

April 02, 2002

Kevin Borton, Licensing Manager
Exelon Generation
200 Exelon Way
Kennett Square, PA 19348

Dear Mr. Borton:

On February 14, 2002, the U.S. Nuclear Regulatory Commission (NRC) staff conducted a conference call with Exelon Generation on fuel cycle, transportation, and waste aspects of the Pebble Bed Modular Reactor (PBMR). The purpose of the conference call was for the staff to follow up and obtain clarification on Exelon's November 15, 2001, response to an information request documented in a letter dated September 26, 2001, from Thomas King (NRC) to James Muntz (Exelon). The November 2001 letter response from James Muntz documented Exelon's assessment on whether or not the specific technical information for inclusion in the PBMR pre-application review would be submitted on a schedule that would allow it to be included in the staff's pre-application review, and if not, what would be the alternative schedule.

A summary of the fuel cycle, transportation, and waste aspects discussed during the conference call is provided in the enclosure. These fuel cycle, transportation, and waste aspects have been identified by the staff for inclusion in the PBMR pre-application review. To be included in the pre-application review, the information would need to be submitted by December 2002. It is requested that you review the enclosed questions and respond whether or not the desired information can be provided by December 2002 and, if not, what alternative schedule you propose.

Please contact me (301-415-7499) or Stuart Rubin (301-415-7480) if you have any questions on this request.

Sincerely,

/RA/

Farouk Eltawila, Director
Division of Systems Analysis and Regulatory Effectiveness
Office of Nuclear Regulatory Research

Enclosure: As stated

cc w/encl.: Thomas P. Miller U.S. DOE

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*See previous concurrence

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Pebble Bed Modular Reactor Pre-Application Review Issues
Involving Fuel Cycle, Transportation and Waste

- Q1. What are Exelon's plans for submitting an application to NRC for the certification, review, and approval of fresh and spent PBMR fuel transportation packages? Alternatively, does Exelon plan to use a package that has been certified by a foreign transportation competent authority?
- Q2. What are Exelon's plans for spent fuel storage casks? What are Exelon's plans for licensing the on-site spent fuel storage facilities for the PBMR fuel?
- Q3. It is estimated that the PBMR spent fuel volume may be an order of magnitude greater than light-water reactor spent fuel on a per MWe basis. These larger volumes could necessitate a corresponding increase in the number of spent fuel shipments. Is Exelon considering the environmental impacts from transportation from the much larger number of spent fuel shipments?
- Q4. When will Exelon provide additional security and safeguards information?
- Q5. How will the spent fuel ultimately be disposed of? Does Exelon have any projected dates and plans?
- Q6. Exelon has not provided a discussion on the operational hazards of Carbon-14, Silver-110m and graphite dust. What is Exelon's strategy to protect against these hazards? Will the reactor design factor in considerations such as eventual dismantling?