

August 3, 2009

MEMORANDUM TO: Chairman Jaczko
Commissioner Svinicki

FROM: Dr. Dale E. Klein **/RA/**

SUBJECT: REVISITING THE PARADIGM FOR SPENT FUEL
STORAGE AND TRANSPORTATION REGULATORY
PROGRAMS

For the reasons discussed in more detail below, I believe that the time has come for the Commission to fundamentally revisit the paradigm for our regulatory programs for spent fuel storage and transportation. The staff should be directed to undertake a thorough review of these programs to evaluate their adequacy for ensuring safe and secure storage and transportation of spent nuclear fuel for extended periods beyond the 120 year timeframe we have considered up to this point. This review should include the standards, regulations, guidance, review processes, and inspection and enforcement procedures. The staff should also undertake research to bolster the technical basis of our regulatory framework to support extended periods. The review should identify risk-informed, performance-based enhancements that will bring increased predictability and efficiency to our regulatory processes, and should investigate ways to incentivize these processes to encourage the adoption of state of the art technology for storage and transportation in a risk-informed, performance-based manner. Last, but not least, the review should be conducted in a transparent, participatory, and collaborative manner with our stakeholders.

The new Administration has stated that it intends to seek a different solution to resolving the back end of the nuclear fuel cycle than the proposed Yucca Mountain repository and is planning a comprehensive review of alternatives to high-level waste and spent fuel disposal at Yucca Mountain. Almost every alternative will rely to some extent on longer storage and possibly more transportation of spent nuclear fuel than was originally planned in the United States. Further, the globalization of safe uses of nuclear material counsels that we seek solutions that foster nuclear safety and security on a broad scale.

The NRC's existing regulatory programs for transportation and storage are well established, respected worldwide, and ensure adequate protection of public health and safety and promote the common defense and security. As noted above, the technical basis supporting our current regulatory programs is sound. In addition to the NRC's domestic programs, it is essential that we lead global efforts to ensure continued safety and security in an effective and efficient manner, now and in the future. Therefore, the review I am proposing should also benefit from experience gained through the Multi-National Design Evaluation Process (MDEP) for reactors and consider opportunities for comparing and, where appropriate, harmonizing, international standards for transport packages and storage casks.

If the Commission agrees, I would expect the staff to develop a project plan, including objectives, plans, potential policy issues, projected schedules, performance measures, and projected resource requirements. Such a plan should leverage, as appropriate, improvement initiatives that the staff already has underway, and it should be available in time to support mid-year reprogramming in FY 2010. As a shorter term action, the staff should prepare a policy statement to support the agency's participation in the upcoming September, 2009 MDEP meeting.

SECY, please track.

cc: SECY
 OGC
 EDO