



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

August 19, 2015

SECRETARY

COMMISSION VOTING RECORD

DECISION ITEM: SECY-15-0085

TITLE: 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)

The Commission acted on the subject paper as recorded in the Staff Requirements Memorandum (SRM) of August 19, 2015.

This Record contains a summary of voting on this matter together with the individual vote sheets, views and comments of the Commission.

A handwritten signature in blue ink, reading "Annette L. Vietti-Cook", followed by a horizontal line and a long, sweeping flourish.

Annette L. Vietti-Cook
Secretary of the Commission

Enclosures:

1. Voting Summary
2. Commissioner Vote Sheets

cc: Chairman Burns
Commissioner Svinicki
Commissioner Ostendorff
Commissioner Baran
OGC
EDO
PDR

VOTING SUMMARY - SECY-15-0085

RECORDED VOTES

	APRVD	DISAPRVD	ABSTAIN	NOT PARTICIP	COMMENTS	DATE
CHRM. BURNS		X			X	8/13/15
COMR. SVINICKI	X	X			X	7/24/15
	X	X			X	8/12/15
COMR. OSTENDORFF		X			X	8/13/15
COMR. BARAN	X				X	7/24/15

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary

FROM: CHAIRMAN BURNS

SUBJECT: SECY-15-0085: EVALUATION OF THE
CONTAINMENT PROTECTION AND RELEASE
REDUCTION FOR MARK I AND MARK II BOILING
WATER REACTORS RULEMAKING ACTIVITIES (10
CFR PART 50) (RIN-315-AJ26)

Approved _____ Disapproved X Abstain _____ Not Participating _____

COMMENTS: Below _____ Attached X None _____

Entered in STARS

Yes x

No _____



Signature

13 August 2015

Date

Chairman Burns' Comments on SECY-15-0085
Evaluation of the Containment Protection and Release Reduction
for Mark I and Mark II Boiling Water Reactors Rulemaking Activities

I disapprove the staff's plan to issue a *Federal Register* notice requesting public comments on the draft regulatory basis for the Containment Protection and Release Reduction (CPRR) rulemaking. After careful consideration of the pros and cons of each of the alternatives presented in the paper and accompanying draft regulatory basis, I conclude that Alternative 1—to leave the existing orders in place and take no additional regulatory action—is the best course. Prior to Commissioner Svinicki's conversion of the staff's information paper to a notation vote paper, the staff was planning to proceed with Alternative 3, namely, developing the proposed rulemaking for improved protection for boiling water reactors (BWR) with Mark I and Mark II containments that would make generically applicable the containment protection measures imposed by Order EA-13-109, "Order Modifying Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation under Severe Accident Conditions." The staff's planned course of action also would have included codifying the planned implementation for Phase 2 of that order which would rely on external water addition during a severe accident. Staff estimates that the rulemaking to codify such requirements would take 2-3 years to complete. However, as the staff itself has noted, there is no practical difference in safety outcomes between Alternatives 1 and 3. As such, for the reasons I outline below, I strongly believe that the NRC can ensure an equivalent level of safety today without any additional rulemaking activity and expenditure of additional resources.

First and foremost, Order EA-13-109, which was imposed on all BWRs with Mark I and II containments in 2013, already serves as a legally binding mechanism that effectively achieves the results the staff is seeking through its proposed path forward. Order EA-13-109 currently requires those licensees to have a reliable, severe accident capable hardened containment venting system. As noted by the staff in SECY-15-0085, 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. This is the only method of compliance for which the industry has developed NRC-endorsed guidance. To date, no licensee has informed the NRC that it will pursue a different solution to comply with the order, and even if one did, such a course would require plant-specific analysis and NRC review and approval under the terms of the order. The industry guidance reinforces this by stating that those licensees that desire to pursue a different option must work directly with the NRC to develop acceptable guidance. Although the guidance is not in and of itself legally binding, the fact that there is currently no other technically viable method to comply with Order EA-13-109 would put a heavy burden on any licensee that chooses to pursue a different solution. In addition, once a method for complying with the order is approved by the NRC, a licensee seeking to change its method of compliance would need agency approval of the change.

