C of the AIM Project NY SWPPP concerning mulch needs to be amended to require stabilization of disturbed soil

within 14 days instead of the stated 20 days to meet the requirements of the NY Erosion and Sediment Control Standards (page 2.3, iii, 4) dated August 2005.

5. The erosion and sediment control plan view construction drawing does not identify where the concrete washout facility will be located on site. This omission needs to be addressed. In addition, the washout facility specifications need to be added to the Details-1 sheet of the construction drawings set.
6. Construction drawing, Details-2, contains specific details for a temporary sediment basin, but no basin is shown on the erosion and sediment control plan view. All sediment basin locations need to be shown on the plan.
7. The temporary sediment basin inspection requirements are missing from the construction drawing for Construction Sequence, Inspection and Operation and Maintenance. These must be added.
8. All silt fence shown on the erosion and sediment control plan view that is not installed on a topographic contour line should be removed.

9. The rock riprap outlet detail shown on construction drawing Details-1, needs to show the specific dimensions required for the two rock outlets illustrated on the erosion and sediment control plan view.

10. An infiltration basin is one of two stormwater management practices selected for use on this project. However, no construction details are presented in the SWPPP nor on the drawings for this use. These specifications must be provided.

11. To determine whether an infiltration practice is feasible, the soil at the bottom elevation of the proposed practice must be tested. There are no such test results in the SWPPP. This omission must be addressed.

12. Two infiltration rates are provided for the basin in the SWPPP documents. In the HydroCAD routings, the infiltration rate for the basin is reported as 2.0 inches per hour. Whereas, the infiltration rate for the basin is reported as 3.88 inches per hour on the Infiltration Basin Worksheet in appendix C. In addition, an infiltration rate of 0.4 inches per hour is reported for the dry swale on page 9 of the HydroCAD routing for the proposed drainage. These infiltration practices are all within the Stockbridge-Rock Complex, as defined by the United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS)

soil survey. This survey also classifies this soil as belonging to Hydrologic Soil Group “C”. This soil typically has an infiltration rate ranging from 0.06 inches per hour to 0.57 inches per hour (Southeast Station SWPPP, see Appendix D within Appendix F). There appears to be extreme contradictions between the values used to define the infiltration rate for the basin and the USDA-NRCS soil survey. Therefore, site specific infiltration testing must be done to assure the feasibility of the proposed infiltration practice.

13. The infiltration basin shown on the erosion and sediment control plan view does not meet the criteria for an approved infiltration basin (I-2), shown on page 6-33 of the New York State Stormwater Management Design Manual and described on pages 6-35 through 6-40. Lacking are pre-treatment, soil permeability testing, and construction details for elevation and overflow outlets. For example, the basin shown on the erosion and sediment control plan has a 4% bottom grade, which does not comply with the requirement that the surface of an infiltration practice be level to insure even stormwater distribution into the ground. Proper design details must be provided.

14. The proposed construction drawings on sheet Details-1, show a grassed channel that is mislabeled as a “Dry Swale”. The criteria for a Dry Swale

(O-1) is presented on page 6-60 in the NYS Stormwater Management Design Manual, 2010, and described on pages 6-62 through 6-64. If this vegetated channel is proposed for use as an approved water quality practice in New York, it must be designed in accordance with the required criteria.

15. The hydrologic analysis presented in Appendix G of the AIM Project NY SWPPP Appendix F, entitled “The Stormwater Pollution Prevention Plan for the Southeast Station”, Putnam County, dated August 2014 uses outdated TP-40 rainfall values and Soil Conservation Service (SCS) Type 3 rainfall distribution values. Updated hydrologic data from the Northeast Regional Climate Center (NRCC) should be used, along with the corresponding rainfall distributions, for each individual storm (this data can be imported directly into HydroCAD). The NRCC value for the 1 year rainfall event is now 2.8 inches instead of the TP-40 value of 2.7 inches, used in the HydroCAD routings. These analyses should be re-done using the updated NRCC hydrologic data.

16. The water quality treatment volume (WQv) calculations in Appendix C within Appendix F for the Southeast Station SWPPP are incorrect. The 1 year rainfall values need to be converted to runoff values using the TR-55 Curve Number methods, such as that used in the HydroCAD routing. The

Simple Method formula shown in Chapter 4 of the NYS Stormwater Management Design Manual (2010) is only used for the 90th percentile rainfall values, which are not applicable for projects within the New York City drinking water supply watershed.

