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August 16, 2018

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

Commissioner Basil Seggos
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Commissioner Howard A. Zucker
New York State Department of Health
Corning Tower
Empire State Plaza
Albany, New York 12237

Commissioner John Rhodes
New York State Public Service Commission
Empire State Plaza
Agency Building 3
Albany, NY 12223

Commissioner Roger Parrino
New York State Division of Homeland Security and Emergency Service
1220 Campus Access Road #710
Albany, New York 12206

Dear Governor Cuomo and Commissioners Seggos, Zucker, Rhodes and Parrino

This letter is in response to the Enbridge letter to the Federal Energy Regulatory Commission (FERC) dated August 2, 2018 and your release of the Executive Summary of the Algonquin Incremental Market Pipeline Risk Analysis Report and your accompanying letter to FERC on June 22, 2018. Please be advised that I submitted my declaration on this same topic to the Chairman of FERC regarding this matter on July 20, 2018. The attached declaration may be found in the FERC eLibrary.

I reviewed New York State's undated Executive Summary and noted it did not contain any attribution to a person, organization or firm. As a result, it is not clear whether it was prepared by the State of New York, HDR Engineering or by some other entity.

I was pleased to note that the Department of Public Service (DPS) finally acknowledges its responsibility and clearly states: "*DPS, which is delegated by the federal government to ensure compliance with federal gas pipeline safety standards*".

The purpose of this letter is to inform New York State of what appears to be outright misleading information and significant omissions and distortions in the Enbridge letter and their false statements claiming that the Algonquin Incremental Market (AIM) pipeline project was "*designed and constructed and is operating and maintained to meet or exceed federal safety standards and regulations.*" It is my strongest opinion, based on my extensive experience and communications with PHMSA, the NRC and FERC, this materially false statement has misled the public, local officials, the State, the NRC and possibly FERC into a false sense of security.

Enbridge's formal statement in its letter asserts that the AIM project is in total compliance with all regulations of 49 CFR 192 and 49 U.S.C. 60101 et seq. Compliance with these federal regulations stipulates inclusion of all documents incorporated by reference as required by 49 CFR 192.7, most importantly ASME B 31.8(s) for performing a risk assessment and API 1162 for public awareness programs and education. These are not guidance recommendations but documents strictly required of the pipeline operator by federal laws. Enbridge has not demonstrated compliance with these regulations.

There appears to be significant confusion about the "risk or safety analysis". It is neither the responsibility of the Nuclear Regulatory Commission (NRC), FERC, Pipeline Hazardous Materials Safety Administration (PHMSA),

Entergy, New York State nor of the members of the public and their consultants to perform a risk analysis. The NRC, however, must review the required risk analysis by Enbridge to assure the continued safe operation of the Indian Point facility. My professional opinion is that Spectra/Enbridge never performed a risk analysis as required by 49 CFR 192.917 and failed to comply with the requirements for first responder training and public awareness education as required by 49 CFR 192.615 and 616. The failure of Enbridge to comply with these regulations has led to great confusion among the various parties, agencies and the public and places the public at extreme risk.

I firmly maintain that FERC, PHMSA, NRC, the State of New York and Spectra/Enbridge have failed to fulfill their statutory responsibilities for safety. FERC's approval of the AIM project was based on the false statements that a proper risk assessment was conducted. Furthermore, the NRC failed to properly evaluate the potential risks to Indian Point and relied solely on Entergy's contention of a 3-minute valve closure time. The mention of a 3-minute valve closure time first appeared in Entergy's letter to the NRC on August 21, 2014 and originated from Entergy's contractor, the Risk Research Group in its risk analysis report dated August 19, 2014.

- **Federal Energy Regulatory Commission**

One of the primary missions of FERC is to review applications for construction and operation of interstate natural gas pipelines under authority of Section 7 of the Natural Gas Act. "*FERC review ensures that applicants certify that they will comply with Department of Transportation safety standards.*" FERC is granted full authority to review such an application and analyze any potential safety risk.

FERC may have certified compliance with "Department of Transportation safety standards" but has grossly failed any attempt to verify compliance of the pipeline operator by PHMSA in order to permit the construction and operation of the pipeline.

- **Pipeline Hazardous Materials Safety Administration**

PHMSA knowingly failed to require Spectra/Entergy to comply with

its very clear federal regulations, primarily those regulations related to risk assessments, first responder training and public awareness programs. PHMSA, in a documented phone conversation with members of the public, pronounced that a risk assessment would be provided within one year of the Algonquin Incremental Market gas transmission pipeline operation. There is no evidence of the existence of the risk assessment that was assured by PHMSA.

