



COMMISSIONER

UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

COMJSM-00-0003

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October 31, 2000

Approved with comments.

Richard A. Meserve 1/29/01

MEMORANDUM TO:

Chairman Meserve  
Commissioner Dicus  
Commissioner Diaz  
Commissioner McGaffigan

FROM:

Jeffrey S. Merrifield *JSM*

SUBJECT:

STAFF READINESS FOR NEW NUCLEAR PLANT  
CONSTRUCTION AND THE PEBBLE BED REACTOR

As you are aware, several utilities are seriously exploring the option of building new nuclear plants in the United States. Joe Colvin, the President of the Nuclear Energy Institute (NEI), recently announced that a new plant may be ordered in the United States within five years, but that conditions for doing so may be ready in as little as two years. In addition to these activities, PECO Energy (PECO) is actively involved in Pebble Bed reactor initiatives in South Africa. If such initiatives prove successful, it is not inconceivable to think that PECO may try to utilize this technology in the U.S. According to recent comments attributed to Corbin McNeill, PECO's President and CEO, PECO could apply for a design certification in as few as 15 months.

I am not prepared to address the likelihood of these initiatives, and I certainly do not want to give the impression that I am in any way promoting them—as I am not. However, given the magnitude of the technical, licensing, and inspection challenges associated with these initiatives, I believe the agency must approach them in a proactive manner. Specifically, I believe it would be prudent for us to take the steps necessary to ensure that the staff is prepared to carry out its responsibilities should new plant orders emerge or should PECO, or any other entity, pursue the Pebble Bed reactor in the United States.

I am sensitive to staff resource constraints, and appreciate that our limited resources must primarily be focused on immediate and definitive needs. However, consistent with the NRC's "Corporate Management Strategies," I believe the Commission must, at a minimum, better understand what general steps need to be taken and the timeframes required to do so, to assure agency readiness should these challenges arise. Therefore, I propose that the Executive Director for Operations (EDO) take the following actions.

1. Assess our staff's technical and licensing capabilities and identify enhancements, if any, that would be necessary to ensure that the agency can effectively carry out its responsibilities associated with a new plant application.

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*[Handwritten initials and a circled number 3]*

### COMMENTS OF CHAIRMAN MESERVE ON COMJSM-00-0003

As events in California have starkly revealed, the Nation is dependent on supplies of reliable and economical electrical energy to provide the foundation for our social and economic well-being. Society may decide that additional nuclear plants should be included in the portfolio of technologies that are deployed to meet expanding energy needs. And, if that is the case, it is incumbent on the Nuclear Regulatory Commission to assure that our regulatory processes do not stand as a needless impediment. The NRC's focus must remain on preserving the public health and safety, but we should seek to achieve that objective in a fair, efficient, and effective fashion. Because COMJSM-00-0003 is intended to assure the NRC's capability to respond to possible future construction, I approve it, subject to the following comments.

First, the staff is already pursuing a diverse range of activities that bear on new construction and the response to COMJSM-00-0003 should not impede these efforts. For example, as indicated by the memorandum to the Commission from the Executive Director of Operations (EDO) of November 14, 2000, the staff is investing resources to stay abreast of new advanced reactor designs because of the possible interest in building such designs in the United States. Similarly, the response to my memorandum of October 24, 2000, which concerns the need to assess the core technical capabilities that will be required of the staff in the future and of the steps that are needed to assure the availability of technically competent staff, should include consideration of the possible need to handle future new construction activities. And, as indicated by the memorandum to the Commission from the EDO of December 18, 2000, the staff is examining various issues relating to our procedural processes that bear on new plant construction. Moreover, the staff is currently discussing cooperative activities related to advanced reactor technology with the Department of Energy, consistent with our existing Memorandum of Understanding governing such interactions. The staff response to COMJSM-00-0003 should reflect an effort to integrate the various activities that are already underway and to determine if there are any significant gaps that require attention.

Second, I join Commissioner Diaz in his suggestion that the Commission's effort in connection with COMJSM-00-0003 should include the Pebble Bed Modular Reactor (PBMR), but should also extend beyond it to encompass other concepts. There is strong interest in the PBMR project in South Africa, which, if successful, could eventually result in construction activity in the U.S. (The NRC has previously indicated that it would provide technical assistance to South Africa in its assessment of the PBMR in part so that our staff could develop familiarity with the application of risk insights in the evaluation of this novel technology.) Nonetheless, it is premature to focus on just the PBMR because there are a variety of other approaches that might also be pursued.

Finally, I suggest that a particular emphasis be placed on the identification of regulatory issues. Nuclear energy will not be an attractive option unless our regulatory system is able to provide adequate assurance of safety through processes that are timely, reliable, and predictable. Because of the delay that can surround rulemaking activities, we should address and correct needless regulatory impediments now. The activities outlined in the EDO's memorandum of December 18, 2000, should facilitate this effort. In this regard, the staff should also incorporate into its planning the need for early interactions with the Advisory Committee on Reactor Safeguards so as to ensure that important technical and regulatory issues receive appropriate consideration by that group.