17. The WQ_v calculations and the HydroCAD routing contain a storm labeled “DEP 1 year, 24 hour duration Storm” with a “SCS Type 2” rainfall distribution and value of 3.2 inches. Based on discussions with NYSDEC and NYCDEP staff, this storm does not exist in New York. A WQ_v rainfall value of 2.8 inches should be used for the WQ_v calculations.
18. The time of concentration (T_c) is defined as the time required for a drop of water to travel from the most hydrologically remote point in a subcatchment to the outlet. All T_c values used in the HydroCAD routings are direct entry values of 6 minutes. This means there were no calculations done to support these numbers. These T_c values must be calculated for their respective drainage areas and the HydroCAD model re-run.
19. A full Quality Assurance/Quality Control review should be performed on all documentation associated with this project to confirm consistency with all statements and technical work.

EXHIBIT 8:
Spectra Responses and Mailer to West Roxbury
Residents

**West Roxbury Saves Energy – Q&A’s
Algonquin Gas Transmission’s Responses
November 13, 2014**

Attached are the responses prepared by Algonquin Gas Transmission, LLC to the questions forwarded by West Roxbury Saves Energy (the “WRSE”) from the October 8th community meeting. The WRSE’s questions were grouped together based on subject matter due to the overlapping nature of certain questions. Algonquin’s responses then address each subject area in order to facilitate review.

Safety

4. What safety precautions will be taken to avoid an explosion at any point in the line? 5. What activities and events are likely to cause an explosion along the line or at the M&R Station? What is Spectra doing to prevent such events from occurring? 6. Knowing that promising with 100% certainty that no event will occur that results in a major explosion is not possible, what percent are you able to promise? What is your SLO (service level objective) for safety? 7. What kind of pressure can the pipes withstand before they are compromised and at risk for an explosion or other catastrophe? 13. On page 5-14 of the DEIS the mention of a "slight increase in risk to the nearby public" of the new pipeline is stated. What are these "slight" risks? 16. Describe what occurs when a 750 psi pipe has an explosion.

- **General Pipeline Safety Information**

Since pipeline safety is a concern raised in many of these questions, the following is information about interstate natural gas transmission pipelines and how they are safely designed, constructed, operated and maintained. This includes the pipeline system operated by Algonquin Gas Transmission, LLC (“Algonquin”). It is also important to note that the Draft Environmental Impact Statement (the “DEIS”) which the Federal Energy Regulatory Commission (“FERC”) issued on August 6th concluded that Algonquin’s implementation of the safety measures which are reflected in its filing and reviewed within the DEIS would ensure public safety and the integrity of its proposed facilities. FERC also noted that Algonquin’s facilities will be designed, constructed, operated and maintained in accordance with or to exceed the applicable federal regulations which are intended to ensure adequate protection for the public and to prevent natural gas facility accidents and failures. Accordingly, FERC determined that by designing its project in accordance with the applicable standards, Algonquin’s West Roxbury Lateral Project would not result in significant increased public safety risk. FERC’s DEIS also noted that its regulations require that an applicant certify that it will design, install, inspect, test, construct, operate, replace, and maintain the facilities for which a Certificate is requested in accordance with federal safety standards and plans for maintenance and inspection. FERC also stated that natural gas transmission pipelines continue to be a safe, reliable means of energy transportation. Please also

refer to the copy of Resource Report 11 concerning reliability and safety which accompanied Algonquin's FERC application and which is attached to these responses.

The pipeline is designed, constructed and operated to last virtually forever with the proper ongoing maintenance practices. Natural gas transmission pipelines have been operating safely in New England for over 60 years.

The pipeline is built of high strength carbon steel that is coated with a corrosion resistant, non-conductive, inert material with high quality control during manufacturing. The pipe is coated with corrosion resistance coatings. During construction, each joint of pipeline is welded and each weld is x-rayed to verify its integrity. Additionally, the pipeline is hydrostatically tested at high pressure before being placed into service to ensure its structural integrity prior to being placed into service. During hydrostatic testing, the pipeline is filled with water and pressurized to at least 150 percent of the maximum allowable operating pressure. That pressure is held for a minimum of 8 hours to confirm the integrity of the pipeline. The pipeline is also cathodically protected to protect it from the effects of corrosion.

The pipeline will consist of high strength Grade X-52 steel with welded connections. The pipe will be installed within an excavation and be enveloped in an engineered backfill (e.g., compacted sand or cementitious fill (a.k.a., flowable fill)) extending a minimum of 8 inches below the pipe and a minimum of 6 inches on both sides and the top of the pipe. The engineered backfill is designed to support the pipe evenly, and protect the pipe's corrosion-protection coating.

