U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

Indian Point Energy Center
2020 Government to Government Meeting

Welcome!

This webinar will start in a few moments

Call in using the phone number below:
Dial-in Number: 1-888-790-1952
Participant passcode: 7850150#
Help: *0 (“star” “zero”)

Agenda

• Welcome	Raymond Lorson
• Overview of License Transfer Process and 2019 Indian Point Plant Performance	Raymond Lorson
• NRC Review of AIM Pipeline Analysis	Dave Skeen / Mel Gray
• Buchanan Local Update	Mayor Knickerbocker
• Cortlandt Local Update	Supervisor Puglisi
• NRC Staff Available for Questions	
• Closing Remarks	Raymond Lorson

Welcome

Ray Lorson,

Deputy Regional Administrator
Nuclear Regulatory Commission
Region I

NRC Region I Staff Available for Questions

Dan Collins, Director,
Division of Reactor Projects

Nik Floyd, Indian Point
Senior Resident Inspector

Tony Dimitriadis, Chief, Decommissiong,
Independent Spent Fuel Storage
Installation & Reactor Health Physics

Kevin Mangan, Senior
Reactor Inspector

NRC Headquarters Staff Available for Questions

Rich Turtil, Senior Financial Analyst

John McKirgan, Chief, Storage & Transportation Licensing

John Wise, Senior Materials Engineer

Patricia Milligan, Senior Level Advisor for Emergency Preparedness

Bruce Watson, Chief, Reactor Decommissioning, Office of Nuclear Material Safety & Safeguards

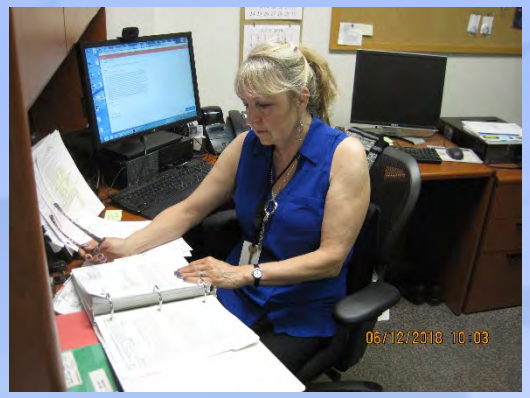
2019 Indian Point Assessment Summary

Daniel Schroeder,

Chief, Division of Reactor Projects
Nuclear Regulatory Commission
Region I

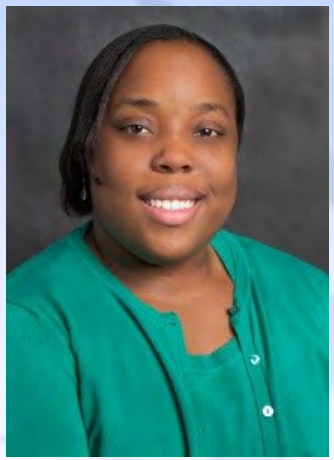
Resident Inspection Office Staff

Nik Floyd
Senior Resident Inspector



Diane Hochmuth,
Administrative Assistant

Sarah Obadina
Resident Inspector



Justin Vazquez
Resident Inspector

NRC Independent Safety Inspections

Reactor Oversight Process

- NRC inspectors have unfettered access to all plant activities related to nuclear safety and security
- Full-time NRC resident inspectors
- NRC regional specialists conduct additional inspections at each nuclear plant

Indian Point
2019 Assessment Summary

- Indian Point Units 2 & 3 operated safely and in a manner that preserved the public health and safety and protected the environment
- Indian Point Units 2 & 3 remained in the Licensee Response column of the Action Matrix
- 8,400 hours of inspection and related activities
- 3 Green Non-Cited Violations (NCVs) and one Green finding

License Transfer

Richard Guzman

NRC Project Manager

Office of Nuclear Reactor Regulation

License Transfer Review Summary

- **License Transfer Application (November 2019)**
  - Noticed in Federal Register (January 2020)
  - Hearing Requests and Comments Received (February 2020)
  - Requests for Additional Information (August 2020)
- **If approved, an Order and Conforming Amendment are issued:**
  - Order (Projected November/December 2020)
  - Conforming License Amendment (May 2021)
- **Other Processes/Reviews:**
  - Hearings on License Transfer Applications
  - Holtec Exemption Request to allow use of Decommissioning Trust Funds for Non-Radiological Decommissioning Activities

