

March 2, 2011

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

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

SUBJECT: STAFF REQUIREMENTS – SECY-10-0121 – MODIFYING THE
RISK-INFORMED REGULATORY GUIDANCE FOR NEW
REACTORS

The Commission has disapproved the staff's recommendation to modify risk guidance for new reactors as described in SECY10-0121. The Commission has approved a hybrid of Options 1 and 2 as described below. The staff should continue to use the existing risk-informed framework, including current regulatory guidance, for licensing and oversight activities for new plants, at this time, pending additional analysis and review as described below. Substantive changes that would alter the outcomes of the activities below should be made only under specific Commission direction.

The Commission reaffirms that the existing safety goals, safety performance expectations, subsidiary risk goals and associated risk guidance (such as the Commission's 2008 Advanced Reactor Policy Statement and Regulatory Guide 1.174), key principles and quantitative metrics for implementing risk-informed decision making, are sufficient for new plants. Because new plant designs incorporate operating experience from current generation reactors, severe accident research, and risk insights from design probabilistic risk assessments, the Commission expects that the advanced technologies incorporated in new reactors will result in enhanced margins of safety. However, the Commission continues to expect (consistent with the 2008 Advanced Reactor Policy Statement), as a minimum, at least the same degree of protection of the public and the environment that is required for current-generation light water reactors. New reactors with these enhanced margins and safety features should have greater operational flexibility than current reactors. This flexibility will provide for a more efficient use of NRC resources and allow a fuller focus on issues of true safety significance.

In the near-term and coordinated with the below activities, the staff should articulate, in a single document, a coherent overview of the Commission's policies and decisions regarding new reactor safety performance. This document should be written at a summary-level (e.g., a brochure) for purposes of public communication and to supplement NRC staff knowledge management (which would be done separately).

The staff should engage with external stakeholders in a series of tabletop exercises to test various realistic performance deficiencies, events, modifications, and licensing bases changes against current NRC policy, regulations, guidance and all other requirements (e.g., Technical Specifications, license conditions, code requirements) that are or will be relevant to the licensing bases of new reactors. The tabletop exercises should either confirm the adequacy of those regulatory tools (and make the NRC aware of these potential scenarios such that

commensurate regulatory oversight can be applied) or identify areas for improvement, such as potential adjustments to the Reactor Oversight Process.

The staff should continue to work with stakeholders to consider appropriate use of 10 CFR 50.59 by combined license holders and develop guidance for changes during the construction phase and operational phase of a new nuclear power plant that would not require NRC approval. This new plant change control guidance should address severe accident design features and other elements of 10 CFR Part 52 not applicable to operating plants. The staff should assess the sufficiency of regulatory guidance to support combined license holder application of risk-managed technical specifications and potential application of 10 CFR 50.69, *Risk-Informed Categorization and Treatment of Structures, Systems and Components for Nuclear Power Reactors*.

The staff should provide, in the form of Commission Assistant notes or briefings, a schedule of activities followed by progress updates every six months.

The staff should inform the Commission of the results of the above activities. The staff should prepare a notation vote paper with options and recommendations that provide greater specificity and definition than was contained in SECY-10-0121. If the staff concludes that the enhanced safety margins for new plants will significantly decrease without regulatory policy changes, the staff should clearly explain how "significant" (in the context of decreasing safety margins) was defined to support the recommendations.

(EDO)

(SECY Suspense: 6/4/12)

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