Once the pipeline is installed at least three feet beneath the surface and the surface is restored to its pre-existing contours, Algonquin installs above-ground or surface markers to indicate the location of the buried pipeline. These markers are placed in line-of-sight intervals as the buried pipeline crosses private and public property; they are also installed at each and every road crossing. Markers are designed to enhance public safety and alert anyone planning any excavation activities of the pipeline's presence in the area. The markers contain a decal which indicates Algonquin's name and the telephone number for assistance.

The piping and associated facilities are also required to undergo quality control and testing during manufacturing and construction. Algonquin's quality assurance/quality control includes having its inspectors at the manufacturing facilities and on-site during all welding, coating, and backfill operations. All welds for the pipeline are required to be tested (non-destructively) by a third-party radiographic inspection company.

An important key to public safety is leak prevention and detection. Algonquin personnel regularly perform visual inspections of its pipeline to identify potential problems. These inspections are done on foot, by vehicle and air. Aerial inspections of the entire pipeline route are done on a regular basis. The rights-of-way are routinely viewed by vehicles at road crossings. An on-the-ground inspection is conducted annually by walking the entire pipeline route.

Government statistics cite "outside forces" as the primary cause for reportable incidents on natural gas pipelines, with "human error" in equipment usage comprising 75 percent of these events. Most of these cases involve excavating without first contacting a gas company to mark the location of the pipeline. The reference in the DEIS issued by the FERC in August to a slight increase in risk primarily involves third party damage. For this reason, Algonquin adheres to strict guidelines regulating activities within close vicinity of its facilities. For the protection of the public and the pipeline, Algonquin must approve any physical work in such vicinity. Algonquin supports third party awareness by promoting pipeline safety and public awareness. This is accomplished by community liaison meetings and mailings throughout the areas where the pipeline is located.

Algonquin is an active member and advocate of the "Dig Safe" program in Massachusetts. Through Dig Safe, Algonquin is informed of planned excavations, which allows it to monitor activities around the right-of-way to protect the pipeline. Before any type of excavation work may be done within close vicinity of its facilities, Dig Safe and Algonquin must be contacted. Algonquin will then mark the location of its facilities and will require that an inspector be present during the excavation to monitor the work. In most instances, Algonquin provides that inspection at no cost to the contractor or landowner.

Once the pipeline is in-service, Algonquin's Gas Control Center electronically monitors the operations of the pipeline. The Gas Control Center is staffed 24 hours a day, 365 days a year and uses a state of the art computerized gas monitoring system ("SCADA System") to read pressures on a continuous basis along the system every 60 seconds or less.

Safety is Algonquin's primary focus. Steel pipelines are designed, constructed and operated to avoid catastrophic events. In the course of construction and operation of the pipeline, Algonquin works closely with local communities and public safety officials through an ongoing liaison program. In the unlikely event of an emergency, Algonquin operating personnel who are headquartered in Westwood coordinate their response with the local public safety officials as noted within FERC's DEIS.

Company personnel are responsible for the pipeline in the event of an emergency. Local public safety officials (fire, police) would be responsible for protecting the public during an emergency situation and make the determination of the necessary emergency steps to take, notifying or evacuating residents if necessary. Company personnel meet with local safety officials on a regular basis in conjunction with its liaison program to ensure that the public's safety is maintained and its response activities are coordinated.

9. Where have you successfully built and maintained a pipeline of similar length and pressure in a similar environment (M&R Station so close or closer to an active quarry that is also in such a densely settled neighborhood)? Where else is there an active quarry in the middle of a major city that also has one of your 750 psi pipelines running through it? **14.** Is it possible to relocate the M&R Station to a place that is not in proximity to the quarry? **23.** Why did Spectra not consider alternative locations for this 5-mile spur that did not include a densely populated residential area and an active quarry across from the M&R Station? **24.** One speaker stated that his home will be just a few hundred feet from the proposed M&R Station. Please ask the CEO of Spectra if he would want his children living in that same proximity to the M&R Station.

- **West Roxbury Crushed Stone Quarry**

The issue of safety was initially raised by public officials, residents and local community groups in the fall of 2013. The core issue is whether Algonquin's facilities can operate safely in close proximity to an active quarry. In order to address those concerns, Algonquin commissioned a detailed engineering study by GZA GeoEnvironmental, Inc. ("GZA") to evaluate the possible impacts from the West Roxbury Crushed Stone Quarry's (the "Quarry") current and potential future blasting operations on the construction and operation of the West Roxbury Lateral pipeline and the meter and regulator station. The GZA study was completed and filed with FERC on March 31, 2014 for its review and consideration. Critically, the DEIS issued by FERC provides an in-depth analysis of the GZA study and the DEIS did not fault the conclusions within the study which are summarized below.

