

June 26, 2003

MEMORANDUM TO: William D. Travers  
Executive Director for Operations

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

SUBJECT: STAFF REQUIREMENTS - SECY-03-0047 - POLICY ISSUES  
RELATED TO LICENSING NON-LIGHT-WATER REACTOR  
DESIGNS

The Commission has approved the staff's recommendations as outlined in this paper for issues 2, 4, 5, and 7.

The Commission has approved the staff's recommendation for issue 1 on implementation of the Commission's expectations for enhanced safety in future non-light-water reactors, with the exception of accounting for the integrated risk posed by multiple reactors. The staff should provide further details on the options for, and associated impacts of, requiring that modular reactor designs account for the integrated risk posed by multiple reactors. Historically, the NRC has issued operating licenses to sites with as many as three units, granted Construction Permits for four at one site (Shearon Harris), and docketed another application for five at one site (Palo Verde). The staff should review those dockets for relevant historical regulatory positions on these issues, including potential precedents. The staff will need to establish a usable definition of core damage and will need to determine if the concept of large early release frequency is meaningful or if a level 3 risk assessment would be needed.

The staff should consider whether it can accomplish the same goals associated with issue 2 in a more efficient and effective manner by updating the Commission Policy Statement on Use of Probabilistic Risk Assessment Methods in Nuclear Regulatory Activities to include a more explicit discussion of defense-in-depth, risk-informed regulation, and performance-based regulation.

The Commission has disapproved the staff's recommendation for issue 3 to proactively participating in development of and endorsing international codes and standards where such codes and standards have been identified by applicants or pre-applicants for use in their submittals or by staff as needed to fill gaps in the NRC's non-LWR infrastructure. The staff should pursue option (a), specifically to "Review international codes and standards only as part of an application or pre-application review." The staff should gain experience through review of international codes and standards during the pre-application and application reviews of non-LWRs then apply the lessons-learned from these reviews to their activities involving our domestic codes and standards committees.

The Commission has disapproved the staff's recommendation for issue 6 related to the requirement for a pressure retaining containment building. At this time there is insufficient information for the Commission to prejudge the best options and make a decision on the viability of a confinement building. The staff should develop performance requirements and criteria working closely with industry experts (e.g., designers, EPRI, etc.) and other stakeholders regarding options in this area, taking into account such features as core, fuel, and cooling systems design. The staff should pursue the development of functional performance standards and then submit options and recommendations to the Commission on this important policy decision.

cc: Chairman Diaz  
Commissioner Dicus  
Commissioner McGaffigan  
Commissioner Merrifield  
OGC  
CFO  
OCA  
OIG  
OPA  
Office Directors, Regions, ACRS, ACNW, ASLBP (via E-Mail)  
PDR