

## **MEMO: URGENT NATIONAL SECURITY AND SAFETY ALERT REGARDING IMMINENT THREAT FROM SPECTRA AIM PIPELINE AT INDIAN POINT NUCLEAR POWER PLANT**

**The Federal Energy Regulatory Commission's (FERC) approval of the siting of the Spectra Algonquin Incremental Market (AIM) gas pipeline adjacent to the Indian Point nuclear power plant in Buchanan, NY, poses a unique national security threat to our nation. Construction of the AIM, projected to be completed in November 2016, must be halted immediately and FERC must deny Spectra's request to allow additional gas to flow through the existing pipelines at Indian Point.**

**Indian Point is a key terrorist target and pipelines are vulnerable to hacking, drones, physical access, and vehicle explosions. Furthermore, pipeline ruptures are not rare, and new pipelines fail at higher rates than older pipelines.<sup>1</sup> The Nuclear Regulatory Commission (NRC) reviewed and confirmed Indian Point documents that clearly state that a rupture in the pipeline at Indian Point may cause damage the plant's infrastructure and back-up systems. This event would likely cause a radioactive release greater than that at Fukushima rendering the region uninhabitable. A pipeline at Indian Point is an un-deployed weapon of mass destruction.**

FERC's approval to site the AIM at Indian Point, issued on March 3, 2015, was based on the NRC's confirmatory analysis of plant operator, Entergy's, risk assessment. The NRC claimed that the Indian Point nuclear plant could safely shut down in the event of a pipeline rupture. However, the NRC also stated, "review and approval of the proposed pipeline ...overreaches our regulatory authority; the NRC does not perform safety-related calculations."<sup>2</sup>

In meetings, hearings, letters, and filings this past year, pipeline and nuclear experts have explained that the NRC's confirmatory analysis not only defies the laws of thermodynamics, it is inconsistent with federal regulations, is based on a modeling system that is prohibited for a pipeline rupture in this configuration, and that the NRC does not have the expertise to properly evaluate the consequences of a pipeline rupture of a 42-inch diameter pipeline at this location. The NRC's assessment was based on material false information provided to the NRC by Entergy.

### **The required risk assessment of co-locating a pipeline at a nuclear plant was never conducted.**

Governor Cuomo<sup>3</sup> and Senators Schumer and Gillibrand<sup>4</sup> called for a halt in construction of the Spectra AIM pipeline, but FERC refused<sup>5</sup> and continues to cite the NRC's confirmatory analysis as the basis for their ongoing approval. Congressman Engel<sup>6</sup> wrote to President Obama and Congresswoman Lowey<sup>7</sup> wrote to Secretary Moniz to elevate this issue; neither has received a response. A letter was also sent to Lisa Monaco, Assistant to the President for Homeland Security and Terrorism and there has been no response.<sup>8</sup> The urgency of this situation cannot be overstated. Action must be taken now to stop this project.

When contacted about the NRC's faulty analysis, the U.S. Department of Transportation's Pipeline Hazardous Materials Safety Administration (PHMSA) representative said that PHMSA defers to the NRC and that PHMSA's jurisdiction begins when the pipeline becomes operational. PHMSA did not conduct its required risk assessment as outlined in PHMSA regulation 49 CFR 192.907.

Secretary of Defense Ash Carter and Secretary Johnson, Assistant Secretary Durkovich, Commissioner Melville and others at the federal and state Departments of Homeland Security (DHS) responsible for critical infrastructure, as well as DHS's Transportation Safety Administration (TSA), have also been contacted on numerous occasions. These agencies responded that they defer to the NRC. However, because the NRC did not properly evaluate the catastrophic hazards of the siting of this massive gas pipeline at a nuclear power plant, in this unique case, DHS must exercise its authority to protect the country from national security threats.

