

December 14, 2012

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

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

SUBJECT: STAFF REQUIREMENTS – SECY-12-0093 – CLOSURE
OPTIONS FOR GENERIC SAFETY ISSUE - 191, ASSESSMENT
OF DEBRIS ACCUMULATION ON PRESSURIZED-WATER
REACTOR SUMP PERFORMANCE

The Commission has approved the staff's recommendation in SECY-12-0093 to allow licensees the flexibility to choose any of the three options discussed in the paper to resolve Generic Safety Issue (GSI)-191: Option 1 – Compliance with 10 CFR 50.46 Based on Approved Models; Option 2 – Mitigative Measures and Alternative Methods Approach; and Option 3 – Different Regulatory Treatment for Suction Strainer and In-Vessel Effects.

For Option 1 and the deterministic prong of Option 2, the staff should work with stakeholders to establish testing protocols and acceptance criteria, and the resolution period should begin after a reasonable period of time to complete the planned tests and the staff's review. It should not be triggered from the artificial date of January 1, 2013. For the risk-informed prong of Option 2 and for Option 3, the resolution period should encompass two refueling outages after issuance of NRC's safety evaluation report on the South Texas Project (STP) risk-informed GSI-191 resolution pilot. Consequently, the staff should develop completion schedules on a plant-specific basis using an approach that is linked to the completion of necessary testing (or the STP pilot, in the case of the risk-informed approach) and the issuance of staff's evaluation of the results, followed by – at a minimum -- one refueling outage to identify, engineer, and source the required materials for any necessary plant modifications and a second refueling outage to carry out those modifications.

As noted in the Staff Requirements Memorandum on SECY-10-0113 (Closure Options for Generic Safety Issue - 191, Assessment of Debris Accumulation on Pressurized Water Reactor Sump Performance), the measures taken thus far in response to the sump clogging issue have contributed greatly to the safety of U.S. nuclear power plants. Given the vastly enlarged advanced strainers installed, compensatory measures already taken, and the low probability of challenging pipe breaks, adequate defense-in-depth is currently being maintained. The staff should be receptive to plant-specific implementation schedules that consider the cumulative effects of other required regulatory actions, licensee planned outages, critical modifications, maintenance activities, and occupational doses. The staff should remain open to staggering licensee submittals and the associated NRC reviews to accommodate the availability of staff and licensee resources. The staff should consider PRA insights provided by licensees to inform implementation schedules.

The staff should work expeditiously to develop clear guidance that details how Option 3 should be implemented and how it will be evaluated.

The staff should provide the Commission with a status update no later than one year from the date of the SRM on SECY-12-0093.

(EDO)

(SECY Suspense:

12/16/13)

The forthcoming § 50.46c proposed rulemaking should contain a provision allowing NRC licensees on a case-by-case basis, to use risk-informed alternatives. The license amendment process would be used to reconstitute the long-term core cooling licensing basis. Stakeholder comments should be solicited on the proposed provision. The Commission is also providing this direction in the SRM to SECY-12-0034, "Proposed Rulemaking- 10 CFR 50.46c: "Emergency Core Cooling System Performance During Loss-of-Coolant Accidents."

The agency has dealt with GSI-191 for many years and resolving this matter has proven to be an extraordinarily complex and, at times, frustrating process. Part of the reason for this frustration is a decision made quite some time ago to continually expand the definition of the issue to capture concerns that are related to but in some cases quite different from the original sump-clogging challenge. As part of its efforts to improve the Generic Issues Program as described on page 8 of SECY-12-0105, "Summary of Activities Related to the Generic Issues Program," the staff should consider the need to definitively scope, investigate, act upon, and close a technical issue. In its next annual status report to the Commission on the Generic Issues Program, the staff should discuss the actions taken to assure that future generic issues are and remain well-defined and avoid the mission creep experienced by GSI-191.

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