The GZA study took an extremely conservative approach by assuming that the Quarry was allowed to blast within five (5) feet of the sidewalk along Grove Street in West Roxbury. Such a location would place the Quarry's blasting at the closest possible point to the facilities associated with Algonquin's West Roxbury Lateral Project. In preparing its report as submitted to FERC, GZA concluded as follows:

- The current or future blasting operations at the Quarry will not affect the safe operation and integrity of Algonquin's facilities.

- Despite the conservative approach followed concerning the proximity of the Quarry's blasting, ground vibrations from future blasting at the Quarry will not damage the proposed pipeline and the pipeline had a minimum factor of safety of ten (10) to twenty (20) times its design strength.
- The blasting at the Quarry will not be disruptive or damaging to the meter and regulator station at the intersection of Grove and Centre Streets due in part to the station's design and because the meter station will be located even further away from the Quarry than the pipeline, with the impact from blasting dissipating over distance.
- The likelihood that a piece of fly-rock from the Quarry might hit and damage the meter and regulator station is calculated to be in the range of 10,000,000 to 1, and the possibility that such a direct hit might actually cause a release of gas in any amount is even less likely.

Subsequent to the preparation of the GZA report which assumed that blasting occurred within five feet of the sidewalk, State Senator Michael Rush successfully passed legislation which restricts the ability of the Quarry to blast within five hundred (500) feet of Algonquin's facilities absent state approval and a specific finding by the state that such blasting is completely safe. It is also important to recognize that blasting at the Quarry is performed under a permit issued by the Fire Department for the City of Boston which, as FERC's DEIS notes, specifies a limit on the allowable blast-induced vibration magnitude at any abutting property of 1.0 inch per second.

Algonquin would also note that two existing gas pipelines and a waterline have been operating within Grove and Centre Streets, adjacent to the Quarry, for several decades with no appreciable effect on the community's safety or the Quarry's operation.

1. If an explosion happened along any point in the five-mile pipeline, what would the blast radius be? How many residents and homes would be affected by the blast and the ensuing fires? 2. If an explosion happened at the M&R Station, what would the blast radius be? How many residents and homes would be affected by the blast and the ensuing fires?

Safety is Algonquin's top priority in the construction, operation and maintenance of its facilities. According to National Transportation Safety Board statistics, the interstate natural gas pipeline system is the safest energy delivery system in the nation. The pipeline and the meter and regulator station are designed, constructed and operated to meet or exceed the safety requirements exclusively governed by the U.S. Department of Transportation ("U.S. DOT").

It is important to note that in the Draft Environmental Impact Statement issued on August 6th, the FERC concluded that Algonquin's implementation of the safety measures which are reflected in its filing would ensure public safety and the integrity of its proposed facilities.

The U.S. DOT is responsible for establishing the requirements and oversight of the operation and maintenance of interstate natural gas pipelines. In that capacity, regional U.S. DOT representatives perform periodic inspections of Algonquin as the pipeline operator by reviewing its records, operating and maintenance procedures and facilities to ensure that Algonquin's operating practices meet or exceed U.S. DOT regulations.

A pipeline rupture or similar occurrence at the meter and regulator station is highly unlikely. In fact, the U.S. DOT design and operating criteria are developed specifically to avoid those types of events. Algonquin and the pipeline industry in general make every effort to avoid and prevent such occurrences. Algonquin works with local authorities and the Dig Safe Program to educate third parties about the necessary communications when a contractor needs to perform construction on and around the pipeline right-of-way or in the general vicinity of the meter and regulator station. Additional detail concerning the strong focus which Algonquin brings to the construction, operation and maintenance of its facilities was included within Resource Report 11 as filed with Algonquin's application at the FERC; a copy of Resource Report 11 is included as an attachment to these responses.

Algonquin has safely operated pipelines in Massachusetts and the region for over sixty years. The safe operation of the Algonquin pipeline system is due to procedures and specifications that incorporate multiple layers of safety into the design, materials procurement, construction and operation as described more fully in the *General Pipeline Safety Information* section included with these responses.

11. What materials will be used for the M&R Station? Are they explosion-proof?

The meter and regulator (“M&R”) Station will consist of a metering building, two exterior gas heaters, a regulating building, and above-ground and underground gas pipelines. The M&R Station site will be enclosed in a security fence. The two buildings will be engineered, single-level structures with minimum 4-inch thick reinforced concrete walls and a 4- to 6-inch thick reinforced concrete roof. The exterior above-ground structures, pipes, and supports will be steel construction. The buildings and heaters will be supported on concrete foundations. All sensitive M&R Station piping, instruments and components will be located inside of the reinforced concrete buildings.