Gas Pipeline

David Skeen,

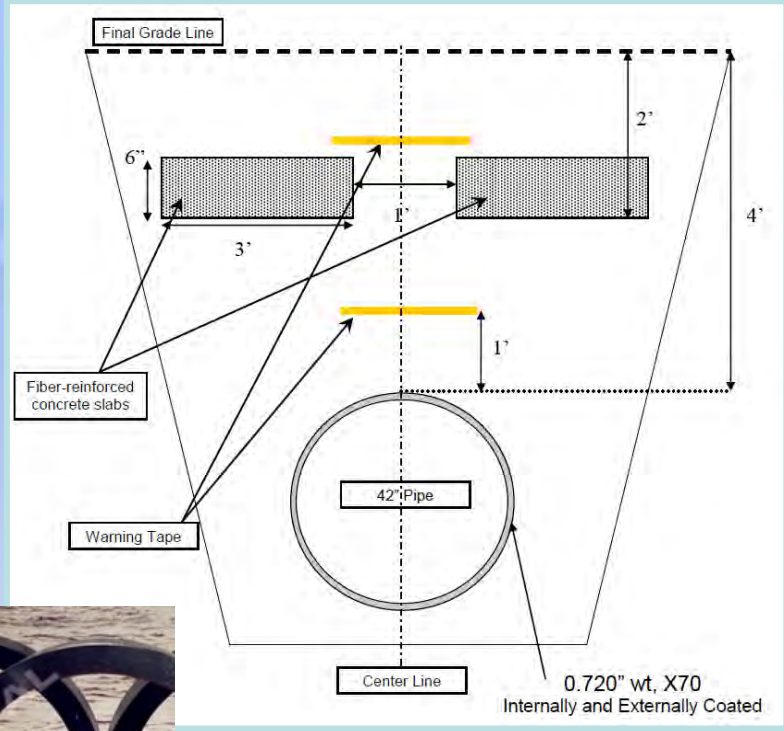
Team Lead: Expert Evaluation Team on Concerns Pertaining to the Gas Transmission Lines Near Indian Point

Expert Evaluation Team's Key Findings

- **Indian Point remains safe.**
  - **A rupture of the 42" Algonquin Incremental Market (AIM) pipeline near Indian Point is unlikely.**
  - **If a rupture occurred, the nuclear power plant and its stored spent fuel would remain protected.**
- **The team recommended that the NRC take several actions.**
  - **Entergy should be asked to revisit optimistic assumptions it used in its analyses.**
  - **NRC should consider process updates for peer reviews, inspection support, petition reviews, interagency work, and pipeline analysis.**

