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# NEW YORK STATE LEGISLATURE

August 4, 2015

Honorable Stephen G. Burns
Chairman
Nuclear Regulatory Committee
Washington, DC 20555

Dear Chairman:

On July 15, 2015 we attended the public listening session which accompanied the NRC's Petition Review Board phone call with Paul Blanch who petitioned the NRC regarding the Spectra AIM Pipeline and concerns relating to its proximity to the Indian Point Energy Center (IPEC). We continue to be concerned that the safety of this project has not been properly evaluated.

We have repeatedly called for an independent risk assessment, and now call for that assessment to include a transient risk analysis, which has not been undertaken. A gas pipeline expert who has been hired by the Town of Cortlandt, NY has pointed out the need for such an assessment to fully understand the nature of a rupture and its potential impact on the power plant.

As you know, Indian Point Energy Center (IPEC) is within 50 miles of New York City. Any threat to the plant's safety could have catastrophic consequences for this region. An independent risk assessment, including a transient risk analysis (see attached description of such an analysis prepared by Rick Kuprewicz, gas line expert), must be undertaken before the path of this pipeline is finalized and before any construction or pre-construction takes place in the vicinity of IPEC. We urge you to call on the National Academy of Sciences to prepare a full, comprehensive study or any other independent agency with expertise in gas pipeline analysis. We also urge you to ask FERC to stop work on this project until an independent assessment is complete.

Sincerely,

Sandy Galef
Member of Assembly
95th District

David Buchwald
Member of Assembly
93rd District

cc: FERC Chairman Norman C. Bay
NRC Director, Michelle G. Evans
Douglas Pickett, NRC Senior Project Manager, Indian Point Nuclear Generating Units Nos. 2 & 3
U.S. Senator Charles Schumer
U.S. Senator Kirsten Gillibrand
Congresswoman Nita Lowey
Congressman Sean Patrick Maloney
NYS DEC Acting Commissioner Marc Gerstman
NYS Attorney General Eric Schneiderman
Westchester County Legislator Catherine Borgia
Westchester County Legislator John Testa
Town of Cortlandt Supervisor Linda Puglisi
Village of Buchanan Mayor Theresa Knickerbocker

Attachment

Excerpted from an email dated 7/17/15 from Richard Kuprewicz:

"By transient risk analysis I mean a risk analysis that incorporates the true transient nature of a pipeline rupture capturing the extremely high and change in gas rate of release with time that reflects the tremendous extremes of a gas transmission pipeline rupture, especially on a 42-inch high pressure pipeline. Given the past attempts to use models that don't reflect the release change with time science and that tend to average the numbers down I would advise the following, especially given the lack of clarity of the Exhibit G's and G2s for this project to FERC for the Cortlandt segment that can be used to develop a simple schematic. These Exhibits are the soul of a FERC determination one would think, and the ones I have seen (they are CEII protected) were very "sloppy" given that they should have been heavily vetted by the applicant before going to FERC, which raises a question as to how did FERC do any analysis of project claims.

A Transient Risk Analysis should include:

1. A clear simple flow schematic capturing the 42-inch system between compressor stations for the pipe segment spanning the Nuke facilities, and include the mileage of pipe along the segment from the compressor stations, the pipe diameter and thickness, the pipe friction factor (affects rate of mass release with time), the location of mainline valves and the valve actuation if any of these mainline valves, the controlling scheme of the upstream and downstream compressor stations and the approximate mileage at the point near the Nuke plant where the case will assume rupture has occurred.

2. From the above schematic an engineer familiar with transient rupture calculations for compressible natural gas flow can then model or calculate the mass release change with time from the designated point of rupture for the schematic system clearly stating key assumptions leveraging to the calculation effort (such as pressure at time of rupture, control logic of the upstream compressor station, pipe segment lengths, initial gas flow rate before rupture, etc.) This is no small feat as the gas release rates out of rupture take a quantum rate increase as the "system curves" for the pipeline segments (there will be two following rupture) are changed considerably at point of rupture.

3. Results of the above mass release calculation are usually plotted as a series of total mass release curves with time that help demonstrate "a fingerprint" for the case that will quickly allow an experienced analyst familiar with pipeline rupture to see if case assumptions are realistic (such as rupture recognition time via SCADA and valve closure time, and pipe segment blowdown times. All of these affect the mass release cases, thus the transient part.

4. Lastly, a time to ignition/detonation is estimated for several different plot curves to demonstrate a sensitivity case for possible blast and usually more importantly heat fluxes to gauge impact to sensitive nuke facilities that play a part in bringing the plant down safely and keep it in a safe condition (Paul's storage tanks question needs a clear resolution yes or no on containing hydrocarbon for example). Not all gas pipeline ruptures ignite or detonate, but when they do, damage is increased considerably so a truly conservative case for the nuke risk is going to have a fairly quick detonation/ignition time for controlling case (something like 30 seconds or less).

Sorry to be so techie but it just isn't that complicated to lay out the steps, though the calculations and process can be quite involved, but this is a nuke plant. Some in the industry know what I am talking about but their voices can be drowned out given the time value of money on projects that can bring many billions of dollars in profit where delay by proper analysis can really slow things down.

Others can lay out the transient calculations. None of the above rises to the level of being kept secret I think as it is fairly public so such secrecy claims as you have figured out, are apparently driven by another agenda. The key are the case steps as above. Lastly the analysis may demonstrate that the 42 inch needs to be moved away from the nuke plant so others may need to be prepared for a gas pipeline reroute away from the plant as a possibility.

Take care."

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