

**From:** [Dipaolo, Eugene](mailto:Dipaolo, Eugene)  
**To:** [vaughey@aol.com](mailto:vaughey@aol.com)  
**Subject:** Spectra/Algonquin Gas Pipeline  
**Date:** Wednesday, November 23, 2016 10:47:40 AM

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Dear Mr. Vaughey,

I am writing in response to your October 26, 2016, email to Brian Haagensen, in which you requested that the NRC should immediately look into the potential safety impacts that could result from changes in the operating conditions of the existing gas pipelines at Indian Point. Specifically, on October 18, 2016, Spectra submitted a request to the Federal Energy Regulatory Commission to allow the Algonquin gas transmission pipeline (AIM Project) be placed in service using the existing Hudson River pipeline crossings (two 24" and one 30" diameter lines). You expressed concern that the interconnection of the 42" line (rated at 850 psig maximum allowable operating pressure (MAOP)) with the 30" line (rated at 750 psig MAOP) represents a change in operating characteristics that may present a safety concern at Indian Point. Additionally, you expressed concern with the risk analysis and Updated Final Safety Analysis Report of Indian Point given the proposed change in operating conditions.

NRC's regulations require that licensees of nuclear power plants evaluate external hazards near their plant. Title 10 of the Code of Federal Regulations (10 CFR) Part 50.59, "Changes, Tests and Experiments," allow licensees to make changes to the facility as described in the Updated Final Safety Analysis Report without obtaining a license amendment pursuant to Sec. 50.90 only if the change (or hazard) does not meet the specific criteria in paragraph (c)(2), which essentially ensure that the changes do not result in a more than minimal increase in risk. The licensee for Indian Point, Entergy Nuclear Operations, Inc. (Entergy), prepared a hazard analysis (50.59 safety evaluation) of the proposed AIM natural gas pipeline. The NRC staff thoroughly reviewed Entergy's safety evaluation, and confirmed the results of Entergy's hazard analysis. In addition to Entergy's analysis, the NRC staff also independently analyzed the effect of a possible natural gas pipeline rupture and subsequent explosion and fire on the Indian Point facility. The assumptions and methodology used in the analysis results in projected accident damage levels that are more conservative than the realistic expected damage levels. The NRC concluded that a fire or explosion of the pipelines would not compromise the safety of the plant or prevent a safe shutdown of the Indian Point reactors. Additionally, the analysis remains bounding for any increase in expected accident consequences that could occur due to the increase in gas flow rates associated with placing the new pipeline in service while using the existing pipelines under the Hudson River.

It should be noted that there are many levels of overpressure protection employed in gas pipelines. In the unlikely event of overpressure in the pipeline, precautionary alarms are initiated well before the MAOP is exceeded, which alert operators to take action, if necessary. These operators are trained to take action to reduce pressure during abnormal conditions. Automated control systems for the compressors are set to ensure the discharge pressure does not exceed the MAOP of any section of pipe in the system. Automatic shutdown systems are also in place in the unlikely event if the pipeline pressure were to continue to climb above the MAOP. Additionally, relief valves are part of the strategy as a means of overpressure protection. All these safety features, along with Spectra's intention to operate the pipeline at a lower pressure within the MAOP of the

pipeline, help ensure the MAOP is never exceeded so that a pipeline rupture is avoided.

The design and construction of pipelines is performed in accordance with the applicable regulations found in Title 49 of the Code of Federal Regulations, administered by the Pipeline and Hazardous Materials Safety Administration (PHMSA) within the Department of Transportation (DOT). The NRC does not perform reviews of proposed pipelines, and does not impose NRC regulations on the design, operation, or construction of pipelines. In summary, the current proposal by Spectra does not change the NRC's assessment; in that, an extremely unlikely fire or explosion of the pipeline would not compromise the safety of Indian Point or prevent a safe shutdown of the Indian Point reactors.

Thank you for contacting the NRC to discuss your safety concerns. We appreciate and share your interest in the safety of the Indian Point nuclear power plants.

Sincerely,

Gene DiPaolo  
Chief (Acting)  
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