April 2, 2010

Mr. Andrew J. Bieniawski,
Assistant Deputy Administrator
Office of Global Threat Reduction
NA-21/LENF955
U.S. Department of Energy
1000 Independence Ave., S.W.
Washington, DC 20585-1615

Dear Mr. Bieniawski:

I would like to take this opportunity to update you on recent actions taken to support the high priority and challenging initiative to convert the high performance research reactors (HPRR) from the use of high enriched uranium (HEU) to low enriched uranium (LEU) and the time needed for the NRC staff to complete its safety review. In Administrator D'Agostino's June 23, 2009, letter to Chairman Jaczko of the Nuclear Regulatory Commission (NRC), Administrator D'Agostino invited the NRC to provide a delegate to participate on the senior-level working group, informed the NRC of the aggressive schedule to complete HPRR conversions by the end of 2014, and indicated a need for the timely dedication of adequate, qualified, and capable resources. In the July 24, 2009, response to Administrator D'Agostino, Dr. Bruce Mallett, responding for the NRC Executive Director for Operations, committed continued NRC interactions with senior-level and technical working groups and support for the completion of HPRR conversions.

I have authorized, and my staff has initiated, a number of changes within the NRC Office of Nuclear Reactor Regulation that will ensure that the NRC has dedicated, what I believe to be, an adequate number of qualified and capable staff to provide for the timely review of fuel qualification reports, reactor conversion license amendments, and HPRR HEU to LEU conversions. Mr. Thomas Blount will continue to provide NRC management representation on the senior-level working group. We also brought onboard a Senior Technical Advisor with considerable research reactor experience to assist in the coordination between our respective organizations. We established a new technical branch led by an experienced Branch Chief and staffed with experienced Project Managers who are focused on this and a limited number of other special projects. We will continue to involve our key technical staff through participation in the HPRR technical working group. My staff plans to seek out and place under contract qualified fuel experts to assist with the necessary technical reviews if it can be verified that they are free from conflict of interest issues through previous involvement with the National Nuclear Security Administration's (NNSA) fuel design work. Finally, to maintain the effective communications established through our previous collaborative work on research reactor conversions, we find great benefit in periodic status meetings between our respective staff, such as the meeting scheduled for April 21, 2010, between Mr. Thomas Blount and Ms. Kathy Garcia of your staff.

My staff has provided a time estimate of one year for the review of the fuel qualification report and approval of a HPRR fuel design for use in NRC licensed reactors. This assumes that the

report is complete, is of high quality, and that conclusions presented in the initial fuel qualification report remain valid with respect to the conclusions of the comprehensive supplemental report. The need for additional information or the discovery of unexpected fuel performance following irradiation of the first set of fuel elements in Department of Energy's Advanced Test Reactor (ATR) driver position could result in the need for additional review time. It will also be incumbent on the operators of the HPRRs to submit a timely license amendment request for the conversion from HEU to LEU fuel that supports the established schedule. My staff has estimated that 15 months will be needed to review and approve a fuel conversion license amendment. Their estimate assumes the submitted license amendment is complete, is of high quality, and that fuel performance assumptions assumed in their submittal remain valid following completion of the irradiation of the first set of fuel elements in the ATR driver positions. To the extent possible and practical, my staff is agreeable to conduct the required reviews in parallel and will consider review of partial applications. This may provide a means to reduce the overall time required to complete HPRR conversions; however, this tactic also introduces a level of risk in that it may become necessary to repeat technical reviews if actual fuel performance deviates from that expected or assumed.

I look forward to the continued collaboration with the NNSA and the opportunity to build on our previous successes with the completion of HPRR HEU to LEU conversions. We must ensure, as we have with past HEU-LEU conversions, that operational safety of the HPRRs remains as our primary focus over and above the schedule. I would like to close with assurance that the NRC is fully committed to support the timely completion of this challenging and high priority initiative.

Please contact me, (301)-415-1270, if you desire additional discussion on this topic or have additional questions or concerns.

Sincerely,

/RA/
Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

cc: K. Sheely
K. Garcia

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Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

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