

Risk Significance  
IP2 SGTF

Actual Event Significance (CCDP)

- 1.) GEM/SPAR ~ 3.3E-4
- 2.) Licensee's IPE ~ CDF contribution SGTR/IE SGTR ~ 1E-6/1.3E-2 ~ 7.7E-5
- 3.) Licensee's Calculated CCDP base on actual leak rate ~ 2E-6  
[Key Assumptions - a.) NSR charging pumps available for makeup ~98 gpm/ea; b.) Long time available for human actions - revised HRA with lower HEPs]

SDP Delta CDF Evaluation

Performance issue was inadequate SG tube inspection in 1997 - a.) high noise signal; b) inadequate corrective action when PWSCC was found; c) did not assess flow slot hourglassing.

1.) NRC's Risk Assessment for SDP - (completed by OST - Steve Long)

Key Risk Assessment Assumptions

- Assumed that the IE frequency was 1/yr based on actual event
- ½ SGT failures would result in ruptures - based on industry experience with PWSCC
- delta-CDF ~ delta-LERF - based on SDP 0609 guidance
- Risk assessment included spontaneous & induced SGTRs (MSLB, ATWS, High/Dry initiators)

Conclusions

- Delta-CDF ~ 1E-4 ^ delta-LERF ~ 1E-4 RED (delta-CDF>1E-4 or delta-LERF>1E-5 RED)
- Spontaneous ~ 1E-4 - Induced MSLB ~ 1.9E-5 - ATWS ~ LERF~4E-7

2.) ConEdisons SDP Risk Assessment

Key Risk Assessment Assumptions

- IE frequency broken into leaks and ruptures (>225gpm rupture - <225gpm leak)
- Based on actual SG eddy current inspection results cracks, estimated crack growth rates, and leak flow per crack size estimates - a monte carlo technic was used to estimate IE frequency .038 > 225gpm and .275 <225 gpm (NRC analysis estimated .5 SGTRs)
- PRA model was modified to have different success criteria for leaks than ruptures.
- .13 of the SGTR delta-CDF sequences result in LERF

Conclusions

- Delta-CDF ~ 6.7E-6 ^ delta-LERF ~ 4.5E-6 YELLOW (delta-CDF>1E-4 or delta-LERF>1E-6 Yellow)
- Spontaneous ~ 3.8E-6 (LERF 1.1E-6) - Induced MSLB ~ 2.9E-6 (LERF 2.9E-6) ATWS 5E-7 LERF

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