POLICY ISSUE
(Notation Vote)

June 18, 2015 SECY-15-0085

FOR: The Commissioners

FROM: Mark A. Satorius
Executive Director for Operations

SUBJECT: EVALUATION OF THE CONTAINMENT PROTECTION AND RELEASE REDUCTION FOR MARK I AND MARK II BOILING WATER REACTORS RULEMAKING ACTIVITIES (10 CFR PART 50) (RIN-3150-AJ26)

PURPOSE:

This paper transmits to the Commission the draft containment protection and release reduction (CPRR) rulemaking regulatory basis and the U.S. Nuclear Regulatory Commission (NRC) staff's path forward for addressing filtering strategies and severe accident management issues related to Mark I and Mark II boiling water reactor (BWR) containments. This paper is in response to the Staff Requirements Memorandum (SRM) to SECY-12-0157, "Consideration of Additional Requirements for Containment Venting Systems for Boiling Water Reactors with Mark I and Mark II Containments," dated March 19, 2013, in the Agencywide Documents Access and Management System (ADAMS) under Accession No. ML13078A017, which directed the NRC staff to provide an information paper to the Commission with a regulatory basis that supports the development of a filtering strategies and severe accident management rulemaking.

SUMMARY:

In response to the March 2011 accident at Fukushima Dai-ichi, the NRC issued Order EA-13-109, "Issuance of Order Modifying Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation Under Severe Accident Conditions," dated

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June 6, 2013 (ADAMS Accession No. ML13143A321), which required licensees having BWRs with Mark I and Mark II containments to upgrade or replace their vents with a containment venting system designed and installed to remain functional during severe accident conditions. The Commission also directed the staff to develop technical bases and rulemaking for filtering strategies and severe accident management of BWR Mark I and II containments.

During the development of the draft regulatory basis for the CPRR[1] rulemaking, the NRC staff developed a risk evaluation and has evaluated alternatives for possible courses of action related to filtering strategies and severe accident management of BWRs with Mark I and Mark II containments relative to the NRC's Safety Goal Policy Statement's quantitative health objectives (QHOs).[2] The staff has found that the possible plant modifications (e.g., engineered filters) to enhance containment protection and release reduction capability beyond those imposed by Order EA-13-109 could result in reductions in offsite consequences; however, these reductions would not meet the quantitative threshold for a substantial safety enhancement because the individual early fatality risk and the individual latent cancer fatality (ILCF) risk are below the QHOs without additional plant modifications. The staff plans to proceed with a CPRR rulemaking that would make Order EA-13-109 requirements for BWRs with Mark I and Mark II containments generically applicable. The rulemaking would also include the planned implementation of Phase 2 of the order to require licensees of BWRs with Mark I and Mark II containments to have the capability to add water from external sources and control its flow to cool core debris during severe accident conditions. The staff concludes the ability to provide post-core-damage water addition results in worthwhile additional protection for public health and safety by protecting the integrity of the containment, reducing the release of radioactive materials in some severe accident events, and contributing to the balance between accident prevention and mitigation.

The staff's plans for the CPRR rulemaking differ from the staff's recommendation in SECY-12-0157 to require the installation of an engineered filtering system. More detailed analysis and quantification has shown the following: (1) core-damage frequency from an extended loss of alternating current (ac) power (ELAP) is lower than estimated in SECY-12-0157; (2) identification of important contributors to core-damage frequency and sensitivity analyses enhance the staff's confidence in its quantitative analyses and therefore reduces the importance of remaining uncertainties; and (3) in addition to the severe accident capable vents portion of Order EA-13-109, external water addition is shown to avert containment failure via drywell liner melt-through in a wide range of scenarios and achieves benefits in terms of averted health risks even without an engineered filtering system whose benefits are not fully realized in scenarios where the release pathway bypasses the filtering system. Therefore, the staff plans to proceed with a proposed rulemaking to address the

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[1] As the rulemaking progressed, the staff determined that the original rulemaking name (filtering strategies) no longer matched the purpose of the activity. The staff felt it was more logical to have the rulemaking reflect the two issues being analyzed–enhanced containment protection and release reduction. The new proposed name (containment protection and release reduction) was accepted at a rulemaking Division level steering committee meeting in August 2014.

