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Docket No.: Project 713

June 1, 2001

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Reference:

1. Letter dated May 10, 2001 "Regulatory Issues Related to the PBMR," from James A. Muntz - Vice President, Nuclear Projects, Exelon Generation, to Thomas King - RES, US NRC, and
2. Letter dated May 25, 2001 "PBMR 10 CFR Part 52 Applications and Licensing Plan," from James A. Muntz - Vice President, Nuclear Projects, Exelon Generation, to US Nuclear Regulatory Commission

Subject: Upcoming pre-application meeting between US NRC and Exelon Generation regarding the Pebble Bed Modular Reactor (PBMR)

Dear Sir/Madam,

A PBMR pre-application meeting has been scheduled for June 12 and 13, 2001 between the US NRC and Exelon Generation. The scope of this pre-application meeting will include a discussion and NRC assessment of the referenced letters regarding regulatory issues and Exelon's proposed Part 52 applications and licensing plan. In addition, the meeting will continue to discuss Exelon's proposed licensing approach presented to the NRC on April 30, 2001, and an initial discussion regarding the PBMR TRISO ceramic coated fuel.

Specifically, Exelon is requesting the NRC staff to provide on June 12, 2001 their initial impressions and assessment of the 9 regulatory issue "white papers" and the detailed application and licensing plan contained in the referenced Exelon letters to the NRC. Exelon would like to hear the staff's current views regarding interpretations, feasibility, assumptions and conceptual acceptability regarding these non-design issues.

In order to move forward with the PBMR licensability assessment, Exelon requests that the NRC staff be prepared to discuss their initial impressions and conceptual acceptance of the generic approach and methods described within the discussion paper titled "Proposed HTGR Licensing Framework Approach for the PBMR," distributed at the April 30, 2001 meeting.

The Exelon-proposed licensing approach, described during the April 30, 2001 pre-application meeting can be defined as a structured procedure (or process) that can be used to compare the design's safety features and functions with the NRC's mission and goals. This is normally accomplished by ensuring compliance with the NRC's regulations; however, much of the current regulations' language and purpose have been influenced by and written for legacy light water reactor designs. Therefore, the proposed approach establishes a means to rationally determine and document the reasoning for appropriate plant specific licensing requirements, and the extent of applicability of existing regulations.

DO64

The steps in proposed approach are as follows:

- 1) Determine the design independent and site independent top-level quantitative criteria that define the NRC mission and safety goals
- 2) Determine the design-specific licensing bases events (LBE) by means of the plant specific PRA
- 3) Determine the PBMR's applicable principal design safety criteria (GDCs) by examining the functions and features that prevent the criteria in step 1 from being exceeded (step 2 and step 3 are iterative steps)
- 4) Classify the systems, structures, and components (SSCs) that provide the safety related functions determined above and ensure the level of regulatory treatment assigned to these SSCs is commensurate with its safety significance.

Initially the above steps provide a focused and repeatable means to compare the design with current regulations at their functional level (see figure 1). The results of the proposed approach and comparison will allow any current regulation to be grouped into one of three categories when compared to the PBMR design: 1) completely applicable to PBMR, 2) partially applicable to the PBMR, 3) not applicable to the PBMR (i.e., LWR specific). In addition, the approach can highlight a fourth area: 4) PBMR specific safety functions not currently addressed by current regulations. This comparison can be initially performed during the pre-application phase with enough detail to determine if NRC policy clarifications are necessary to support gas reactor licensing.

