

PBMR PRE-APPLICATION REVIEW OF EXELON'S TECHNICAL WHITE PAPERS:

NRC's Pre-application Review Objectives:

1. Identify significant technical issues, safety issues and policy issues,
2. (Where possible) identify a path to resolve the issues,
3. Develop the NRC staff know-how and Infrastructure to review a PBMR application

NRC/Exelon PBMR Pre-Application Review Process and Schedule:

A. Conduct Monthly NRC/Exelon Public Meetings on Technical Topics, in which Exelon:

- Gives an oral presentation of the specific topic
 - Provides the slide handouts (proprietary and non-proprietary versions)
 - Responds to staff and stakeholder questions
 - Takes notes on questions and answers (Q&As)
 - States their objective(s) for staff's review of the topic
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- Design Codes and Standards (7/17-18/01)
 - Control of Chemical Attack, High Temperature Materials Graphite (10/25/01)

B. Exelon Later Submits "White Papers" on Specific Topics to NRC

Purpose of White Papers: To formally document the meeting topic presentation (and noted Q&As) and; to provide an acceptable reference for the staff's review of the topic.

- Control of Chemical Attack, High Temperature Materials Graphite (10/23/01)
- Design Codes and Standards (10/30/01)

C. NRC Staff Reviews the White Papers (and meeting handouts)

Purpose: To develop and document the staff's RAIs on the key questions (Qs) directed at: (1) the staff's significant issues associated with the white paper topics; (2) Exelon's stated objective(s) for staff's review; (2/02)

D. NRC Staff Transmits the RAIs to Exelon (2/02) and; requests Exelon's response, stating that:

- Responses may be submitted during pre-application review period or,
- Responses may be provided later - as part of an actual application

E. NRC staff meets with Exelon (optional) to present and discuss it issues and RAIs and; respond to any Exelon clarification questions (Date: TBD)

F. Any Exelon responses (As) provided during the pre-application review period shall also be included by way of a revision/addition to the applicable white paper(s)

- G. Exelon and NRC staff meet with the ACRS/ACNW (~9/02) to discuss white paper topics and identified key issues.

Purpose: To obtain ACRS/ACNW input to the PBMR pre-application review.

- H. NRC staff prepares a SECY paper (~1/03) summarizing the results ~~on the~~ of the staff's pre-application review scope including:

- Significant aspects of the PBMR design, analysis, safety and technical basis
- Staff's views/positions, including the identified associated significant issues
- (Where possible) the staff's views on the paths needed to resolve the issues
- Staff-identified Commission policy issues with decision options, recommended option and the technical bases

- I. NRC staff send a letter to Exelon (~4/03) summarizing the results of the staff's pre-application review scope:

- Significant aspects of the PBMR design, analysis, safety and technical basis
- Staff's views/positions, including the identified associated significant issues
- (Where possible) the staff's views on the paths needed to resolve the issues
- Commission policy decisions and the technical bases

Roles and Responsibilities for the PBMR Pre-application Review (and RAIs)

1. RES has the lead responsibility
2. NRR and NMSS have a support responsibility
3. National Labs provide Expert Technical Assistance in some areas (e.g., ORNL)

- Thermal fluid graphs

RAI Development and Documentation Process

1. RES (with contractor support) will draft RAIs for each of the (3) technical topics
2. NRR/NMSS will provide office input to the draft RAIs
3. RES will transmit the agreed-upon RAIs to Exelon and request a response from Exelon
4. As needed, RES (with NRR/NMSS & contractor support) will present the RAIs to Exelon

RES Lead Reviewer for the (3) White Papers and RAIs

Dr. Joseph Muscara, DET
ORNL Tim Burchell

Charges for Staff Review Time

PBMR Pre-application Review: 100%

*need comments
by end of Jan
forward to Ann*