

June 30, 2014

MEMORANDUM TO: Mark A. Satorius
Executive Director for Operations

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

SUBJECT: STAFF REQUIREMENTS – SECY-13-0137 –
RECOMMENDATIONS FOR RISK-INFORMING THE REACTOR
OVERSIGHT PROCESS FOR NEW REACTORS

The Commission has disapproved the staff's Recommendation 1, to develop an integrated risk-informed approach for evaluating the safety significance of inspection findings for new reactor designs using qualitative measures to supplement the risk evaluations. The staff should enhance the significance determination process (SDP) by developing a structured qualitative assessment for events or conditions that are not evaluated in the supporting plant risk models. Areas where such a qualitative assessment may prove useful include evaluation of performance deficiencies associated with passive safety systems, digital instrumentation and controls, and human performance issues. The SDP should continue to place emphasis on the use of the existing quantitative measures of the change in plant risk for both operating and new reactors. The staff should develop guidance to address circumstances that are unique to new reactors, for example due to uncertainty of the reliability of passive systems, structures and components (SSCs) or other SSCs with limited operational experience. The staff should submit a paper to the Commission with its proposed approach for any revisions to the SDP for new reactors at least one year before the scheduled implementation of any changes to the Reactor Oversight Process (ROP). The staff should also evaluate the need to provide additional clarity on the use of qualitative factors for operating reactors to provide more transparency and predictability to the process.

The Commission has approved the staff's Recommendation 2, to develop appropriate Performance Indicators (PIs) and thresholds for new reactors, specifically those PIs in the Initiating Events and Mitigating Systems cornerstones, or develop additional inspection guidance to address identified shortfalls to ensure that all cornerstone objectives are adequately met. The staff should develop, with appropriate stakeholder input, the necessary updates to the PIs, including any new PIs or changes to thresholds, and submit them to the Commission for approval prior to power operation for the first new reactor units. The staff should also further explore how the current Safety System Functional Failure PI would be applied to the passive safety-related components in Generation III+ reactors before deciding upon whether or how to apply this PI for new reactors.

The Commission noted that the overall structure of the existing ROP should be preserved. The staff should notify the Commission through the annual report on the ROP self-assessment if they identify any further changes that are necessary, once the staff has gained operating experience with the new Generation III+ plants.

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