[2] 51 FR 28044 (August 4, 1986), as revised by 51 FR 30028 (August 21, 1986). "Safety Goals for the Operations of Nuclear Power Plants; Policy Statement." *Federal Register,* U.S. Nuclear Regulatory Commission, Washington, D.C. (ADAMS Accession No. ML011210381).

containment protection improvements related to venting and water addition without including requirements for installation of engineered filtering systems.

BACKGROUND:

The accident at the Fukushima Dai-ichi nuclear power station reinforced the importance of reliable operation of containment vents for BWR plants with Mark I and Mark II containments. As part of its response to the lessons learned from the accident, the NRC issued Order EA-12-050, "Issuance of Order to Modify Licenses With Regard to Reliable Hardened Containment Vents," dated March 12, 2012 (ADAMS Accession No. ML12054A694), requiring licensees to upgrade or install a reliable hardened containment venting system for Mark I and Mark II BWR containments. The Order EA-12-050 requirements were intended to increase the reliability of BWR Mark I and II containment venting to support decay heat removal from the reactor core and to provide protection against over-pressurization of the primary containments before core damage.

While developing the requirements for Order EA-12-050, the NRC acknowledged that questions remained about maintaining containment integrity and limiting the release of radioactive materials if licensees used the venting systems during severe accident conditions. The NRC staff presented options to address these issues for Commission consideration in SECY-12-0157,"Consideration of Additional Requirements for Containment Venting Systems for Boiling Water Reactors with Mark I and Mark II Containments," dated November 26, 2012 (ADAMS Accession No. ML12326A370). The options presented in SECY-12-0157 included: (1) continuing with the implementation of Order EA-12-050 for reliable hardened vents; (2) requiring licensees 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; (3) requiring licensees with BWR Mark I and Mark II containments to install an engineered filtered containment venting system intended to prevent the release of significant amounts of radioactive material following the dominant severe accident sequences; and (4) pursuing development of requirements and technical acceptance criteria for performance-based confinement strategies. The staff provided an evaluation considering various quantitative analyses and qualitative factors related to the four options and recommended that the Commission approve Option 3 to require the installation of an engineered filtering system. While acknowledging that the quantitative analyses indicated that the costs of the proposed actions outweighed the benefits, the staff recommended in SECY-12-0157 that the Commission consider both the quantitative and qualitative factors and concluded that the proposed additional regulatory actions were cost-justified.

In the SRM to SECY-12-0157, the Commission directed the NRC staff to: (1) issue a modification to Order EA-12-050 requiring BWR licensees with Mark I and 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, and (2) develop technical bases and rulemaking for filtering strategies with drywell filtration and severe accident management of BWR Mark I and II containments. The staff subsequently issued Order EA-13-109, which rescinded the requirements imposed in Order EA-12-050 and replaced them with the following requirements for licensees with BWRs with Mark I and II containments:

- Phase 1: Upgrade the venting capabilities from the containment wetwell to provide reliable, severe accident capable hardened vents to assist in preventing core damage and, if necessary, to provide venting capability during severe accident conditions.

- Phase 2: Install a reliable, severe accident capable drywell vent, or develop a reliable containment venting strategy that makes it unlikely the site would need to vent from the containment drywell during a severe accident condition.

The NRC staff also developed and evaluated other possible performance criteria directed in the Commission's SRM for SECY-12-0157. As directed in the SRM, the staff assessed possible requirements beyond those proposed in SECY-12-0157 for containment pressure control and venting to include measures to enhance the capability to maintain containment integrity and to cool core debris.

DISCUSSION:

The NRC staff developed the enclosed draft regulatory basis to support the CPRR rulemaking. The objective of the CPRR regulatory basis is to determine what, if any, additional requirements are warranted related to filtering strategies and severe accident management of BWRs with Mark I and Mark II containments assuming the installation of severe accident capable hardened vents per Order EA-13-109. The staff interacted with external stakeholders and identified four major alternatives (and numerous sub-alternatives) for possible courses of action related to filtering strategies and severe accident management for BWRs with Mark I and Mark II containment designs. The CPRR alternatives are:

1. Take no action (Order EA-13-109 implemented without additional regulatory actions related to BWR Mark I and Mark II containments).

2. Pursue rulemaking to make Order EA-13-109 generically applicable for protection of BWR Mark I and II containments against over-pressurization.

3. Pursue rulemaking to address overall BWR Mark I and Mark II containment protection against multiple failure modes by making Order EA-13-109 generically applicable and requiring external water addition points[3] that would allow for water addition into the reactor pressure vessel (RPV) or drywell (DW) to prevent containment failure from both over-pressurization and liner melt-through.