3. In the event of an emergency, how long would it take Spectra and/or National Grid to turn off the gas to the line and to the M&R Station to avoid further damage and lost of life? (It took PG&E approximately 1.5 to 2 hours in the San Bruno blast.) 12. Where will the shut-off valves for the M&R Station be located? 20. An elementary school is located less than a mile away from the proposed high-pressure pipeline. Explain what precautions will be taken to protect these children in the event of a leak or explosion at the pipeline.

Remotely operated valves are installed along the pipeline to control and shut off the flow of gas. The spacing of these valves is regulated by the U.S. Department of Transportation (“U.S. DOT”). As required by U.S. DOT standards, mainline valve sites are located at specified intervals depending upon the population density. Algonquin plans to install mainline valves at the beginning of the route in Westwood and at the M&R Station in West Roxbury. A typical valve site is comprised of an area that is enclosed by a fence measuring approximately 50 feet by 50 feet surrounding an aboveground valve and piping. In addition, an additional shut-off valve will be located at the interconnection between Algonquin’s pipeline and Grid’s facilities in West Roxbury.

With the remote operating capability, our Gas Control Center can immediately begin a safe shutdown and isolation of a section of pipeline in the event of an emergency. The remotely operated valves close within 60 to 90 seconds.

As noted elsewhere, company personnel are responsible for the pipeline in the event of an emergency. Local public safety officials (i.e., fire, police) would be responsible for protecting the public, including nearby schools, during any emergency situation. Company personnel meet with local safety officials on a regular basis in conjunction with its liaison program to ensure that the public’s safety is maintained and response activities are coordinated.

As noted previously, the DEIS which FERC issued on August 6th concluded that Algonquin’s implementation of the safety measures which are reflected in its filing would ensure public safety and the integrity of its proposed facilities.

Project Need

21. Has there been a cost-benefit analysis done on the supply of gas through a new line vs. fixing the current leaks in the system? 25. In light of all the leaks in the existing gas pipes, can the added pressure from the high-pressure line be handled safely? 26. Is this gas going into a liquefied station? Can Spectra promise us it will not be LNG? 27. Is the sole purpose of the West Roxbury Lateral at full capacity to deliver 30,000 decatherms to National Grid or is Spectra anticipating other uses? 28. Is there any reason Spectra could not bring the extra gas in through a lower pressure line? 29. How many communities will be served by the 750 psi line coming into West Roxbury?

The West Roxbury Lateral Project (the “Project”) is being developed by Algonquin in order to provide additional pipeline capacity to National Grid (“Grid”) so that Grid can meet its immediate and planned load growth demands within the West Roxbury area and the City of Boston. In fact, the agreement between Algonquin and Grid which forms the basis for Algonquin’s Project was subject to review and approval by the Massachusetts Department of Public Utilities (the “Department”). Based on a filing made by Grid with the Department in September 2013, the Department found that the contract between Algonquin and Grid was in the public interest and was necessary to enable Grid to meet its forecasted demand for its customers in the West Roxbury/Boston area. Both the Attorney General and the Massachusetts Department of Energy Resources had recommended approval of the contract between Algonquin and Grid as necessary for Grid to be able to meet its forecasted demand.

In its filing with the Department, Grid noted that Algonquin’s Project would be a dedicated lateral to serve Grid’s distribution system. Grid maintained that the primary reasons why the Project would be beneficial and was needed for Grid’s distribution system and its customers was to improve system reliability, to facilitate upgrades to the local distribution system in West Roxbury, and to support long-term growth. Specifically, Grid noted the following:

- Ninety-five percent of the homes and businesses in West Roxbury use natural gas and Algonquin's West Roxbury Lateral will provide significant enhancements to the reliability of supply into this portion of the Grid service territory.
- Its gas system could be modernized and replaced with higher pressure (60 psig) plastic gas mains, which would be more efficient and cost effective than replacing the existing low pressure system. That modernization program has already been initiated by Grid in anticipation of the additional supply to be provided by the Project.
- New gas customers are driving the need for additional supply even with ongoing energy efficiency gains. For example, Grid estimates that there could be nearly 146,000 potential new customers in the Boston area that could be supported by the completion of Algonquin's Project, with a corresponding benefit for the entire City due to cleaner air which will result from the lowering of greenhouse gas emissions.

