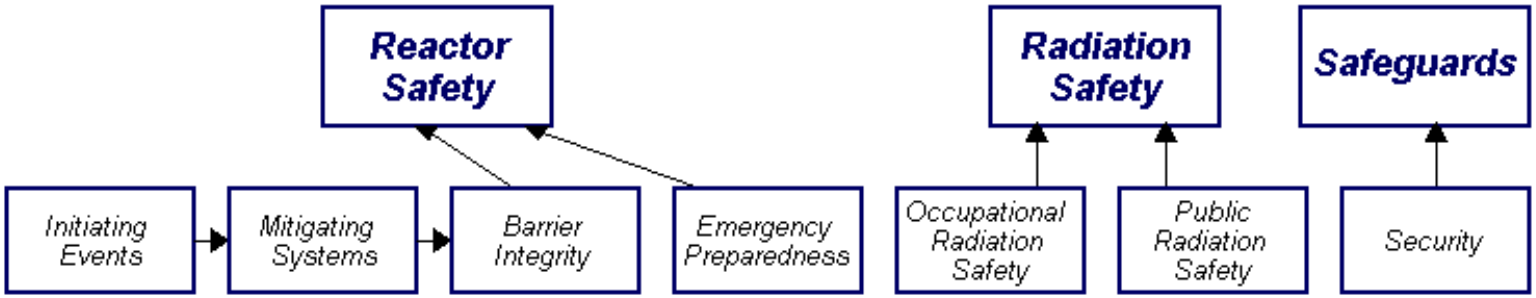
Media Briefing on Recent Issues at Indian Point Nuclear Plant

U.S. Nuclear Regulatory Commission

June 6, 2016



Performance Indicators

Unplanned Scrams (W)	Safety System Functional Failures (G)	Reactor Coolant System Activity (G)	Drill/Exercise Performance (G)	Occupational Exposure Control Effectiveness (G)	RETS/ODCM Radiological Effluent (G)	Protected Area Equipment (G)
Unplanned Power Changes (G)	Emergency AC Power System (G)	Reactor Coolant System Leakage (G)	ERO Drill Participation (G)			
Unplanned Scrams with Complications (G)	High Pressure Injection System (G)		Alert and Notification System (G)			
	Heat Removal System (G)					
	Residual Heat Removal System (G)					
	Cooling Water Systems (G)					