AIM Pipeline Unlikely to Fail

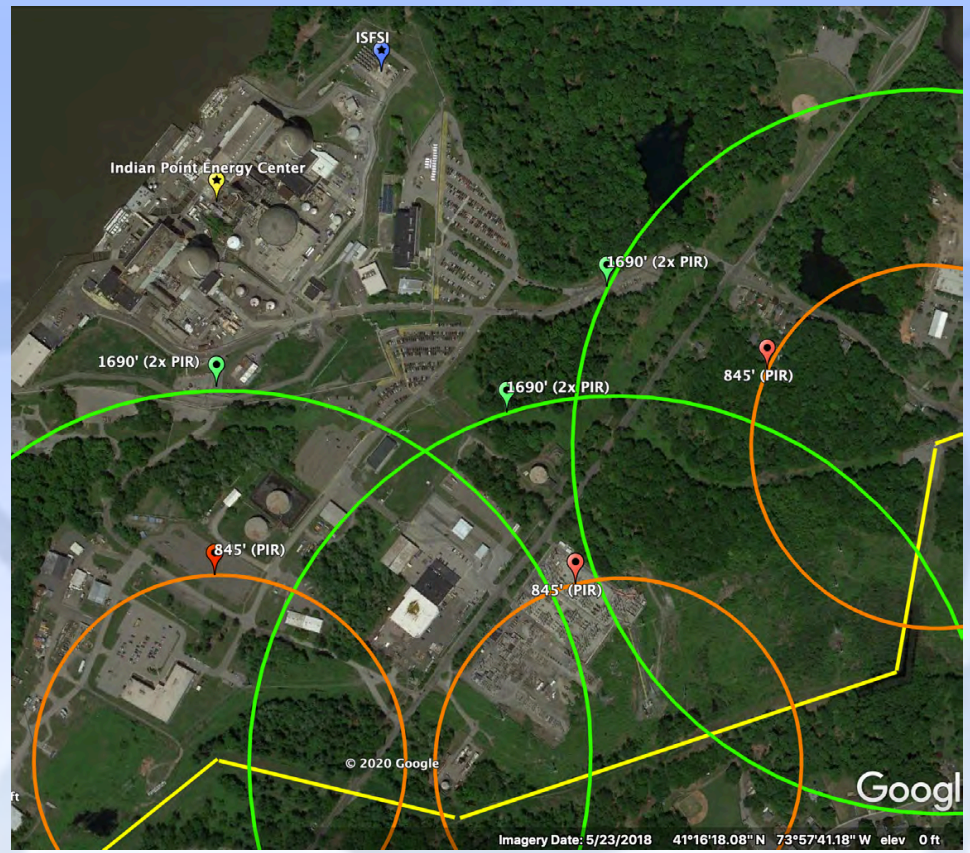
- Construction meets or exceeds DOT requirements for a high-consequence area
  - Stronger pipe
  - Buried deeper, with concrete slabs, warning tape
  - Corrosion protection
  - Full weld inspection
  - Pressure testing
- Operator's integrity management program provides for risk assessments, prioritization of ongoing inspections
- New York inspects under agreement with DOT/PHMSA; no violations or open issues

