

January 27, 2010

Dr. Andrew C. Kadak  
Professor of the Practice  
Nuclear Science and Technology  
Massachusetts Institute of Technology  
77 Massachusetts Avenue  
Cambridge, Massachusetts 02139-4307

SUBJECT: COMMENTS AND RECOMMENDATIONS FOLLOWING CHAIRMAN'S REMARKS  
AT THE SMALL AND MODULAR REACTOR WORKSHOP

Dear Dr. Kadak:

Thank you for your letter dated December 1, 2009, addressed to Chairman Jaczko of the U.S. Nuclear Regulatory Commission (NRC). As you mention in your letter, the NRC has undertaken several initiatives to improve the incorporation of risk insights and performance-based approaches into our regulation of existing nuclear plants as well as the potential licensing of innovative designs. Our current plans regarding a "technology-neutral" licensing framework or other approach to support innovative technologies and designs is to assess the feasibility of such approaches in parallel with our pre-application and post-application activities related to the next generation nuclear plant (NGNP) program. A discussion of this plan is provided in SECY-09-0056, "Staff Approach Regarding a Risk-Informed and Performance-Based Revision to Part 50 of Title 10 of the *Code of Federal Regulations* and Developing a Policy Statement on Defense-In-Depth for Future Reactors, dated April 7, 2009 (ADAMS Accession No. ML090360197).

Ongoing activities related to developing licensing approaches for innovative reactor designs include a public meeting scheduled for February 10, 2010, between the NRC staff and staff from Idaho National Laboratory regarding their white paper entitled "Next Generation Nuclear Project Defense-in-Depth Approach" (ADAMS Accession No. ML093480191). In addition, the NRC staff is participating in the development of draft standards being prepared by the American Nuclear Society (e.g., ANSI/ANS-53.1-200x, "Nuclear Safety Criteria and Safety Design Process for Modular Helium-Cooled Reactor Plants") and in various international activities related to harmonizing safety approaches for gas-cooled and sodium-cooled reactors. We expect that this subject will be the focus of several meetings during 2010 and would welcome your attendance and participation in such discussions.

Regarding the information related to manufacturing licenses that we discussed during our telephone conversation on January 12, 2010, copies of several documents associated with the NRC review of Offshore Power Systems are provided under separate cover.

Dr. A. Kadak

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If you have any questions regarding our activities or suggestions on how the NRC might move forward on licensing approaches for innovative designs, please feel free to contact me at [william.reckley@nrc.gov](mailto:william.reckley@nrc.gov) or by telephone at (301) 415-7490.

Sincerely,

*/RA/*

William D. Reckley, Branch Chief  
Advanced Reactors Branch 1  
Advanced Reactor Program  
Office of New Reactors

Dr. A. Kadak

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Sincerely,

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William D. Reckley, Branch Chief  
Advanced Reactors Branch 1  
Advanced Reactor Program  
Office of New Reactors

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