Last Modified: April 24, 2016

NRC PARTICIPANTS

David Lew, NRC Region I Deputy Administrator

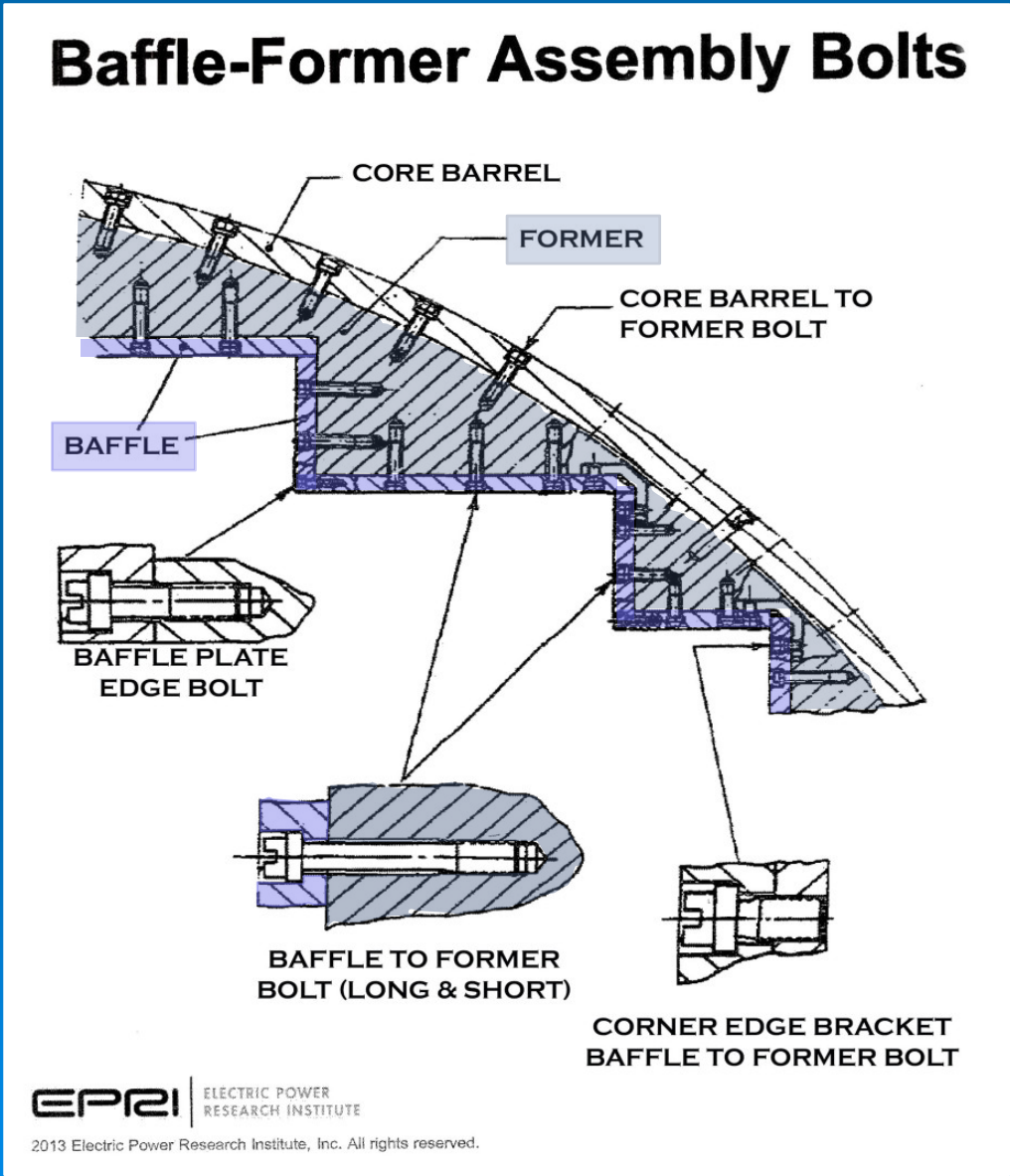
Neil Sheehan, NRC Public Affairs Officer, Region I

Jack McHale, Chief of the Vessels & Internals Integrity Branch, NRC's Office of Nuclear Reactor Regulation

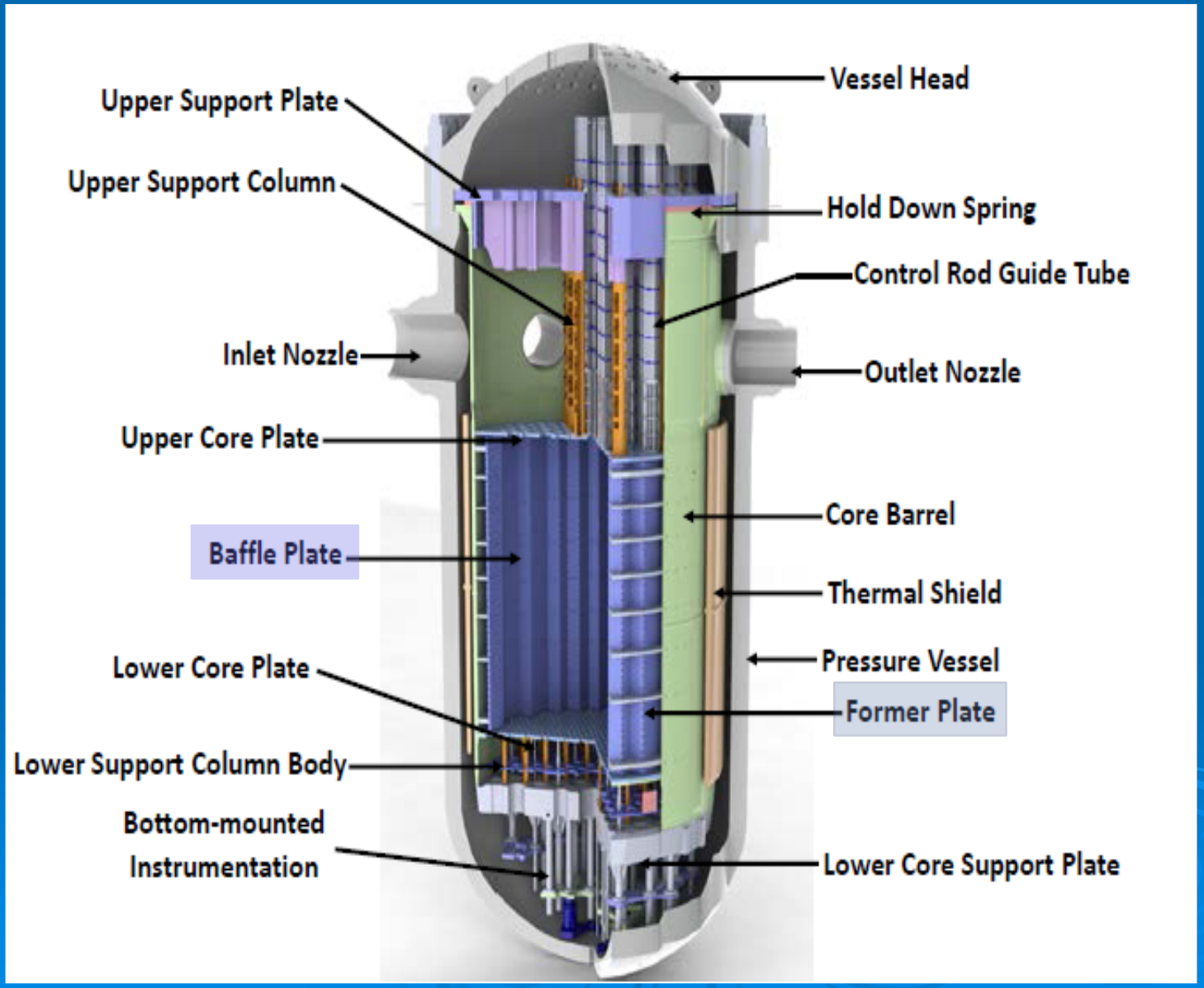
Jim Noggle, Branch Chief in the Region I Division of Reactor Safety responsible for radiological safety inspections

