

March 19, 2013

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

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

SUBJECT: STAFF REQUIREMENTS – SECY-12-0157 – CONSIDERATION
OF ADDITIONAL REQUIREMENTS FOR CONTAINMENT
VENTING SYSTEMS FOR BOILING WATER REACTORS WITH
MARK I AND MARK II CONTAINMENTS

The Commission has approved Option 2 to issue a modification to Order EA-12-050, "Order Modifying Licenses with Regard to Reliable Hardened Containment Vents," to require licensees of Boiling Water Reactors (BWRs) with Mark I and Mark II Containments to upgrade or replace the reliable hardened vents required by Order EA-12-050, with a containment venting system designed and installed to remain functional during severe accident conditions. The staff should send the final proposed revision of EA-12-050 to the Commission 10 business days prior to the issuance of the Order.

(EDO)

(SECY Suspense: 60 days from the date of this SRM)

The Commission has approved the development of technical bases and rulemaking for filtering strategies with drywell filtration and severe accident management of BWR Mark I and II containments. The technical bases and rulemaking should consider Option 3 – design and installation of an engineered filtered containment venting system intended to prevent the release of significant amounts of radioactive material following the dominant severe accident sequences at BWRs with Mark I and Mark II containments; and Option 4 – development of requirements and technical acceptance criteria for confinement strategies and requirements for licensees to justify operator actions and systems or combination of systems, such as suppression pools, containment sprays, and separate filters to accomplish the function and meet the requirements.

Within one year of the date of the staff requirements memorandum, the staff should provide an information paper to the Commission presenting the technical bases that support the development of the rulemaking. The technical bases should assume the installation of severe accident capable hardened venting systems ordered under Option 2 and, as a consequence of that action, should assume that the benefits of these vents accrue equally to engineered filters and to filtration strategies. In the rulemaking technical bases, the staff should evaluate a variety of performance criteria, such as a decontamination factor, equipment and procedure availability similar to those required to implement 10 CFR 50.54(hh), or other measures that may be developed during the stakeholder engagement. The rulemaking technical bases should include a discussion of validation and testing that would be required to support various options. The staff should ensure that the performance and risks of the various filtering strategies and equipment considered are fully evaluated. The rulemaking should fully explore the requirements associated with measures to enhance the capability to maintain containment integrity and to cool core debris.

The staff should engage a diversity of external stakeholders throughout the development of the technical bases and rulemaking and should present to the Advisory Committee on Reactor Safeguards at appropriate points in the process. To engage a diversity of stakeholders and viewpoints most effectively, the staff should consider various formats, to include public meetings, workshops, and tabletop exercises to foster detailed discussion of analytical methods, modeling assumptions, and potential performance criteria.

The staff should keep the Commission periodically informed of their progress. If policy issues emerge, the staff should provide a notation vote paper.

The staff should provide the proposed rule to the Commission within two years of the final SRM on SECY-12-0157, and the final rule within four years.

(EDO)

(SECY Suspense:

Technical basis 1 year from SRM)

Proposed Rule 2 years from SRM)

Final Rule 4 years from SRM)

Independent of the BWR Mark I and Mark II containment filtration issue, the staff should seek detailed Commission guidance regarding the use of qualitative factors in a future notation voting paper.

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