4. Pursue rulemaking to address both containment protection against multiple failure modes and release reduction measures for controlling releases through the containment venting systems. This alternative would include making Order EA-13-109 generically applicable and require external water addition into the RPV or DW. In addition, licensees would be required to reduce the fission products released from the containment by either implementing strategies to maximize the availability and efficiency

[3] The external water addition points are located outside the reactor building.

of the wetwell in scrubbing or filtering fission products before venting from containment and/or installing an engineered filter in the containment vent paths.

Each alternative was compared to alternative 1 (no action) to determine the relative benefits and costs of the alternatives.

In the following sections of this paper, the NRC staff compares its analysis in SECY-12-0157 to the current technical and regulatory analyses performed. The staff also summarizes what items (i.e., scope, results, etc.) have changed, if any, since SECY-12-0157 was issued. Additional details of the changes and results can be found in the enclosed draft CPRR regulatory basis.

Technical Evaluation

To support the regulatory analysis of the four CPRR alternatives, the staff performed detailed thermal-hydraulic and severe accident progression computer simulations with MELCOR, performed offsite release and consequence analysis of radioactive materials with the MELCOR Accident Consequence Code System (MACCS), and developed a probabilistic risk assessment (PRA) of the accident scenarios. The accident scenarios were selected to capture the most likely variations of an ELAP-initiated severe accident as identified in the PRA.[4] These technical analyses supported the staff's assessment of the possible benefits of various approaches to filtration and severe accident management of BWR Mark I and II containments. The details of the technical analysis are provided in Section 4, "Technical Evaluation," of the enclosed draft CPRR regulatory basis.

There was no fundamental shift in the technical approach or results with regard to the MELCOR analyses presented in SECY-12-0157. However, the scope of the analysis was expanded to also include MELCOR and MACCS modeling of a Mark II BWR containment and site. The current analysis also incorporates opening the wetwell vent early in an ELAP rather than keeping the vent closed until core damage is imminent. This is the strategy selected by the industry to comply with Order EA-12-049, "Issuance of Order to Modify Licenses With Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," dated March 12, 2012 (ADAMS Accession No. ML12054A735). The results were very similar and verified that both water addition and venting are required to maintain containment structural integrity and that water addition is a beneficial strategy to influence containment conditions, cool core debris, and reduce radiological releases from the dominant containment failure modes.

The MACCS analysis provided in the draft CPRR regulatory basis document, likewise, is similar to that in SECY-12-0157 with the exception that the MACCS analysis now also includes Mark II BWR containments. The quantitative results and the key insights from the current analysis and the analysis included in SECY-12-0157 are quite similar. There is no early fatality risk for any of the cases analyzed and the ILCF risk is more than a factor of 10 lower than the QHO level. Conditional ILCF risk (per event) is dominated by long-term phase low level exposures. Offsite

[4] See Section 4.2.2, "Accident Sequence Delineation," in the draft CPRR regulatory basis.

emergency phase exposures are calculated to be small because close-in populations will have sufficient time to evacuate given the delayed releases calculated for the selected accident scenarios in MELCOR.[5] Offsite consequences related to land contamination and economic consequences, as well as public health consequences from long-term low level exposures, are reduced with external water addition and are further reduced for those cases with both external water addition and an external filter.[6]

The scope and level of detail of the PRA model developed for SECY-12-0157 has been expanded. The PRA model used in SECY-12-0157 did not delineate core-damage sequences; rather, it relied on a generic estimate of core-damage frequency developed from previous NRC staff and licensee PRAs. In order to provide a quantitative basis for regulatory decision-making, the draft CPRR regulatory basis PRA includes the following features:

- Models to estimate the frequency of ELAP events resulting from internal events and earthquakes, based on revaluated seismic hazard estimates developed by the industry.[7]

- Core-damage event trees (CDETs) that delineate accident sequences from the occurrence of an ELAP event to the onset of core damage. The CDETs reflect station blackout mitigation strategies using installed plant and portable equipment.

- Accident progression event trees (APETs) that delineate accident sequences from the onset of core damage to the release of radioactive materials. The APETs reflect CPRR strategies such as post-core-damage containment venting and water addition.

- Random and seismically induced equipment failures.

- In-control room and local manual operator actions specified by the emergency procedure and severe accident guidelines.