Mike McCoppin, Chief of the Radiation Protection and Accident Consequences Branch in NRC's Office of New Reactors

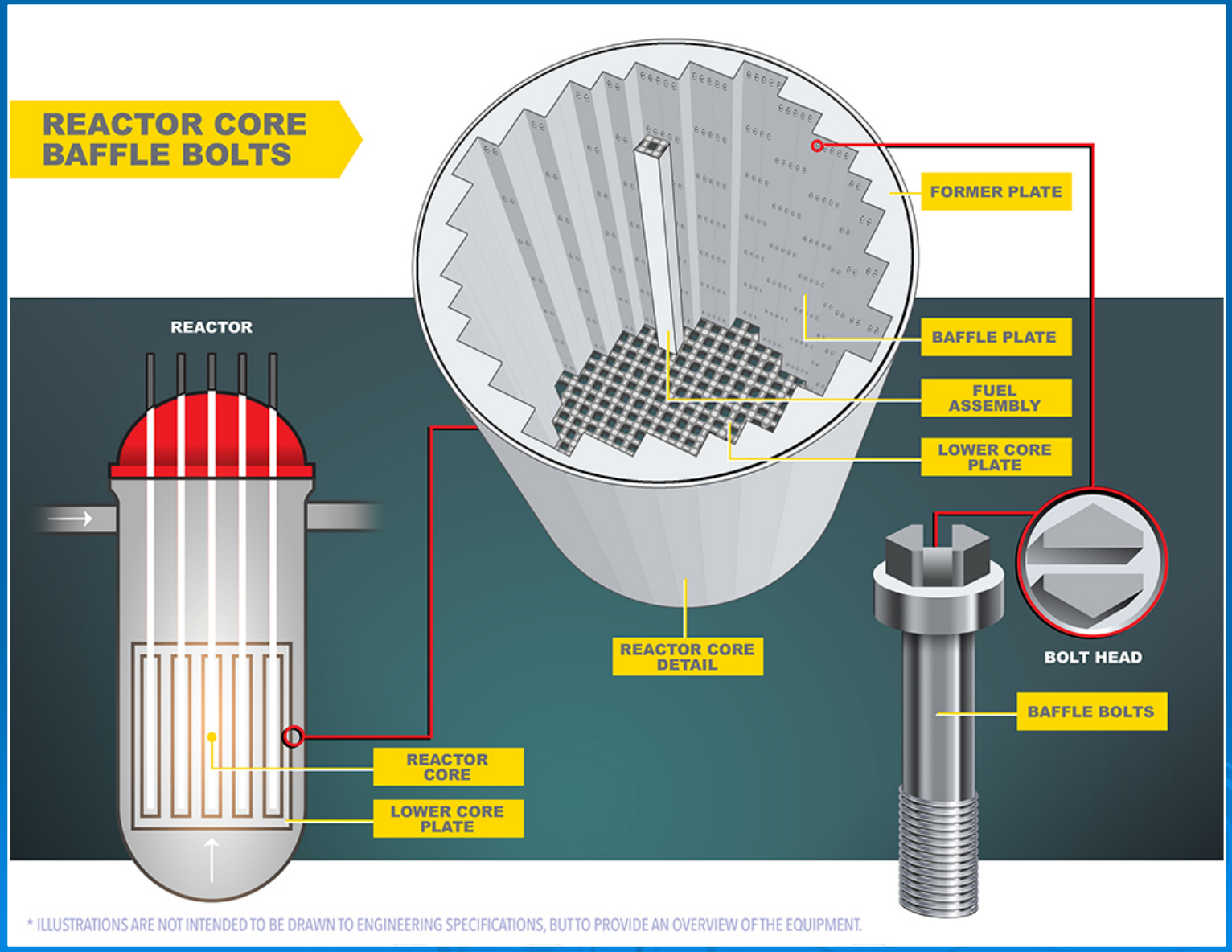
Degradation of Baffle-former Bolts



Degradation of Bolts (cont'd.)

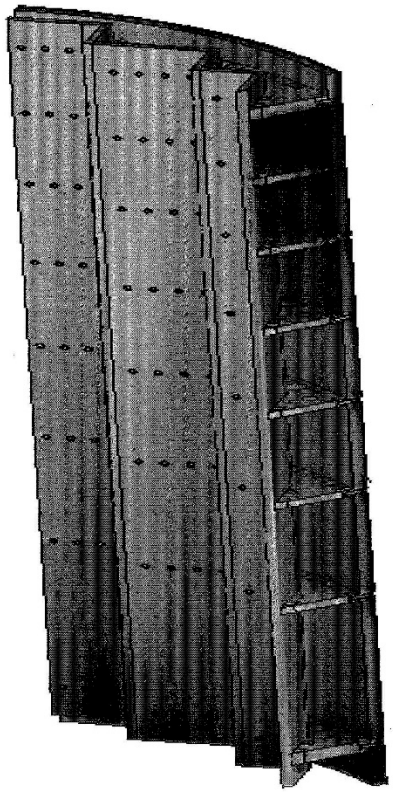


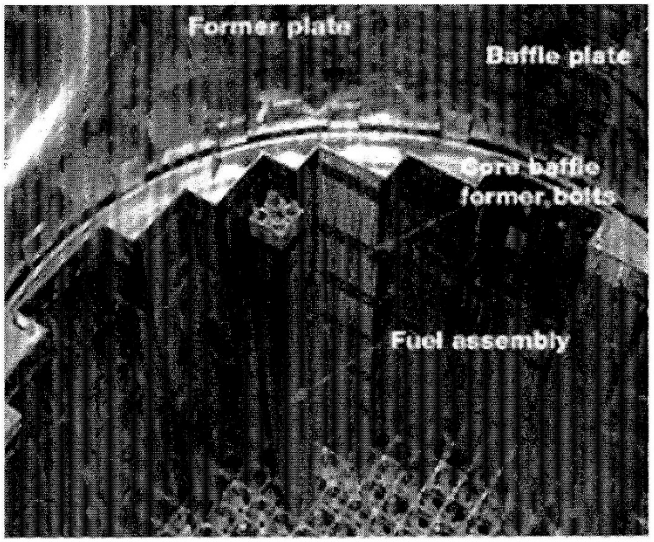
Degradation of Bolts (cont'd.)



Degradation of Bolts (cont'd.)