- **Enbridge**

Enbridge's statement that it "*meets or exceeds federal safety standards and regulations*" is misleading and may be construed as a materially false statement to the State of New York. I have personally verified, through the FOIA process and documented conversations with Karen Gentile of PHMSA, that neither Enbridge nor Spectra have submitted a risk assessment to either PHMSA or FERC as required by federal law and they have not trained first responders at Indian Point. There are no programs in place to alert the general public of the potential risks and evacuations in the event of a pipeline rupture.

Enbridge stated in its letter that the 3-minute valve closure time from a pipeline event is meaningless because the NRC's analysis assumes gas continues to be expelled from a gas transmission pipeline break for one hour. Yet, Entergy's letter to the NRC¹ on August 21, 2014 refers to the 3-minute valve closure time following the risk analysis report of August 19, 2014 by Entergy's contractor, the Risk Research Group in which the same 3-minute closure time was used. Ultimately, this faulty analysis was accepted and submitted by the NRC to FERC and served as the basis for FERC's approval of the AIM project in 2015.

Enbridge stated in its letter to FERC: “

¹ This analysis was enclosed with Entergy's letter (NL-14-106) to the NRC Indian Point Nuclear Generating Unit Nos. 2 & 3 Docket Nos. 50-247 and 50-286 License Nos. DPR-26 and DPR-64. A copy of this letter was obtained under FOIA. This analysis is available on the NRC's website.

“In conjunction with the emergency response procedures, Algonquin conducts periodic liaison meetings with municipal emergency response officials across this pipeline system, including municipalities in the vicinity of Indian Point.”

I have personally discussed this issue with first responders in the vicinity of Indian Point and none have ever received this required training. This includes police, fire and municipal officials in many of the surrounding communities. Enbridge has never conducted any meetings with Entergy to discuss emergency response within the security boundaries of Indian Point should a pipeline event occur within these boundaries.

Enbridge claims in its letter that it complies with 49 CFR 192.615 & 616 for public awareness and emergency planning. However, there has been no public awareness training conducted as per the requirements of API RP 1162 and no emergency planning training conducted for first responders. Entergy controls all access to significant portions of the pipeline and does **not have any procedures** in place to respond to a gas leak, fire or explosion from unignited gas. In fact, the Indian Point operations personnel do not even have any emergency contact number to report a problem to Enbridge. Enbridge is responsible for the regulatory compliance of their pipelines; not the NRC, FERC or the D.C. Circuit.

Furthermore, Enbridge also stated in its letter: *“Based on the overall analysis undertaken to date by the NRC, FERC, D.C. Circuit and Algonquin...”* there will not be any damage to Indian Point. None of these entities have conducted a risk analysis as required and specified by 49 CFR 192.917, therefore, this statement is misleading and meaningless. Enbridge is the organization required to produce this risk assessment, yet continues to fail to comply with this clear regulatory requirement.

Once again, these statements appear to be intended to mislead the public, the State and FERC.

- **Nuclear Regulatory Commission**

The NRC has been unable to provide any official signed or dated safety analysis in spite of numerous requests and 10 CFR 2.206 petitions and FOIA requests.

The only formal analysis accepted by any federal or state agency is the analysis conducted by Entergy and submitted to the NRC on August 21, 2014. This analysis was accepted by the NRC despite the fact that it contains false and misleading information. Subsequently, the NRC submitted this flawed analysis to FERC, serving as justification for the approval of the AIM project in 2015.

The NRC has never conducted any formal risk analysis but accepted Entergy's analysis containing false and inaccurate data².

- **The State of New York**

DPS is delegated by the federal government to ensure compliance with federal gas pipeline safety standards. This delegation of authority is clearly reflected in the "Standard Inspection Report of a Gas Transmission Pipeline"³ and signed by a representative of the DPS. This report recognizes the importance of review of compliance with 49 CFR 192.615, 616, and 917. This DPS document infers satisfactory Emergency plans, Public Awareness programs consistent with API 1162 and a risk assessment. Although these plans, programs and required risk assessment do not exist, the DPS failed to note any shortcomings in these areas.

² Both the three-minute isolation time and the probability are inconsistent with PHMSA and NTSB data.

³ This document was obtained under FOIA and it is unclear if this is a NYS DPS or PHMSA document.