- Identification of important contributors to core-damage frequency.

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5 Separate calculations were performed to assess the sensitivity of evacuation assumptions on the early fatality risk and latent cancer fatality risk metrics. These calculations show that even for the earliest calculated release to the environment (7.3 hours), substantial evacuation delays would not cause either QHO to be exceeded. In fact, disabling the evacuation model entirely and assuming the population shelters-in-place still results in neither QHO being exceeded for the selected accident scenario. Details are provided in Section 4.4.3, "MACCS Sensitivity Calculation Results" in the draft CPRR regulatory basis.

6 See Section 4.5, "Conditional Consequences of Different CPRR Alternatives," in the draft CPRR regulatory basis.

7 Accidents caused by deliberate malevolent acts such as sabotage or terrorism are not included in this analysis.

- Sensitivity evaluations to gain insight into how human error probability affects the quantitative results.

The results of the revised PRA show a lower value for core-damage frequency from an ELAP event as compared to SECY-12-0157.

Regulatory Evaluation

Containment Protection (Alternatives 2 and 3)

The CPRR rulemaking is linked to the ongoing efforts to implement Order EA-13-109. The CPRR alternatives 2 and 3 relate to containment protection in that the regulatory action would have the objective of preventing failure of containment structures and resultant uncontrolled release of radioactive material.

The industry's approach to complying with Phase 2 of Order EA-13-109 is to incorporate the addition of water during a severe accident as part of the actions needed to support venting and help prevent the over pressurization of BWR Mark I and II containments.[8] The proposed severe accident water addition (SAWA) measures are designed to limit the maximum containment temperatures, which are used to define the design specifications for unfiltered drywell venting-related equipment for those licensees planning to comply with the order by installing a severe accident capable drywell vent (option 1 in the NEI guidance[9]). SAWA is also an integral part of strategies to make unlikely the need for a drywell vent by maintaining capabilities to vent from the containment wetwell (i.e., through the suppression pool) for licensees that pursue severe accident water management (SAWM) (option 2 in the NEI guidance). The integrated plans from licensees for Phase 2 compliance are due to the NRC in December 2015.

The planned inclusion of external water addition as part of the implementation of Phase 2 of Order EA-13-109 has the additional benefit of providing capabilities to address other containment integrity failure modes, such as leakage through the drywell head at high temperature and pressure and molten core debris breaching the containment liner (i.e., liner melt-through). In addition, venting from the containment through the wetwell reduces the release of radioactive materials because the water in the suppression pool scrubs or filters the release. The additional provisions for cooling core debris and the ability to reduce releases by venting through the wetwell as part of implementing Order EA-13-109 are considered within the enclosed draft CPRR regulatory basis. Such measures address the Commission direction in the SRM to SECY-12-0157 to explore requirements associated with measures to enhance the capability to maintain containment integrity and to cool core debris. The analysis provided in SECY-12-0157 credited water addition capabilities required to address the loss of large areas of a plant due to fires or explosions but the NRC staff acknowledged in the paper that additional requirements might be warranted to address severe accident conditions. Additional discussion of the accident management functions and benefits from SAWA are provided in the enclosed draft CPRR regulatory basis.

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8 Letter to Jack R. Davis (NRC) from Steven P. Kraft (NEI), "Compliance with Phase 2 of NRC Order to Modify the Licenses of Boiling Water Reactors (BWRs) with Mark I and II Containments with Regard to Reliable Hardened Containment Vents Capable of Operation Under Severe Accident Conditions (EA-13-109)," dated September 10, 2014 (ADAMS Accession No. ML14259A186).

9 Nuclear Energy Institute (NEI) guidance, "NEI 13-02, Rev. 0E2, Industry Guide for Compliance with Order EA-13-109," dated December 15, 2014 (ADAMS Accession No. ML14349A371).

As described in SECY-12-0157, a regulatory analysis based only on quantitative factors would not likely lead to regulatory requirements beyond those imposed by Order EA-13-109 given the low probability of a severe accident condition and the protective actions that would be taken to protect local populations. The additional analysis performed for the draft CPRR regulatory basis reinforces those previous findings and concludes that additional regulatory actions would not result in a substantial safety improvement in terms of providing frequency-weighted benefits that meet the quantitative threshold requirements of the NRC's safety goal policy statement.[10] The discussion in SECY-12-0157 regarding qualitative factors used to support the quantitative analysis remains valid, but consideration of those factors can now be viewed in the context of the other post-Fukushima safety enhancements, additional technical analyses, and recent Commission decisions.[11] The draft CPRR regulatory basis provides an updated discussion of qualitative factors for the various alternatives considered. The NRC staff concluded that alternative 3 provides the most qualitative benefits of all the potential regulatory actions considered in the draft regulatory basis.