Baffle High Fluence Edge Seams/Edge Bolts





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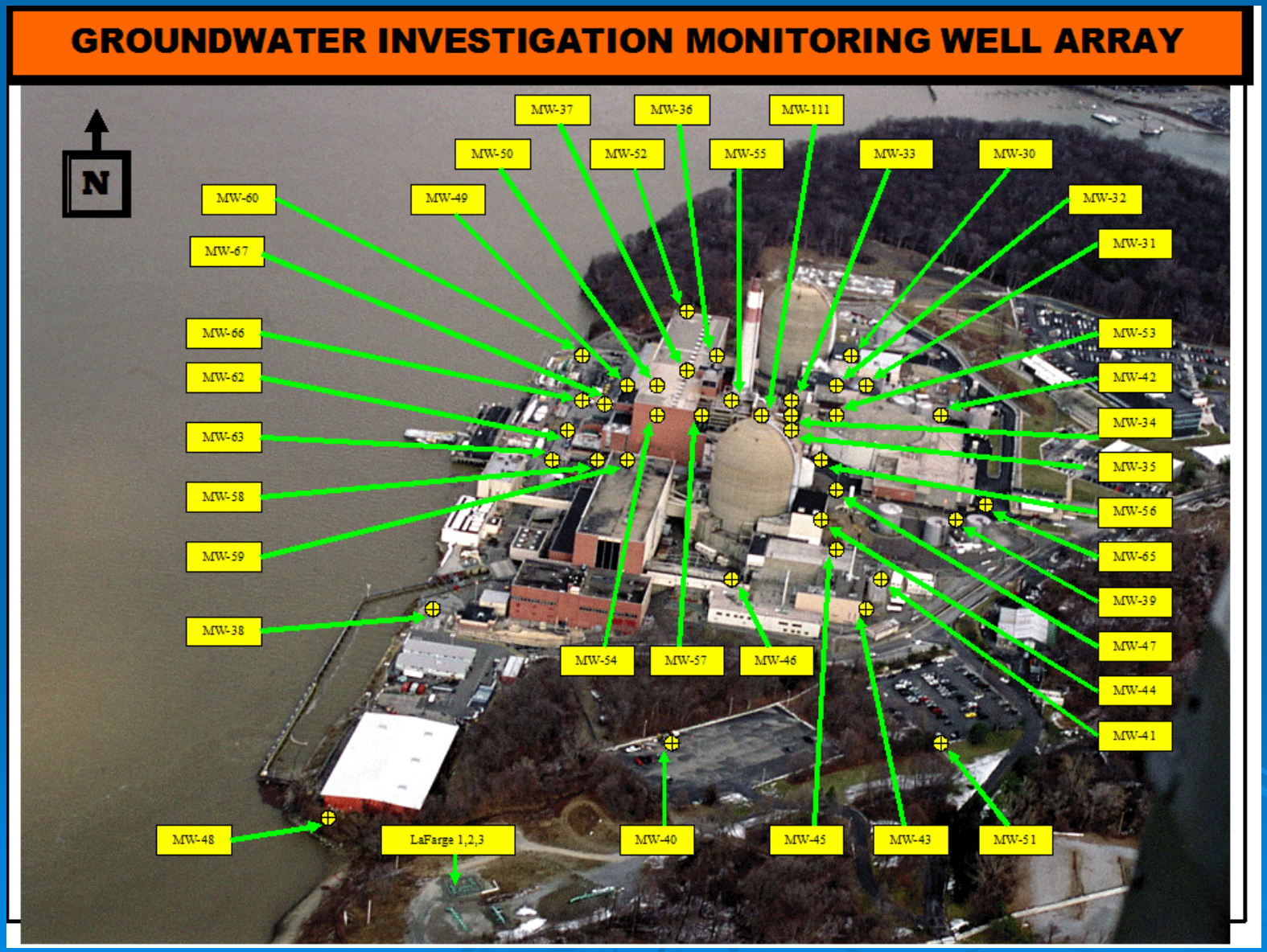
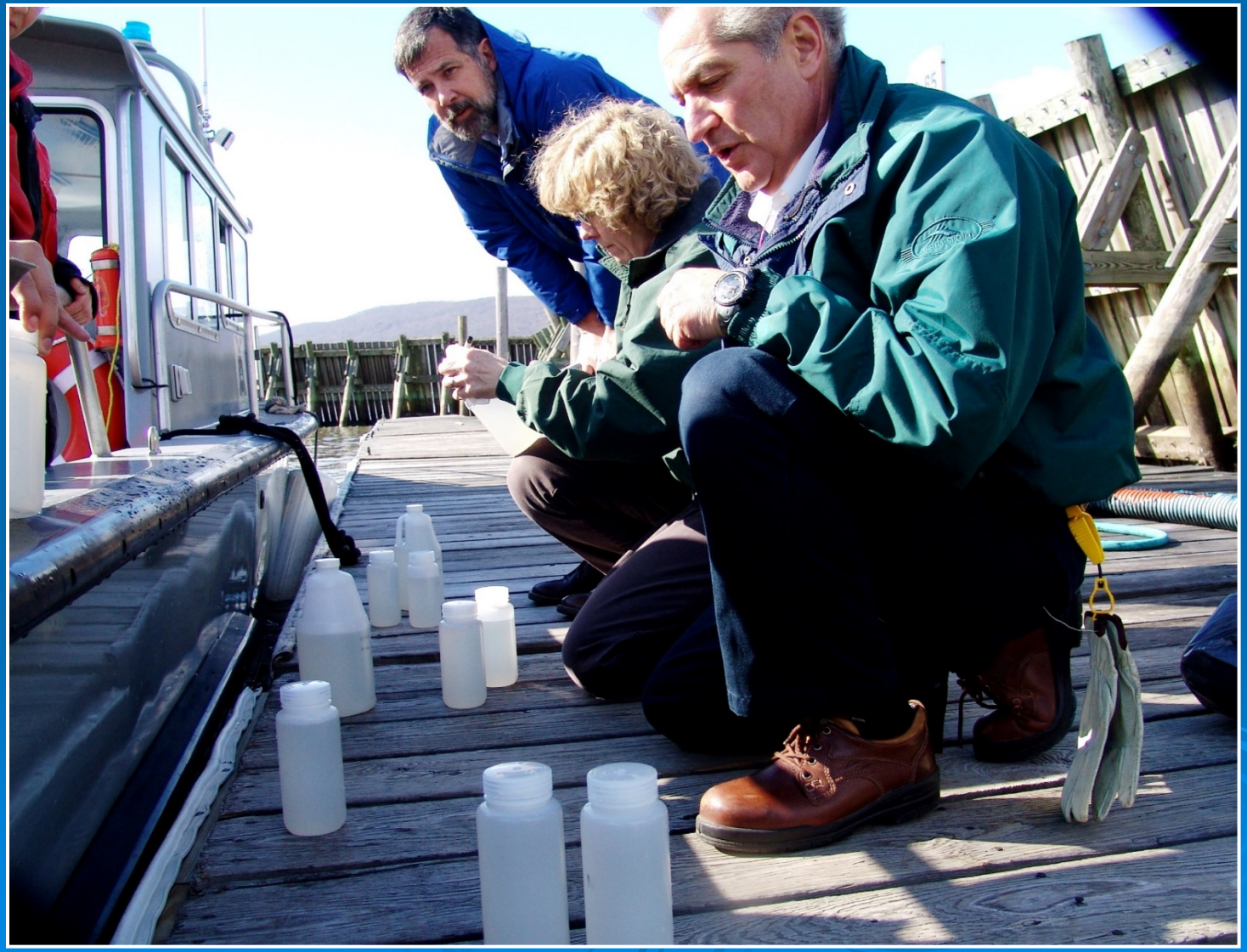
Summary of Bolt Degradation