The West Roxbury Lateral also helps Grid resolve gas distribution system reliability issues in West Roxbury. For example, Grid has estimated that 15 percent of peak day supplies are delivered from its Commercial Point facility in Dorchester. Absent the West Roxbury Lateral being in-service, an outage at that facility would result in wide spread system outages. Similarly, Grid has noted that 25 percent of its peak day supplies are delivered into Boston on Algonquin's J-lateral. In the event of an outage on the J-lateral on a cold day (i.e., 15 degrees), Grid has estimated that tens of thousands of its customers would lose service without the West Roxbury Lateral.

There is no intent to use the gas supplied through the Project for LNG production or export. The DEIS issued by FERC on August 6th addressed this issue and concluded that the Project is not designed for the export of natural gas.

Alternatives Discussion

14. Is it possible to relocate the M&R Station to a place that is not in proximity to the quarry? 19. Explain why this route for the West Roxbury Lateral is the best route available for this incoming pipeline. 23. Why did Spectra not consider alternative locations for this 5-mile spur that did not include a densely populated residential area and an active quarry across from the M&R Station?

National Grid (“Grid”) requested a new delivery point located in the West Roxbury section of the City of Boston to connect with, enhance and reinforce system reliability during outage situations and support long-term growth in the Boston region. The site for the new delivery point cannot be reached by the existing Algonquin pipeline system. As a result, it is necessary to install approximately 4.9 miles of new lateral pipeline and a new meter and regulator (“M&R”) Station to provide Grid with the service it has requested.

Algonquin initially identified another route for the West Roxbury Lateral which is identified in its FERC filing as the West Roxbury Lateral Alternative. The West Roxbury Lateral Alternative route deviated from the currently proposed route for the West Roxbury Lateral on Washington Street in the Town of Dedham. The alternate route followed Incinerator Road off of Washington Street and existing parking lots and driveways for a variety of commercial properties for approximately 0.7 miles before paralleling Providence Highway and crossing into West Roxbury. The alternative route then went cross country and intersected with Belle Avenue. At this point, the route followed various residential roadways including Belle Avenue, Baker Street, Spring Street and Alaric Street before intersecting with the proposed alignment.

Significant concern was raised at that time about the alternative route primarily because of its proximity to residential structures and the surrounding neighborhoods, particularly in the vicinity of Belle Avenue. For example, the alternative alignment would have crossed through the backyards of several residential homes, impacted a number of residential streets, and caused significant disruption to the surrounding neighborhood. Construction in these areas would also have required complete closure of these residential streets. In addition, if this alternative route

were to be used, the required M&R Station would have to be located on private property at the intersection of Centre Street and Alaric Street, which does not present any favorable land options for locating the M&R Station. For example, one option would have required the purchase and demolition of a residential property at the corner of Centre and Alaric Streets.

In addition, after detailed engineering review, it was determined that finding a location for the proposed M&R Station along the West Roxbury Lateral Alternative would have resulted in greater impacts due to the presence of residential homes, school athletic facilities and traffic congestion as compared to the proposed M&R Station site at the intersection of Grove and Centre Streets on the preferred route. The proposed M&R Station site is located at the intersection of Centre Street and Grove Street on a 4.11-acre undeveloped property. This provides a more feasible option for siting the new M&R Station in West Roxbury. In addition, this site was superior in terms of allowing the Project to help screen the M&R Station from view due to the existing growth on that parcel.

A detailed analysis of the West Roxbury Lateral Alternative Route was performed by the Federal Energy Regulatory Commission in conjunction with its preparation of its DEIS. Based on that review, the DEIS concluded that the alternative route was not preferable to or otherwise provided a significant advantage over the proposed route. Moreover, the DEIS also discussed the proposed location of the M&R Station in West Roxbury and compared it with the possible location at the intersection of Centre and Alaric Streets. The DEIS determined that the alternative location was not technically feasible or environmentally preferable when compared to the proposed site off of Grove Street. The DEIS also concluded that no other viable alternative sites had been identified for the M&R Station in West Roxbury.

In recent weeks, the Project has also been asked about the possibility of Algonquin's West Roxbury Lateral Project tying-in to the Grid system by traveling up the VFW Parkway and connecting on Rivermoor Street. Basically, a tie-in at Rivermoor Street would not support Grid's intermediate pressure system as the pipe infrastructure at Rivermoor is insufficient to provide the needed takeaway capacity or pressure support which Grid requires in order to serve its customers. In fact, an additional pipeline would still need to be installed from Rivermoor Street to the current interconnection with Grid near Temple and Centre Streets in order to

achieve the needed benefits. Thus, instead of one pipeline, the project would have two pipelines running through West Roxbury, and the overall length in Boston would increase by close to two miles. In contrast, the West Roxbury Lateral as presently configured meets Grid's requirements by interconnecting to Grid at Spring and Centre Streets.