The Enbridge letter to FERC also stated that Algonquin was not “*consulted in the development of the report, despite the fact that the study reportedly evaluates certain of Algonquin's pipelines located near Indian Point.*” Without information only available from Algonquin, it would not be possible to conduct a risk analysis meeting the requirements of ASME B31.8(s).

The DPS is required to ensure compliance with federal gas pipeline safety standards and regulations; however, it has neglected to comply with the requirements for a risk assessment and other regulations within 49 CFR 192 and has not insisted on compliance by the pipeline operator in order to continue the operation of the pipeline.

Although I possess the necessary CEII security clearances, the State has failed to provide information requested by FOIL for me to review the risk assessment conducted for the State of New York.

Three-Minute Valve Closure Time

The reference to a 3-minute valve closure time initially appeared in Entergy's letter to the NRC on August 21, 2014 and originated from Entergy's contractor, the Risk Research Group in its risk analysis report dated August 19, 2014.

Enbridge's letter to FERC clearly states:

“,,,the Court specifically noted that NRC's analysis in fact assumed continuous gas flow for one hour.”

The basis for this “one-hour” statement is unknown. There is only one document, approved by the NRC or any other Federal or State agency and that is the 10 CFR 50.59 analyses by Entergy. No official contradictory analysis has been provided by PHMSA, Spectra/Enbridge, FERC, the NRC, or the State of New York refuting this 3-minute closure time. The basis for the D. C. Court statement is not referenced in the Enbridge letter to FERC.

The following are excerpts from various sections of the Indian Point 50.59 evaluation involving the 3-minute isolation time. This is the only formal risk analysis approved by the NRC.

"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."

"This hazards analysis considers the effects of the gas pipeline rupture to involve the approximately 3 miles of pipeline between isolation valves and considers the event to be terminated by manual action within 3 minutes after any pipeline rupture event by closing the closest isolation valves and limiting the event to the gas between these valves."

"In modeling releases and their consequences, we assume that the contents of a 3 mile length of gas pipeline are released at a pressure of 850psig (the MAOP of the 42" pipeline), that valves isolating this length of pipeline will be closed within 3 minutes of a major release and that the interior of this pipeline is smooth."

"After valve closure, full bore release from the pipeline will persist for another 2 to 3 minutes. The release following guillotine rupture will therefore be - 5 to 6 minutes duration."

"Based on an average release rate of 1877 kg/s for a 360-second period. This rate comprises the release of 376,000 kg in the first minute (from ALOHA), a release of 200,000 kg in the next two minutes (accounting for the pressure drop) and 100,000 kg after valve closure. This last will take an additional 3 minutes after the valves are closed (from ALOHA)."

Taking the total flow and flow rate from the above NRC approved analysis and employing the equations provided in the NRC's Regulatory Guide 1.91 results in a damage radius exceeding 5000 feet. Using these same numbers and inserting them into the ALOHA program provides similar results; however ALOHA is for specific use by first responders and is not to be used as an analytical tool.

It is imperative that the State of New York persists in its demand of FERC to demonstrate the three-minute valve closure time in a pipeline event. If this can not be demonstrated, there is no justification for the continued operation of the pipelines in the vicinity of Indian Point.

I respectfully request a meeting with the involved New York State agency officials to discuss this urgent matter. This meeting could be moderated by one of New York State's elected representatives. This would be a non-public meeting.

I will provide all pertinent documents referenced above if requested by the State agencies. I have no objections to representatives of Enbridge and your consultant HDR Engineering, as well as officials from Federal agencies participating in this meeting.

In closing, I request the prompt review of my enclosed declaration of July 20, 2018 and the implementation of emergency measures by the State, without further delay, to demand full compliance by Enbridge with the federal regulations discussed in these documents and immediate attention to address the incorrect analytical assumption initially provided by Entergy of a 3-minute valve closure time.

Millions of New Yorkers, countless businesses and vast populations along the East coast are at serious risk of catastrophic radioactive and economic harm posed by a potential Algonquin pipeline rupture at the Indian Point nuclear power facility. The total failure of the above named federal agencies in ensuring compliance with federal laws taken together with the unresolved questions and concerns raised in your own letter to FERC call into question the justification for the continued operation of the Algonquin pipelines at Indian Point until full resolution of these issues can be reached.

It is my professional opinion that these issues can and should be resolved no later than the end of September 2018.

Sincerely,



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cc: Howard Elliott, Administrator,
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