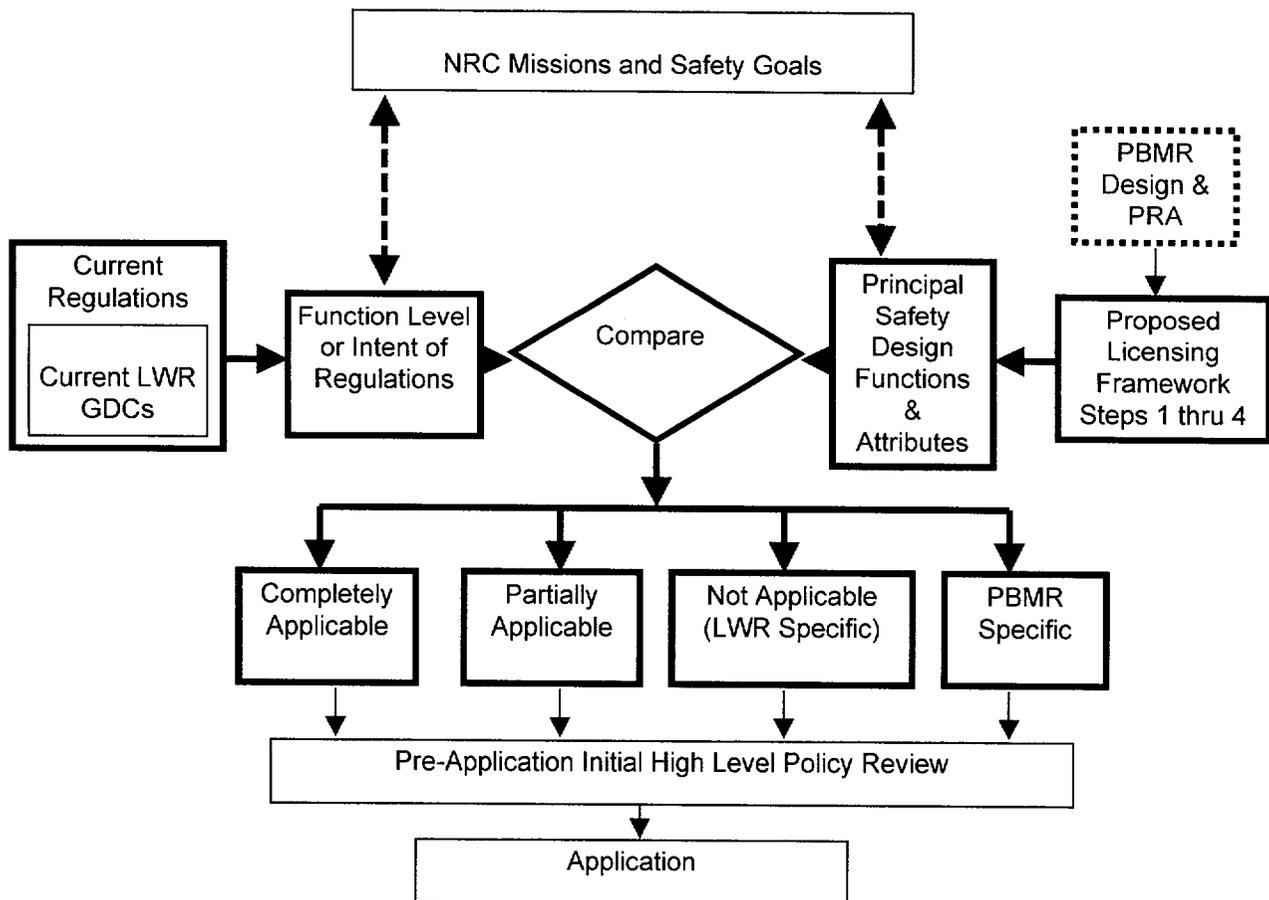


Figure 1

During the June 12, 2001 meeting, Exelon requests the staff be prepared to provide comments regarding the mission linkages, and top-level criteria identified as Figure 2, on page 6, and the Frequency-Consequence Risk Chart, identified as figure 3 on page 8 of the discussion paper. The following thought provoking questions were also presented during the April 30, 2001 meeting, and the staff's initial responses to these questions are requested at the upcoming working meeting.

- Are the regulatory mission linkages presented appropriate and acceptable for a HTGR design?
- Are the top-level regulatory criteria presented acceptable and can they remain valid through final design approval of a HTGR design?
- Can the relationship between criteria and acceptable ranges, as presented, provide the acceptance goals for HTGR approval?

Exelon will be prepared to provide a working copy of a contemporary "Top-Level US Regulatory Criteria" document addressing these areas specifically for the PBMR at the June 12, meeting.

Sincerely,



Kevin F. Borton
Manager, Licensing

cc: Samuel Collins, Director NRR
Ashok Thadani, Director RES
Thomas King, RES
William Borchardt, Associated Director NRR
Richard Barrett, NRR
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