The NRC staff plans to make generically applicable to BWR Mark I and Mark II containments the benefits provided by external water addition within the proposed CPRR rulemaking. The staff's proposal has minimal costs because it is being implemented as part of the industry's response to Order EA-13-109. Even though external water addition was not specifically called for in Phase 2 of Order EA-13-109, the staff concludes that the ability to provide post-core-damage water addition results in worthwhile additional protection for public health and safety by protecting the integrity of the containment and reducing the release of radioactive materials under certain scenarios.

Release Reduction (Alternative 4)

In addition to measures to prevent an uncontrolled release of radioactive materials resulting from a containment failure, the Commission directed the NRC staff to assess possible requirements to reduce or filter planned releases during containment venting operations following core damage. The staff assessed whether imposing such requirements provide a substantial safety enhancement, and if so, whether such a requirement would be justified in light of the associated costs.

The draft CPRR regulatory basis describes the detailed analysis that was performed to support a direct comparison of releases and consequent health risks with the NRC's QHOs defined in the Safety Goal Policy Statement. In that comparison, the NRC staff identified and evaluated several possible performance measures in SECY-12-0157 related to release reduction including decontamination factors (DFs). The results of the CPRR analysis show that the potential benefits of regulatory actions to reduce the amount of radioactive materials released by

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[10] SECY-12-0157 and the related SRM established that possible regulatory actions to improve the performance of BWR Mark I and II containments during severe accident conditions would be evaluated as potential cost-justified substantial safety improvements.

[11] SRM-SECY-12-0110, "Consideration of Economic Consequences within the U.S. Nuclear Regulatory Commission's Regulatory Framework," dated March 20, 2013 (ADAMS Accession No. ML13079A055) and SRM-SECY-14-0087, "Qualitative Consideration of Factors in the Development of Regulatory Analyses and Backfit Analyses," dated March 4, 2015 (ADAMS Accession No. ML15063A568).

containment venting operations during severe accidents do not meet the quantitative criteria for providing a substantial safety improvement. Furthermore, the cost would far exceed the calculated benefits. The staff notes that alternative 4 (installation of engineered filters) shows advantages when evaluated against the additional offsite consequence measures analyzed in the draft CPRR regulatory basis report (e.g., area of land exceeding long-term habitability criterion and population subject to long-term protective actions). Unlike additional measures to maintain containment integrity and to cool core debris (i.e., external water addition), there are no ongoing activities to offset the costs of the evaluated release reduction proposals or to otherwise justify pursuing them under the NRC's established regulations and guidance for regulatory analyses and plant backfits. The NRC staff notes that the small risk benefits calculated for alternative 4 are comparable to those associated with releases in COMSECY-13-0030, "Staff Evaluation and Recommendation for Japan Lessons-Learned Tier 3 Issue on Expedited Transfer of Spent Fuel," dated November 25, 2013 (ADAMS Accession No. ML13329A918). After considering the analysis results, operating history, and limited safety benefits of possible plant changes, the staff recommended that further study would be unlikely to support a requirement that reactor licensees expedite the transfer of spent fuel from their spent fuel pools into dry cask storage and the Commission determined that no additional regulatory actions were warranted.

As directed by the SRM to SECY-12-0157, the NRC staff identified and evaluated several possible performance measures related to release reduction. In SECY-12-0157, one potential approach to defining a performance measure was based on a required decontamination factor for the available combination of plant systems, such as RPV or DW sprays, the suppression pool, the reactor building, and, if necessary, an engineered filter. Another approach stated in SECY-12-0157 was to limit the release of radioactive materials as low as reasonably achievable using currently available filtering technologies. The staff summarizes results using different performance measures that could be used to support decision-making (i.e., alternatives to Commission policies on safety goals and severe accidents) and describes several concepts in the draft CPRR regulatory basis. Some of these decision-making models and criteria are used in other countries and the discussion can help explain differences in regulatory requirements related to installing engineered filters as part of a containment venting system.