- The degraded bolts were identified through required inspections.
- Unit 2 is safe to restart based on bolt replacements and supporting analyses.
- There are no immediate safety concerns with the current operation of Unit 3.

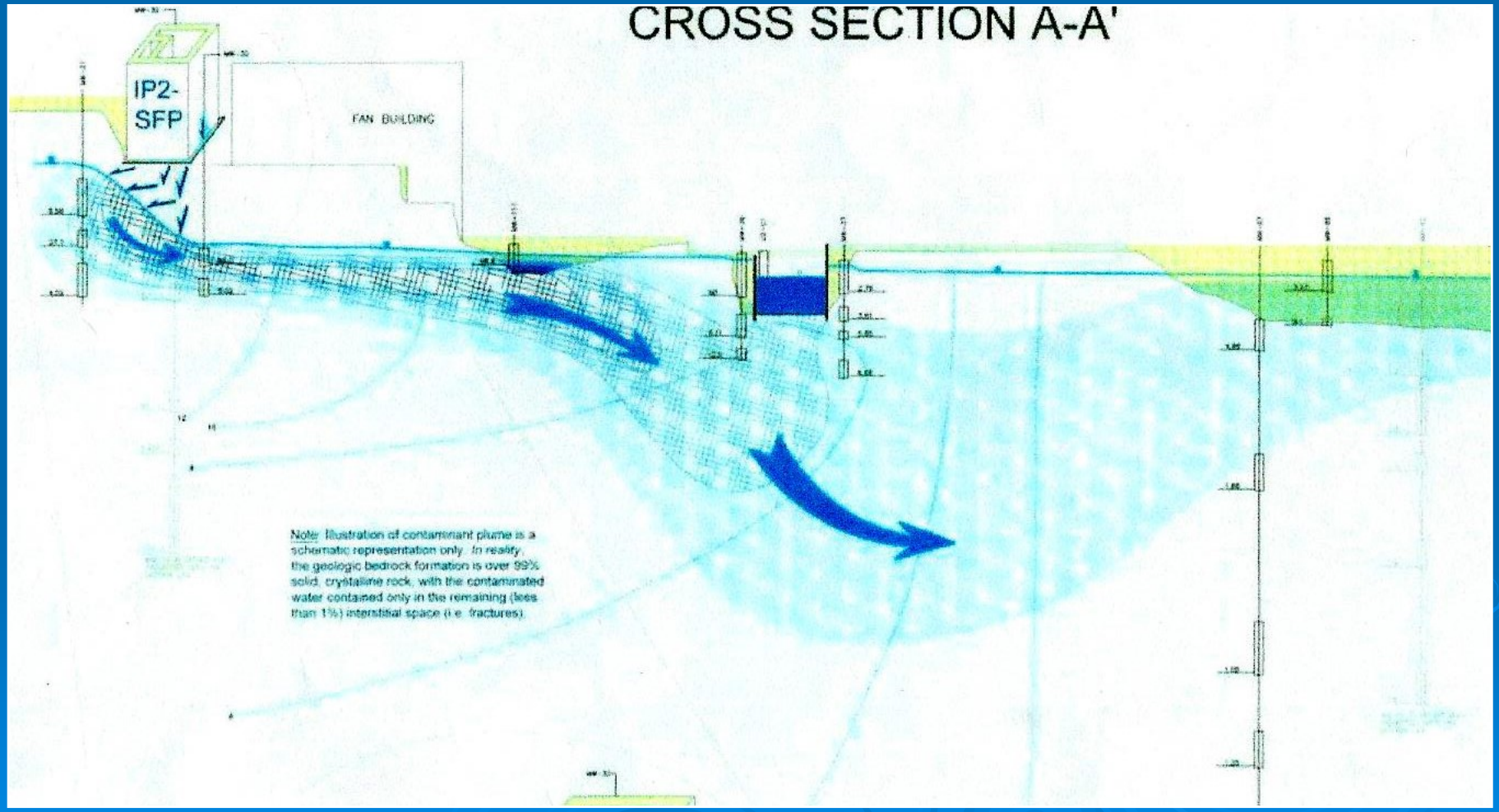
Indian Point Groundwater Contamination



Indian Point Groundwater Contamination (Cont'd.)



Indian Point Groundwater Contamination (Cont'd.)



Health risks of tritium

- From the EPA fact sheet on tritium:

  "As with all ionizing radiation, exposure to tritium increases the risk of developing cancer. However, because it emits very low energy radiation and leaves the body relatively quickly, for a given amount of activity ingested, tritium is one of the least dangerous radionuclides."

