IP2 SGTL Risk Analysis

Region I

US NRC

C/54

Risk Evaluations Performed and Results

- NRR PRAB Risk Analysis
  - Determined a delta-CDF ~ 1E-4 and a delta LERF ~ 1E-4 for SGT inspection findings

- ConEdison Risk Analysis
  -Determined a CCDP ~ 2.2E-6 and CLERP ~ 0 for the actual SGTL event

NRC Risk Assessment Assumptions

- The 1997 SGT inspection performance deficiencies resulted in a IE frequency for SGT failures of 1/year
- The probability that the degraded tube would rupture rather than leak is 0.5
- Includes induced SGTRs - RCS overpressurization events (ATWS); Faulted SGs; and spontaneous failures

ConEdison Risk Assessment Assumptions

- Evaluated risk of actual event (Tube leak versus rupture)
- Assumed addtional time available for operator actions & equipment recovery
- RWST inventory sufficient for long period of time and evacuation time sufficient that conditional LERF ~ 0

Comparison of Risk Assessments

- Both risk assessments are technically accurate
- The risk associated with the 2/15/00 SGTL was Low to Moderate (CCDP ~ 2E-6)
- The 1997 SGT inspection deficiencies were highly risk significant (delta-CDF ~ 1E-4)

Application of Revised Reactor Oversight Program

- Delta-CDF not CCDP is used to determine finding risk significance
- IAW IMC 0609 delta-CDF ~ delta-LERF for SGTR issues
- IAW IMC 0609 delta-LERF > 1E-5 is a Red risk significance finding
- The NRC risk evaluation determined a delta-CDF/LERF of > 1E-5 (Red)

Summary/Conclusion

- The risk significance of the actual SGTL event was low to moderate
- Poor SGT inspection in 1997 resulted in a highly risk significance condition
- Applying the guidance of IMC 0609 the risk associated with the SGT inspection findings are Red based on delta-LERF and Red/Yellow based on delta-CDF