Moreover, the TSA contact stated that the TSA is not involved in the Spectra AIM project because it is not an active pipeline facility. This false statement ignores the two existing pipelines that currently run through the plant, at least one of which will provide gas to the AIM. Entergy's 1997 Individual Plant Examinations for External Events, (IPEEE) and the NRC Staff Evaluation Report warned, "Given the separation between the pipeline and IP-

3, this may cause major damage to IP-3... it would appear that a continuous flammable cloud can extend several thousand meters from the point of release.”<sup>9</sup>

### **Pipeline Vulnerability**

An assessment of vandalism as required in ASME standards and PHMSA regulations, was not considered, clearly violating PHMSA regulations ASME B31.8(s). Yet, critical infrastructure necessary to prevent a radioactive release, both inside and outside of the Indian Point security barrier, could be destroyed if the pipeline were to be tampered with. Terrorists attempted to enter a Belgian nuclear facility earlier this year.<sup>10</sup>

“The U.S. Congressional Research Service (CRS) reported that in a natural gas or oil pipeline “...cyber infiltration of supervisory control and data acquisition (SCADA) systems could allow ‘hackers’ to disrupt pipeline service and cause spills, explosions, or fires—all from remote locations via the Internet or other communication pathways.” SCADA systems use off-the-shelf technologies and open systems architecture and have been infiltrated since the 1990s.”<sup>11</sup> Iranian hackers infiltrated the nearby Rye Brook, NY, dam in 2013.<sup>12</sup> Just last week a cyber attack shut down Netflix, Twitter and several other sophisticated websites.

The pipelines are also easily accessible to someone wishing to do harm as they cross a public road, Broadway, at Indian Point. The mitigation measures for the AIM (burying it 2 feet deeper and adding concrete slabs above the pipe) have not been tested and according to Richard Kuprewicz, pipeline safety expert, are unlikely to offer protection. Kuprewicz further states, “I have yet to see a steel pipeline that cannot be damaged by third party threat activities, especially damage that could result in delayed pipeline rupture.”<sup>13</sup>

Even if Indian Point were slated to close today, the gas pipelines would continue to present an unacceptable risk to the fuel in the reactors and the spent fuel rod pools that will remain forever on-site.

Those at the highest levels of U.S. government must step in immediately to halt construction. If there is a rupture and meltdown, the proposed safety measures, evacuation plans, and emergency response plans are essentially meaningless placing more than 20 million people are at risk.

**This is a national security issue. Access is easy and terrorists are aware and want to do us harm. Pretending it won't happen, won't keep us safe. On behalf of 20 million people who live within a 50 mile radius of Indian Point, and on behalf of the economy of the United States, President Obama, as Commander-in-Chief must intervene and demand that FERC halt construction immediately.**

### **Experts' Statements:**

**Pipeline Safety expert Richard Kuprewicz of Accufacts:** “Entergy, the NRC, and others’ statements that a 42-inch pipeline rupture can be quickly isolated and implying that the pipeline operator can quickly remotely recognize and isolate a pipeline rupture within minutes (such as shutdown in three minutes) are misleading and downright false.”<sup>14</sup>

**Nuclear expert Paul Blanch:** “The NRC has underestimated the probability of a gas line accident impacting the Indian Point nuclear plant by at least a factor of 1000. Moreover, the NRC and Entergy have failed to provide any supportable documentation that Indian Point can safely shut down the plants in the event of a gas line rupture... The blast radius from a gas line rupture would likely encompass the entire Indian Point site, disabling all vital equipment required to prevent core damage and major radioactive releases to the environment.”<sup>15</sup>

**Dr. Irwin Redlener, Director, National Center of Disaster Preparedness and Professor of Health Policy and Management at Columbia University:** “As a physician and a public health professional, I say, unequivocally, that risks of this pipeline, as will be explicitly described by my colleagues, far outweigh the possible benefits and pose an unacceptable level of vulnerability to the men, women and children of this entire region – and beyond.”<sup>16</sup>