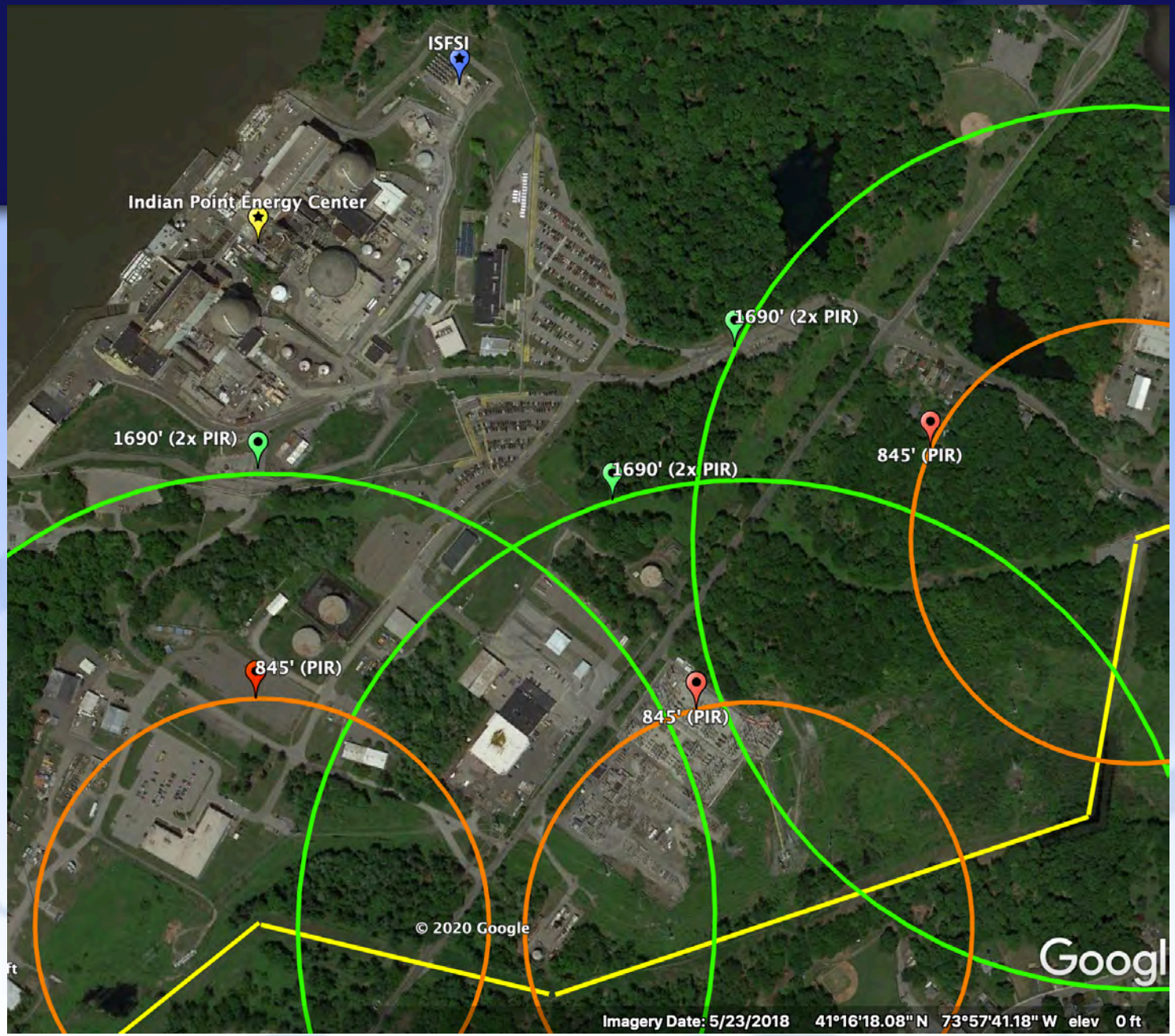


https://www.octalsteel.com/resources/api-5l-x70-pipe

Plant Safe in the Unlikely Event of a Pipe Rupture

- Safety-related equipment, spent fuel pools, and dry fuel storage are 2 or more times the "potential impact radius" in DOT regulations
- Team calculated heat effects – thick-walled important plant structures could withstand a fire burning for ~8 hours




ISFSI
Indian Point Energy Center
1690' (2x PIR)
1690' (2x PIR)
1690' (2x PIR)
845' (PIR)
845' (PIR)
845' (PIR)
© 2020 Google
Imagery Date: 5/23/2018 41°16'18.08" N 73°57'41.18" W elev 0 ft

NRC Is Improving its Processes

- **Peer reviews – initial and continued training on updated guidance**
- **Inspection support – guidelines for how to ask and answer technical questions**
- **10 CFR 2.206 petition reviews – better decision making, documentation, and independence**
- **Pipeline analysis – updated technical guidance, including when/how to do detailed analysis**
- **Interagency collaboration – guidance for how to support other agencies' reviews and document interactions**

NRC Inspection of Revised Entergy Safety Analysis

Mel Gray,

Chief, Engineering Branch 1
Division of Reactor Safety
Nuclear Regulatory Commission
Region I

NRC Inspection Follow-up of Expert Team Recommendation

- NRC requested Entergy to revisit optimistic assumptions it used in its 2015 analyses.
- NRC received revised Entergy analyses and completed inspections in July 2020.
- NRC completed inspection and issued a report on September 16, 2020

NRC Inspection Conclusions

- **Indian Point Safety-Related Structures and Equipment Not Affected in the Unlikely Event of an AIM Pipeline Rupture**

Rupture Hazards

- **Jet fire**
- **Vapor cloud explosions**
- **Vapor cloud fire**
- **Missiles (projectiles from pipe rupture)**

NRC Inspection Conclusions (cont.)

- Entergy revised assumptions that resulted in increased isolation time (8 minutes) and longer pipe length to be isolated (11 miles).
- Inspectors found assumptions were not used by Entergy in 2015 to determine the impact of pipeline hazards on safety-related equipment.
  - Valve closure time discussed in cloud fire hazard analysis but not a factor in conclusions.

NRC Inspection Conclusions (cont.)

- Inspectors found Entergy revised their analysis to include additional conservatisms and refinements.
  - Jet fire angled towards plant
  - Increased flow rate for turbulent jet explosion
  - Vapor cloud explosion in tree belt
- Analyses continued to show safety related equipment is unaffected by AIM pipeline

Buchanan Local Update

Mayor Knickerbocker

Cortlandt Local Update

Supervisor Puglisi

How To Ask a Question

- Ask your question verbally by pressing *1 (star one)
- Do not have your phone on mute
- The moderator will coordinate questions
- Press *2 to withdraw wanting to ask a question
- Press *0 (star zero) for help

This ends the Meeting

Thank You for Attending!