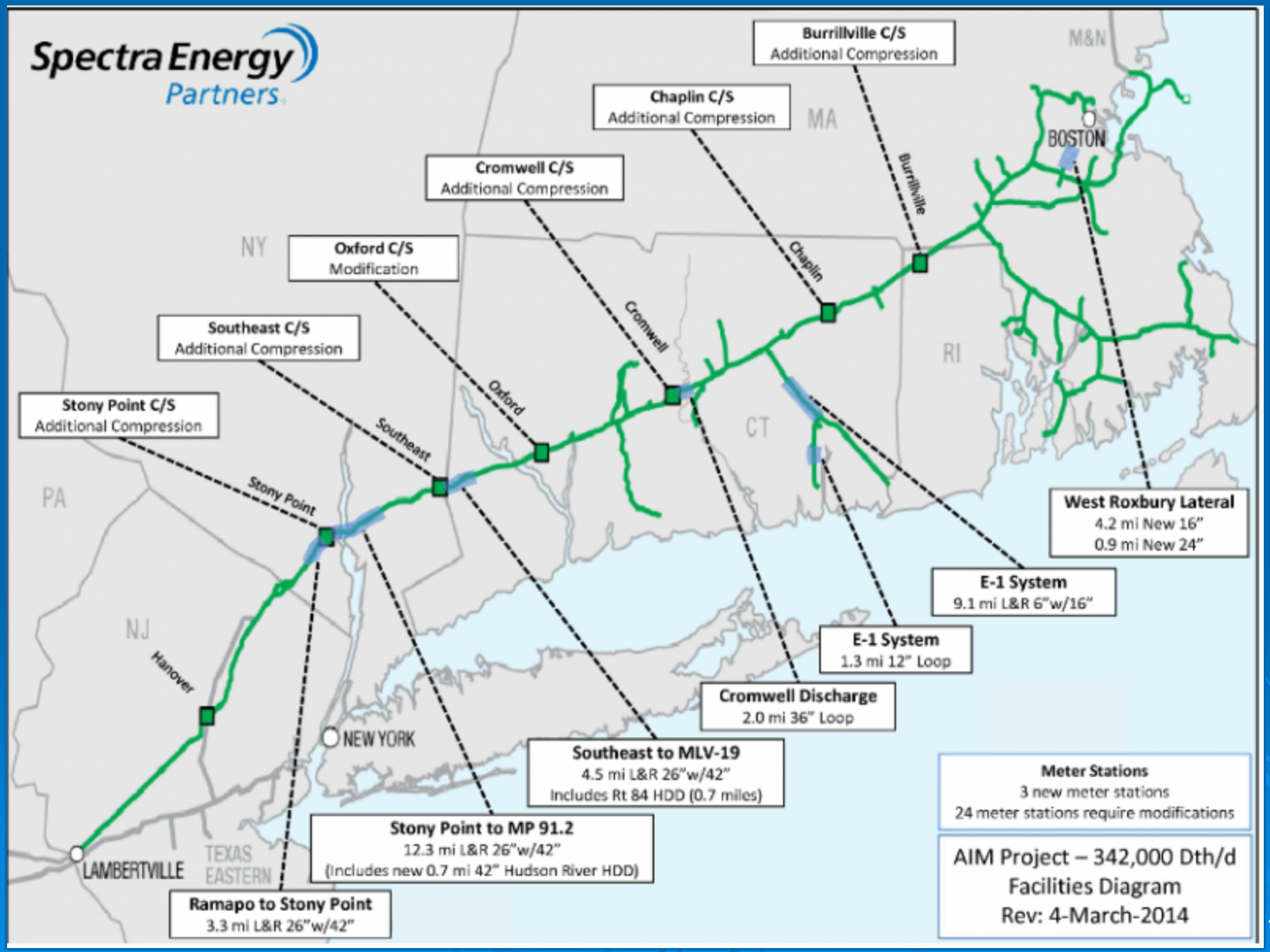
NRC Regulations on liquid radioactive releases

- Nuclear power plant liquid and gaseous releases to the environment are required to be planned, monitored and documented
- NRC regulations (10 CFR Part 20 and 10 CFR Part 50) place limits on these releases to ensure safety standards are being met, such as NRC ALARA limits and EPA drinking-water standards
- On an annual basis, NRC guidelines require that the release of radioactive liquids from a nuclear power plant not result in a radiation dose of greater than 3 millirems to any individual in an unrestricted area

Indian Point Groundwater Contamination Summary

- No health and safety significance
- Promptly detected and investigated
- Building drains and pumping system improvements are underway

Installation of Pipeline



Thresholds for Damage

Overpressure	Consequence
1 psi	Glass shatters
2-6 psi	Serious structural damage to houses
6-9 psi	Severe damage to reinforced concrete structures
10 psi	Destruction of Buildings

- **No safety-related structure necessary to safely shutdown IPEC exposed to >1 psi**

Thermal Heat Flux (KW/m2)	Consequence
2	Pain within 60 sec
5	Tolerable to escaping personnel
12.6	Plastic melts
31.5	Building Damage

- **Max heat flux at SOCA boundary found to be about ½ of that which melts plastic**

Installation of Pipeline (Cont'd.)

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Summary of Pipeline Installation

- Independent and diverse analysis (NRC, Entergy, DOT) demonstrate no safety impacts.
- Actual explosions confirmed NRC analysis is conservative.
- Plant equipment needed to shut down would remain available during a pipeline explosion.

Additional information/questions

- Contact Neil Sheehan, NRC Public Affairs Officer, at 610-337-5331 or via e-mail at Neil.Sheehan@NRC.GOV

Thank you for your participation