

April 24, 2006

Mr. Edward G. Wallace, Senior General Manager-US Programs  
Pebble Bed Modular Reactor (Pty) Ltd.  
P.O. Box 9396  
Centurion 0046  
Republic of South Africa

SUBJECT: PBMR PRE-APPLICATION PHASE 2 INTERACTIONS

Dear Mr. Wallace:

By letter dated December 8, 2005 (ML053420601), Pebble Bed Modular Reactor (PBMR) (Pty) Ltd. provided a summary of pre-application outcome objectives and planned white papers (WPs) to support pre-application interactions with the U.S. Nuclear Regulatory Commission (NRC). NRC and PBMR discussed these objectives and plans in a meeting held on December 12, 2005 (ML053630306). NRC and PBMR met on February 28 and March 15, 2006 to familiarize NRC staff with the PBMR design and related issues (ML060750199 and ML060880497). PBMR has proposed submitting a series of 20 WPs beginning in May 2006 as part of Phase 2 pre-application activities. Each WP would include a substantive discussion on a specific PBMR topic, including technical, regulatory, and policy issues pertinent to the topic.

NRC has reviewed your proposal and agrees to review a limited set of WPs as part of Phase 2 pre-application activities. We intend to review and provide feedback on the three WPs on "Licensing-Basis Event Selection," "System Structure and Component Classification," and "Defense-in-Depth." Collectively, these WPs provide the framework of PBMR's planned design certification approach. The process and results of these reviews should serve as the basis for any future interaction.

These three WP topics represent a significant portion of the technical and policy challenges involved in the entire set of proposed WPs. They are also consistent with potential challenges relative to the on-going NRC efforts toward a risk-informed and performance-based regulatory framework for new reactor licensing. Outcomes of our pre-application review would include identification of key technical, regulatory, and policy issues that would need to be addressed and resolved in support of an effective design certification application for PBMR. It is important that PBMR proposes and develops sound methods, tools, and data to resolve key technical issues. Resolution of key regulatory and policy issues will follow the Commission decision process.

E. Wallace

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In accordance with 10 CFR Part 170, the NRC effort related to PBMR pre-application review will be conducted on a fee-billable basis. This cost does not include research infrastructure development that may be needed to support future certification and license application, and will not be billed to PBMR.

Please contact me or N. Prasad Kadambi of my staff at (301)415-5896, if you have further questions.

Sincerely,

*/RA/*

Christiana Lui, Deputy Director  
New Reactors and Computational Analysis  
Division of Risk Assessment & Special Projects  
Office of Nuclear Regulatory Research

Project No. 732

cc: See next page

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Christiana Lui, Deputy Director  
New Reactors and Computational Analysis  
Division of Risk Assessment & Special Projects  
Office of Nuclear Regulatory Research

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Letter to Edward G. Wallace from Christiana Lui dated April 24, 2006

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