In summary, the DEIS issued by FERC conducted an exhaustive review of alternative routes and concluded that none offered significant environmental advantages over the alignment proposed by the Project.

Insurance

10. If my neighbors and I lose our homes and/or our loved ones due to an explosion or any other issue anywhere along the pipeline or at the M&R Station, what kind of compensation will we receive? What does your insurance policy for this pipeline and M&R Station look like? 22. Are there provisions in place contractually when/if an explosion occurs on the West Roxbury Lateral?

Algonquin has established an exemplary safety record in the operation of its pipeline system. In the unlikely event that an individual's property is damaged due to an incident, Algonquin would assume financial responsibility to keep the landowner whole and has adequate insurance available to cover such liabilities. After a full investigation of the incident, Algonquin may seek reimbursement from the party responsible for causing the incident under state law, as an insurance company would do in the event of an accident.

Algonquin will not be providing liability insurance coverage to each landowner along the proposed pipeline corridor. The pipeline will be designed, constructed and maintained in a very safe manner as governed by U.S. DOT. Algonquin will assume the initial financial responsibility to pay for damage to adjacent properties in the unlikely event there is a serious accident. Moreover, Algonquin will carry the appropriate amounts and types of insurance for a pipeline company consistent with similar companies in this industry.

Truck Traffic Considerations

15. Spectra has indicated (via Ray Porfilio at Community Meeting) that there will be jersey or other protective barriers around the M&R Station. Does Spectra have evidence to provide that shows that these barriers can and will stop large trucks barreling down that road? 18. Has Spectra done an impact study due to the increased truck traffic (from 150 now to 300 proposed, one truck every 7.5 minutes)?

The issue of a vehicle losing control and potentially crossing into the parcel which will house the meter and regulator station was raised by the community in recent weeks. In response to that concern, Algonquin has worked with its design consultant and the decision has been made to add a wood highway guard rail barrier or similar structure on the parcel at the corner of Grove and Centre Streets in order to prevent such an occurrence.

Pipe stresses from surface loads are calculated using the Cornell PC Pisces method or the Marston-Boussinesq-Newmark method (or CEPA derivative). These methods are proven (in theory and in practice) to be accurate, and are accepted by the industry as a means of calculating stress on a gas pipeline. The main areas of interest that these methods focus on are: what loads will the pipe witness, what effect the soil has on the loading scenario, and what the pipe can handle in the first place. Consistent with other Algonquin pipelines that are located in paved streets at locations along its 1,100 mile system, the stress levels are well within the engineered design limits of the pipe.

Air Emissions

8. What kind of emissions will be released from the M&R Station, at what frequency and at what levels? What studies have been done to determine the health risks of such emissions? How will Spectra monitor these levels to ensure the safety of the residents in the area?

Algonquin's pipeline system is designed to be a closed system and result in minimal fugitive releases of natural gas. Through proper operation and maintenance, emissions are minimal in terms of both the total quantity of gas transported through the system and the effect these releases would have on air quality. All gas releases for maintenance operations is minimized to small sections of pipe. In addition, Algonquin conducts annual leak detection inspections at all of its pipeline facilities.

The increased use of natural gas supplied by the West Roxbury Lateral is intended to result in a net reduction of air emissions within the City of Boston. Absent this additional supply of natural gas into West Roxbury, oil heat customers will be denied an opportunity to convert to natural gas for heating purposes and instead will need to continue to rely heavily on No. 2 distillate oil as an alternative.

Spectra Energy Ad Mailing on West Roxbury Lateral Pipeline Tells Only Part of the Story

On December 22 and 23, Spectra Energy blanketed West Roxbury with a mailed advertising piece that touts the benefits of the company's proposal to build a high-pressure natural-gas pipeline called the West Roxbury Lateral (WRL) into the Grove neighborhood. The advertisement neither tells the whole story of this proposal nor speaks honestly about many of the facts. It is our intent here to provide a fuller picture of the West Roxbury Lateral and fill in the numerous gaps left out of the Spectra Energy ad mailer which are crucial to residents' understanding the value of the pipeline as well as potential safety and health issues surrounding its current proposed location. The quotes here are taken directly from the Spectra Energy ad mailer. Our rebuttal, written by the Steering Committee of West Roxbury Saves Energy (WRSE), offers fuller facts and draws attention to unanswered questions. The WRSE rebuttal has been endorsed by Rep. Ed Copping and City Councilors Matt O'Malley and Michelle Wu.

