

January 5, 2012

MEMORANDUM TO: R. W. Borchardt  
Executive Director for Operations

FROM: Annette L. Vietti-Cook, Secretary **/RA/**

SUBJECT: STAFF REQUIREMENTS – SECY-11-0140 – ENHANCEMENTS  
TO THE FUEL CYCLE OVERSIGHT PROCESS

The Commission has approved the staff's recommendation to implement Option 1 for enhancing the Fuel Cycle Oversight Process (FCOP), subject to the comments below.

The staff should continue their interaction with stakeholders, including use of public workshops, to develop the optimal basis for the cornerstones, ultimately recommending the path that is most likely to help ensure safe operations. Consideration should be given to how the cornerstones would be understood in the context of fuel cycle facility operation and less to whether they resemble those of the Reactor Oversight Process (ROP). Possibly, a combination of hazard and operations-based cornerstones could prove to be the optimal approach to help ensure safe operations. When ready, staff should provide a notation voting paper to the Commission to bring this major issue to closure.

The staff should implement a pilot program at a representative group of fuel cycle facilities once the revised process is complete. The representative group should include different classes of fuel cycle facilities according to their complexity and radiological hazard. The pilot program should be designed to exercise the inspection, assessment, and enforcement components of the revised process in order to identify and resolve implementation issues. The staff may be in a better position to develop the action matrix following the completion of a pilot program. The staff should provide the Commission with a notation vote paper that includes the results of the pilot, including the proposed action matrix, any necessary changes to the revised FCOP, and the staff's recommendations for full implementation.

The staff should develop a publicly-available resource loaded project plan that clearly establishes timelines and major milestones and provide the plan to the Commission for information. The project plan should be used to facilitate full stakeholder engagement in the development and implementation of the enhanced FCOP through processes such as public workshops.

As staff develops a qualitative fuel cycle significance determination process, they should inform the Commission if they determine that this approach will not be realistic or precise enough to be useful. The staff should apply quantitative analyses to the revised process when practical and reasonable. Staff is best placed to apply this judgment on a case-by-case basis. Additionally, for the longer-term, the staff should develop and test the use of "focused PRA-like analyses," as recommended by the ACRS.

Further development of fuel cycle-specific cornerstones should include the development and testing of multiple cornerstones as part of the pilot process analyzed across the entire set of relevant fuel cycle facilities. The staff should provide the Commission with an analysis of the testing of multiple cornerstones and recommendations for further development, based on this analysis.

The staff should continue to engage with stakeholders on a definition of “performance deficiency,” including issues associated with licensees failing to meet “self-imposed standards” and report the results to the Commission.

In order to develop the fuel cycle significance determination process (SDP) with the benefit of recent regulatory insights, the staff should analyze the most recent 2 or 3 years of inspection findings, enforcement actions, and events at fuel cycle facilities by running them through the draft qualitative type SDP. The staff should benchmark the results with each facility’s Integrated Safety Analysis and characterize the results in terms of risk. The staff should make these results public, conduct a workshop with stakeholders, and engage the Advisory Committee on Reactor Safeguards (ACRS). The staff should also engage ACRS once the staff has completed developing a qualitative fuel cycle SDP and completed working with stakeholders to develop the definition of “performance deficiency” to be used in the SDP. Prior to initiation of the pilot program directed above, staff should provide the results of these activities to the Commission in a notation vote paper providing the staff’s recommendations. The paper should also contain illustrative examples demonstrating how inspection findings could be evaluated consistently and predictably using the proposed SDP.

The staff should proceed with the development and implementation of the incentives for licensees to maintain an effective Corrective Action Program.

When resourcing inspections, in addition to using cornerstones, the staff should also use information from Integrated Safety Analyses to focus on the most safety significant areas.

As noted by the staff in SECY-10-0031, “the existing [fuel cycle] oversight process is effective and ensures safety and security.” Consequently, the activities undertaken to enhance the NRC’s fuel cycle oversight process are truly that – enhancements – and are a lower funding priority than some other recently emergent, unfunded activities, such as the Commission-approved post-Fukushima response actions. As the staff prepares proposed funding adjustments, for the Commission’s approval, related to funding the near-term Fukushima actions, it should keep this prioritization in mind.

The staff should update the Commission at least once a year on its progress.

cc: Chairman Jaczko  
Commissioner Svinicki  
Commissioner Apostolakis  
Commissioner Magwood  
Commissioner Ostendorff  
OGC  
CFO  
OCA  
OPA  
Office Directors, Regions, ACRS, ASLBP (via E-Mail)  
PDR