A recent Organization for Economic Cooperation and Development report[12] provides a summary of the plans of various countries regarding the installation of filtered containment venting systems. For the majority of their nuclear plants, most countries are requiring external filters based on a reduction of radiological impacts. In these countries it appears sufficient to conclude that filtered containment venting systems are beneficial to address severe accidents. However, in the draft CPRR regulatory basis, these benefits are offset by the low probability associated with accidents where the filtered containment venting option would be useful.

Cost-Benefit Analysis

[12] NEA/CSNI/R(2014)7, "Status Report on Filtered Containment Venting", July 2014, http://www.oecd-nea.org/nsd/docs/2014/csni-r2014-7.pdf.

Although the potential benefits from possible measures to limit releases through the containment venting systems during severe accidents are well below the NRC's threshold for

developing regulatory requirements, the NRC staff also collected updated industry cost estimates for implementing the CPRR alternatives. These updated cost estimates have not changed the staff's conclusion in SECY-12-0157 that none of the proposed alternatives would satisfy the NRC's criteria for cost-justified substantial safety enhancements based on the quantitative analyses.

Backfitting Considerations

The proposed CPRR rulemaking would make generically applicable in Part 50 the requirements in Order EA-13-109 with an additional requirement for the use of SAWA/SAWM (i.e., alternative 3) such that they would become requirements for BWR nuclear power plants with Mark I and II containments. To the extent that the proposed CPRR rule would make the requirements of Order EA-13-109 generically applicable, the proposed rule, as applied to existing licensees to whom Order EA-13-109 was directed, would not constitute backfitting under Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.109.

The addition of a requirement for a SAWA/SAWM capability could constitute a backfit. Therefore, should the NRC staff determine, after receiving comments on this draft regulatory basis, that the rulemaking described as alternative 3 remains the preferred approach, the NRC staff will determine if a complete backfit analysis is required and ensure that any proposed rule is in compliance with the requirements of 10 CFR 50.109.

Summary of the Interactions with Industry, Members of the Public, and the ACRS

The NRC staff held 13 public meetings with nuclear industry representatives between June 2013 and December 2014. At these meetings, the participants discussed the technical and regulatory issues of the proposed CPRR rulemaking. The staff also presented the draft results of the CPRR rulemaking analysis in August and November of 2014 to the ACRS Reliability and PRA subcommittee.

Next Steps

The NRC staff plans to proceed with alternative 3, developing the proposed rulemaking for improved protection for BWR Mark I and Mark II containments to make generically applicable the containment protection measures imposed by Order EA-13-109, including the planned implementation for Phase 2 of that order that uses external water addition (i.e., SAWA/SAWM). The NRC staff is currently scheduled to provide the final CPRR regulatory basis to the Commission by September 19, 2015, the proposed rule by September 19, 2016, and the final rule by December 19, 2017. The staff will ensure any proposed rule is in compliance with 10 CFR 50.109 before providing the proposed rule to the Commission.

Once the draft CPRR regulatory basis is made public through the normal Commission review process, the NRC staff will issue a *Federal Register* notice requesting public comments on the document. During the comment period, the staff will hold a public meeting to provide members

of the public an opportunity to ask questions and have discussions about the draft CPRR regulatory basis. The staff will also continue to meet with members of the public and the ACRS during the proposed and final rule stages. These efforts to obtain public feedback are consistent with the intent of the formal Cumulative Effects of Regulation requirements directed

by the SRM to SECY-11-0032, "Consideration of the Cumulative Effects of Regulation in the Rulemaking Process," dated October 11, 2011 (ADAMS Accession No. ML112840466).

In addition, the staff will develop a NUREG technical report that will document the analysis performed to support the CPRR activities completed. The draft NUREG will be published with the proposed rule and the final NUREG will be published with the final rule. In addition, the staff will publish any supporting draft and final guidance with the proposed and final rules, respectively.

The NRC staff will continue to coordinate the activities associated with Order EA-13-109 and the CPRR rulemaking to ensure that the desired outcomes are being achieved. If during the rulemaking process the industry's response to Phase 2 of the order changes or if other information comes to light that significantly affects the regulatory evaluation described in the draft CPRR regulatory basis, the staff will reevaluate its proposed regulatory action and related justifications. The NRC staff will notify the Commission of any such significant changes to the path described in this paper.

COORDINATION:

The Office of the General Counsel has reviewed this document and has no legal objections.

/RA/

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Enclosure:
Draft CPRR Regulatory Basis