

EXELON CALL - 6/21/01

Stu Rubin, Diane Jackson, Amy Cubbage - NRC
Jim Muntz, Ed Wallace, John Huffnagel, Kevin Borton - Exelon

NRC:

Exelon's 1/30/01 slides listed key technical issues and near term goals (white papers, licensing approach and licensing plan).

RES SECY paper discussing plans for PBMR pre-application was biased to design issues - technology and key safety issues and related policy issues.

There are clear objectives on near term goals, but on the technical side, NRC is setting the agenda with Exelon providing information as they can. We don't sense what Exelon wants from the staff.

Ashok has requested the staff to prepare a detailed project plan with schedule and assigned resources. To do this we have to understand what Exelon's objectives are in the technology area. We are not going to tell Exelon what we need. The staff wants to meet Exelon's needs.

We need feedback from Exelon on scope and depth of pre-application review in the technology area. What topics would Exelon like to cover, what objectives does Exelon have for each topic, what does Exelon intend to provide to support the staff in meeting these objectives?

We understand that Exelon will not be providing a detailed preliminary design document as was provided by GA for the MHGTR.

EXELON:

There are technical issues that Exelon would like to discuss. For topics like fuel, materials, analytical codes, they would like to discuss and in some cases agree to testing plans. They want to understand the relation to key design requirements and ITAAC. They want to understand what requirements will be. They want to understand what the important parameters are and what the acceptance criteria will be. Regarding the DOE fuel testing program they would like to know what is going to be tested and what is success.

Exelon recognizes the need to feed curiosity and get some info out there. They need to describe the concept and how the design supports that. By September 2002, NRC and Exelon should have equal education and be able to relate back to requirements for PBMR and what the ITAACs will be here and in South Africa. They don't want to miss opportunities for testing in South Africa. Regarding the construction and manufacturing process they want to keep NRC informed so there is early identification of

6/25

issues/concerns with relating the South African experience to the US project. Exelon is interested in "criteria for licensibility" and to make sure they know what the NRC need to see in an application to support licensing. They are more interested in the direction than conclusions. They are trying to get directional signals of what will be required and what won't be required. For LWR it is clear what the requirements are. Success for PBMR pre-application is knowing what the path is, and they need NRC to help point them in the right direction. They are going to want positions on some tough issues such as containment and EPZ.

Preliminary list of issues from Exelon:

- Graphite fire
- water intrusion
- defense in depth
- source term
- containment
- fuel quality and durability
- safeguards
- control room (focus on habitability could cover human perf./digital I&C)
- High temp materials
- high level waste
- EPZ

There were a couple more I didn't catch

Exelon agreed to provide NRC a list of issues where they have uncertainty and propose a schedule for introducing each topic. Schedule and list of topics depend in part on what information PBMR provide Exelon and when it is provided (South Africans resources are currently devoted to the South African feasibility study). It also depends somewhat on trying present the issues in a logical order (i.e. source term should come before containment and EPZ). The Exelon list does not equal the NRC list. They don't have a breadth of design information at the ready. Information is not as developed as MHTGR was.

Exelon has committed to provide the NRC with clear objective or questions up front for each topical area they want to interact on. Exelon feels that the white paper on operator staffing is a model of a good interaction. They asked for a position on the concept of fewer operators in the control room. The staff told them the approach was conceptually acceptable and what they would have to do to justify their operator staffing levels when they prepare their application. They thought a similar approach would work for technical areas, but the staff cautioned that more technical detail would be required to support the staff's decision making process.

Exelon's objectives for pre-application are different from MHTGR. GA was a vendor with a design, and Exelon is a licensee looking for a license. Exelon is asking more of NRR. They are more interested in regulatory issues than research and technology issues.

Exelon is trying to influence the final design of PBMR to make it sensitive to NRC requirements. They also want to identify areas where there are regulatory hurdles. For example, are there codes and standards that are not familiar to, or accepted by the NRC? Exelon would like to identify these types of issues and determine what needs to be done to get the issues resolved (including identifying areas where the staff is lacking expertise to support licensing). Some specific examples are the structural codes for graphite, the temperature range of other codes and standards, and the application of ISO9000 which is not yet recognized by NRC. Exelon would also like to determine things like construction inspection lead times.

Exelon and the staff agreed that further dialogue was necessary and that another call should be set up when Tom King returns.