Footnotes:

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<sup>1</sup> PHMSA chart: [https://drive.google.com/file/d/0B7g3zFc9C\\_r6X21ST0R5V2ozTnc/view](https://drive.google.com/file/d/0B7g3zFc9C_r6X21ST0R5V2ozTnc/view)

<sup>2</sup> NRC Response to Paul Blanch:

<https://www.dropbox.com/s/6eaz7zs90dyrsm3/20151106%20NRC%20response%20to%2039%20Questions.pdf?dl=0>

<sup>3</sup> Times Union article about Cuomo letter: <http://blog.timesunion.com/capitol/archives/246569/cuomo-to-feds-stop-algonquin-pipeline-for-more-safety-review/>

<sup>4</sup> Schumer/Gillibrand letter: <https://sape2016.files.wordpress.com/2013/10/080316-schumer-gillibrand-letter.pdf>

<sup>5</sup> FERC Denial to Cuomo: <https://sape2016.files.wordpress.com/2013/10/032516-ferc-denial-of-gov.pdf>

<sup>6</sup> Engel letter to Obama: <https://sape2016.files.wordpress.com/2013/10/20160919-engel-letter-to-pres-obama-re-algonquin-pipeline-1.pdf>

<sup>7</sup> Lowey letter to Moniz: <https://sape2016.files.wordpress.com/2013/10/letter-from-congresswoman-lowey-to-secretary-of-energy-moniz-9-16-16.pdf>

<sup>8</sup> Lisa Monaco letter: <https://www.dropbox.com/s/z4gsapihkexa75p/20160811%20Lisa%20Monaco%20letter.pdf?dl=0>

<sup>9</sup> Entergy's 1997 Individual Plant Examinations for External Events, (IPEEE) and the NRC Staff Evaluation Report:

<http://www.nrc.gov/docs/ML1122/ML11227A102.pdf>

<sup>10</sup> New York Times, March 25, 2016, "Belgium Fears Nuclear Plants are Vulnerable,"

<http://www.nytimes.com/2016/03/26/world/europe/belgium-fears-nuclear-plants-are-vulnerable.html>

<sup>11</sup> Congressional Research Service, "Keeping America's Pipelines Safe and Secure: An Issue for Congress," Parfomak, Paul, Jan. 9, 2013: <https://fas.org/sgp/crs/homsec/R41536.pdf>

<sup>12</sup> New York Times, March 25, 2016, "A Dam, Small and Unsung, Is Caught Up in an Iranian Hacking Case,"

<http://www.nytimes.com/2016/03/26/nyregion/rye-brook-dam-caught-in-computer-hacking-case.html>

<sup>13</sup> Kuprewicz declaration: [https://drive.google.com/file/d/0B7g3zFc9C\\_r6TUMxbHRGWWg0UHc/view](https://drive.google.com/file/d/0B7g3zFc9C_r6TUMxbHRGWWg0UHc/view)

<sup>14</sup> Kuprewicz declaration: [https://drive.google.com/file/d/0B7g3zFc9C\\_r6TUMxbHRGWWg0UHc/view](https://drive.google.com/file/d/0B7g3zFc9C_r6TUMxbHRGWWg0UHc/view)

<sup>15</sup> Blanch declaration: [https://drive.google.com/file/d/0B7g3zFc9C\\_r6Z3dKMVZSYnJjeGc/view](https://drive.google.com/file/d/0B7g3zFc9C_r6Z3dKMVZSYnJjeGc/view)

<sup>16</sup> Dr. Irwin Redlener statement: [http://www.grassrootsinfo.org/pdf/Redlener\\_Statement\\_PSR\\_Press\\_101816.pdf](http://www.grassrootsinfo.org/pdf/Redlener_Statement_PSR_Press_101816.pdf)

Reviewed by Mr. Paul Blanch, Nuclear Safety Expert with over 50 years of industry experience

October 26, 2016