For a factual summary of the WRL and a timeline and other information, visit WestRoxburySavesEnergy.org.

In the ad mailer, Spectra Energy says:

"The WRL is a new natural gas pipeline proposed by Algonquin Gas Transmission..."

WRSE research shows the full facts are:

The WRL is part of a **high-pressure interstate** gas transmission system proposed to run through **densely populated neighborhoods** in Dedham and West Roxbury.

In the ad mailer, Spectra Energy says:

"[The WRL] will be placed under portions of Washington, Grove, and Centre Streets and will not affect private land."

WRSE research shows the full facts are:

Portions of the WRL require easements on private land, such as Meditech in Westwood; other portions run under public land, such as Gonzales Field in Dedham. The Town of Dedham is actively opposing the WRL. The federal Environmental Impact Statement lists all "residences and other structures within 50 feet" of the proposed work (of which the WRL is only a small part): **more than 65% of properties listed for the entire project are associated with the 5 miles of the West Roxbury Lateral.**

In the ad mailer, Spectra Energy says:

"Today, 95 percent of the homes and businesses in West Roxbury rely on natural gas from [National] Grid. In fact, there are 146,000 homes in the Boston area that can convert to clean natural gas if the WRL is built and provides additional supply."

WRSE research shows the full facts are:

There are **fewer than 10,000 homes in West Roxbury** in total (many of which already have gas). So the proposed interstate gas transmission line is sized to supply **nearly 15 times the total number of homes in West Roxbury?! Natural gas is "clean" only relative to coal and oil; natural gas remains a fossil fuel that produces greenhouse gases and is not renewable.**

In the ad mailer, Spectra Energy says:

"The WRL will also help address the cost of heating homes by supplying more natural gas to the area..."

WRSE research shows the full facts are:

We are **not aware of any cost-management commitments to consumers** by either Spectra Energy or National Grid related to the proposed project.

In the ad mailer, Spectra Energy says:

"It should also be noted that two existing gas pipelines...have been operating within Grove and Centre Streets..."

WRSE research shows the full facts are:

The existing pipelines are part of the low-pressure, local distribution network that typically run at 22 psi, **NOT high-pressure pipes such as those proposed by Spectra Energy that will run at 750 psi.**

In the ad mailer, Spectra Energy says:

"Elsewhere around the country, natural gas pipelines have been built and safely operated near quarries without incident."

WRSE research shows the full facts are:

When asked on multiple occasions for locations of **comparable situations**—adjacent to active quarries in the midst of residential neighborhoods—Spectra Energy has been **unwilling or unable to provide a single example** of another high-pressure gas pipeline in a densely populated residential area adjacent to an active quarry.

In addition to providing the misleading statements above, Spectra Energy omitted from their pipeline campaign ad mailer many crucial facts and steps. These include:

—Spectra Energy is a multi-billion-dollar company based in Houston, Texas, that profits from fossil fuels. The ad mailer indicates a Dedham address, but make no mistake: Spectra Energy is not a local company.

—Community members have followed all procedures allowed by the federal government to raise questions, many of which Spectra Energy has failed to answer. Here are just two of the many questions raised: What are the safety risks, especially with a Metering & Regulating Station adjacent to blasting in the quarry? Why weren't other locations seriously considered?

—When Congressman Lynch in November requested that Spectra Energy propose alternate routes not near the quarry, Spectra Energy offered no suggestions.

—Community members have repeatedly over the past three months asked for an independent health and safety review to address concerns about the location of the WRL. No such review has been performed to date.

—The Spectra Energy proposal has no mitigation measures for business disruption along the construction route, no payments to neighbors whose homes will lose value, and no information about constant noise and pollution emissions during regular, "safe" operation.

—The WRL is a 5-mile spur off the Algonquin interstate pipeline traveling through Westwood and Dedham, ending in West Roxbury. Dedham is fighting the pipeline vigorously.

The ad mailer fails to make clear that the proposed high-pressure pipeline is nothing like the low-pressure lines that bring gas to our homes and that the Metering & Regulating Station proposed to be built across the street from the active, blasting quarry is a quasi-industrial building and enterprise, not a quiet residential neighbor.

We encourage you not to take the information offered in the Spectra Energy advertising mailer at face value or as the full story. Consider the safety and health implications of a high-pressure gas pipeline and Metering & Regulating Station being proposed for a heavily residential area near an active quarry in our neighborhood. Learn more at WestRoxburySavesEnergy.org and then call toll free at 866-871-0356 and ask Spectra Energy to answer YOUR questions about the West Roxbury Lateral.

Document Content(s)

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