

NRC PRESENTATION MATERIAL FROM SEPTEMBER 26, 2000 REGULATORY CONFERENCE

Regulatory Conference

Indian Point 2 Steam Generator Special Inspection

Agenda

- Introduction.....NRC
- Regulatory Conference Process.....NRC
- NRC Inspection Findings.....NRC
- NRC Risk Assessment.....NRC
- Licensee Presentation.....Con Ed
- Caucus (if necessary)
- Closing Remarks.....NRC

Regulatory Process

- Significance Determination Process
 - ▶ Based on safety/risk significance
- Regulatory Conference
 - ▶ Provides licensee opportunity to disagree and provide additional information relevant to NRC assessment
- Final NRC determination
 - ▶ Provided approximately 30 days from regulatory conference

Event Overview

- February 15, 2000: IP2 Tube Failure
- Estimated primary-to-secondary leakage of 146 gallons per minute
- The failure happened at the apex of tube R2C5 in S/G 24
- NRC approval needed for restart
 - Based on the number of defects that Con Ed identified in two of the four S/Gs

NRC Response

- Immediate response
- Augmented Inspection Team (AIT)
- AIT Follow-Up Inspection
- Steam Generator Special Inspection

Inspection Findings

- The overall direction and execution of the 1997 S/G inservice examinations were deficient in several respects.
- Despite opportunities, Con Ed did not recognize and take appropriate corrective actions for significant conditions adverse to quality that affected the S/G inspection program.
- Con Ed did not adequately account for conditions, which adversely affected the detectability of, and increased the susceptibility of, tube flaws.

Inspection Findings

(Continued)

- Primary Water Stress Corrosion Cracking (PWSCC) in the outer bend of a low row tube
 - ▶ Significance not understood by Con Ed
 - ▶ Apex flaws have been associated with through wall leakage and burst
 - ▶ There have been tube ruptures due to PWSCC at U-bend apex (Surry -2 1976)
 - ▶ No review for the possibility of hour-glassing
 - ▶ No entry into the corrective action program
 - ▶ Tube plugged on detection

Inspection Findings

(Continued)

- Tube restrictions in the Upper Support Plate
 - ▶ 19 tubes identified as U-bend restrictions
 - ▶ Indicated a significant potential for hour-glassing
 - ▶ No procedure or specific examination criteria for significant hour glassing
 - ▶ No corrective action program review