

October 22, 2012

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

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

SUBJECT: STAFF REQUIREMENTS – SECY-12-0081 – RISK-INFORMED  
REGULATORY FRAMEWORK FOR NEW REACTORS

The Commission has approved the staff's plan to address the potential gap in the Tier 2 change process by a) ensuring that there are sufficient details on all key severe accident features in Tier 1 and b) including a change process in future design certification rulemaking in Section VIII for non-ex-vessel severe accident features similar to Section VIII.B.5.c for ex-vessel severe accident features.

The Commission has approved the staff's recommendation (Option 2C) to transition from large release frequency to large early release frequency (LERF) at or before initial fuel load and discontinue regulatory use of large release frequency (LRF) and conditional containment failure probability thereafter.

The staff should provide an information paper to the Commission that reviews the history of the NRC's use and consideration of LRF. This paper should also provide staff's views regarding the pros and cons of requiring the use of LRF, possibly in addition to LERF, for all operating reactors.

The Commission has disapproved the staff's recommendation (Option 3B) related to the Reactor Oversight Process (ROP). The staff should give additional consideration to the use of relative risk metrics, or other options, that would provide a more risk-informed approach to the determination of the significance of inspection findings for new reactors. If the staff believes that this is not a viable option for new reactor oversight, it should provide a technical basis for its conclusions. The staff should provide the Commission with a notation vote paper that provides:

1. A technical basis for the staff's proposal for the use of deterministic backstops, including examples;
2. A technical evaluation of the use of relative risk measures, including a reexamination of the pros and cons listed in the staff's 2009 white paper;
3. A discussion of the appropriateness of the existing performance indicators and the related thresholds for new reactors.

(EDO)

(SECY Suspense:

10/22/13)

The Commission would benefit from a fresh review of the practices and approaches the NRC has developed for the Reactor Oversight Program over the course of years. The staff should pursue an independent review of the program's objectives and implementation, including the relative roles of headquarters and regional staff, our interactions with industry over performance indicator assessments, and the effectiveness of NRC's assessment of substantive cross-cutting issues. Such an assessment would provide a reinforced foundation upon which the agency can plan for the operational review of new nuclear power plants based on Generation III+ reactor technology.

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