

Exelon Lessons Learned Regarding Alternative Source Term (AST)

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Overview

- Exelon AST background
- NRC interaction
 - Pre-submittal
 - Submittal
 - Post-submittal
- Level of detail in submittals
- Use of precedents
- Use of unique systems
- Use of administrative controls
- Regulatory environment
- Post-submittal RAIs
- Summary

- Exelon has submitted AST license amendment requests for several (9) plants.
 - Three Mile Island 1
 - Submitted January 2001
 - Approved October 2001
 - Dresden 2 & 3 and Quad Cities 1 & 2
 - Submitted October 2002
 - Under review
 - Clinton
 - Submitted April 2003
 - Approved September 2005

Background (Continued)

- Byron 1 & 2 and Braidwood 1 & 2
 - Submitted February 2005
 - Under Review
- Limerick 1 & 2
 - Submitted February 2004
 - Under Review
- Oyster Creek
 - Submitted March 2005
 - Under Review

Background (Continued)

- Peach Bottom 2 & 3
 - Submitted July 2003
 - Withdrawn May 2005
 - Technical differences
 - Long response time for RAIs
- LaSalle 1 & 2 LAR is under development
 - Analyses on hold, pending other Exelon submittals
 - Similar to Limerick

- Pre-submittal meetings
 - Face-to-face public meetings
 - Methodologies
 - RG exceptions
 - Existing licensing bases
 - Audience
- On-going check-ins
 - Routine scheduled calls
- Post-submittal RAI discussions
 - Understand questions
 - Ensure responses meet NRC expectations

Submittal - Level of Detail

- New or revised methods
 - Adequately highlighted in LAR
 - Note exactly what is being changed
- Submit supporting calculations
 - Independent third party reviews
 - Provide key un-docketed references
 - Discuss need with NRC
 - Cite ADAMS reference numbers
 - Indicate applicable sections of large documents
- Reg. Guide conformance and exception
 - Adequate descriptions of conformance or alternate method
 - Table format
- RIS 2001-19

Submittal – Use of Precedents

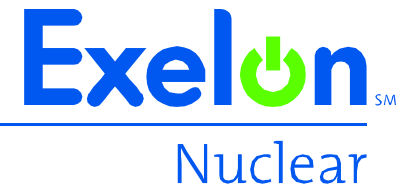
- Evolving regulatory standards require pre-approval for application of precedents
 - Discuss in pre-submittal meeting
 - RG interpretation
 - Adequate justification presented
 - Level of detail required has varied
- More than one precedent may be available

- Multiple precedents lead to inconsistencies
 - MSIV leakage particle size & settling velocities
 - Flashing fractions
 - HVAC issues
 - Drywell / Wetwell airspace mixing
 - Purge analyses
 - Plume rise adjustments
 - Cesium contribution to MSLB
 - Airborne cloud shine
 - Gamma shine from liquid sources

Submittal – Use of Unique Systems

- Discuss in pre-submittal meeting
- Additional current licensing basis justification may be required for use with AST

Submittal – Use of Administrative Controls



- Technical Specifications vs. procedures
 - If used in accident analysis, must be in TS
- Non-standard release points controlled by procedure

Submittal – Regulatory Environment

- Assess AST impacts on other issues
 - CRH
 - HVAC
- Use of TSTF-51
 - Don't assume 100% compliance
- RG 1.183 interpretations
 - Use currently published guidance
 - RIS 2006-04
- SRP 15.0.1 detail

- Responses may result in changes to original LAR
 - Highlight all changes
 - Ensure clarity
 - Provide information to support NRC Safety Evaluation

Summary

- Interaction with NRC – early interaction with the NRC makes the process more efficient.
- Level of detail in submittals – this ensures the NRC has enough information to complete their review accurately and efficiently.
- Use of precedents - since several precedents may be available for any one topic, ensure applicability for your specific plant design.
- Use of unique systems - discuss the specific applicability with the NRC before incorporating them into design analyses.
- Use of administrative controls - use caution when using admin controls; ensure their use is included in TS.
- Regulatory environment - ensure your interpretation of guidance is consistent with that of the NRC.
- Post-submittal RAI responses - communicate openly and frequently with the NRC to ensure full understanding of questions and responses.

Questions

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