To further emphasize this point, I note that all licensees subject to the order have already submitted to the NRC an overall integrated plan describing their approach to compliance with Phase 1 of the order and are required to submit an overall integrated plan for Phase 2 of the order by December 31, 2015. The NRC staff will review the overall integrated plans and issue interim staff evaluations. If needed, the staff will ask for additional information from licensees and perform regulatory audits. The overall integrated plans will be updated every six months, and once the licensee has achieved full compliance with the order, the staff will issue a final safety evaluation report and perform post-compliance inspections. The NRC's reviews of licensee overall integrated plans, combined with interim onsite audits and post-compliance inspections, provide oversight mechanisms through which the NRC can ensure that licensees are complying with the existing order in an acceptable way.

In sum, I am confident that the currently accepted industry-wide approach to comply with Order EA-13-019 already achieves the level of safety that is envisioned in pursuing rulemaking.

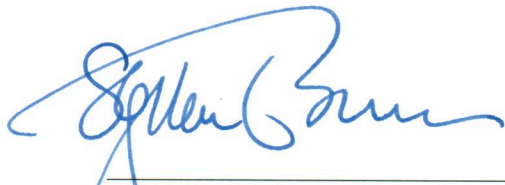
Although some prefer using rulemaking to achieve regulatory objectives (and I concede there are times when rulemaking may be the preferred course), it is important to recall that from a legal and enforcement perspective, orders are no less robust than other means of imposing regulatory requirements and are no less "fair" in terms of the procedural means of achieving their imposition. In fact, the NRC staff engaged stakeholders during the development of the Order EA-13-109 by holding a series of public meetings and making available revisions of the draft order as they were prepared, and the orders were subject to the hearing requirement of section 189a of the Atomic Energy Act. In addition, the guidance documents supporting implementation of the order were made available in draft form for public comment.

Another consideration obviating the need for rulemaking in this instance is that Order EA-13-109 applies exclusively to BWRs with Mark I and Mark II containments, the last of which received its operating license over 25 years ago. There have been several evolutions of BWR containment designs since then and there are no expectations that a BWR with a Mark I or II containment will ever be licensed to operate in the United States again. In my view, this fact significantly reduces the value of expending resources to make the requirements of Order EA-13-019 generically applicable through rulemaking. Historically, a key motivation for making order requirements generically applicable in regulations was so that those requirements could be applied to future licensees without the need to impose orders. There being no realistic possibility in this case, the need for a generic framework to support future BWR Mark Is and IIs is non-existent.

Finally, Alternative 1 is the path forward most in line with the with the agency's efforts to reduce the cumulative effects of regulation and the Commission's direction with respect to Project Aim. In the staff requirements memorandum (SRM) for SECY-15-0015 on Project Aim, the Commission approved rebaselining the work of the agency and noted that:

This effort should not focus exclusively on whether there is a specific statutory requirement or Commission direction to perform a given task. The process should also consider what work is most critical to the safety and security mission of the agency . . . If through this process, the staff finds that the agency expends resources on tasks that may no longer be necessary, but which the staff was previously directed to perform, the staff should propose changes for Commission review and approval along with a discussion of why the task was originally required and why it is no longer needed.

Although the staff is implementing Commission direction from the SRM on SECY-12-0157, "Consideration of Additional Requirements for Containment Venting Systems for Boiling Water Reactors with Mark I and Mark II Containments," in proceeding with the development of the CPRR rulemaking, the Commission should heed its own more recent direction to the staff. As the staff acknowledges, there is little to no additional safety benefit to be gained by proceeding with the CPRR rulemaking which would require significant resources and time to complete. Therefore, focusing on implementation of Order EA-13-109, without the unnecessary step of its "codification" by rule, is the better course.



Stephen G. Burns
13 August 2015

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary

FROM: COMMISSIONER SVINICKI

SUBJECT: SECY-15-0085: EVALUATION OF THE
CONTAINMENT PROTECTION AND RELEASE
REDUCTION FOR MARK I AND MARK II BOILING
WATER REACTORS RULEMAKING ACTIVITIES (10
CFR PART 50) (RIN-315-AJ26)

Approved XX In Part Disapproved XX In Part Abstain _____

Not Participating _____

COMMENTS: Below _____ Attached XX None _____



SIGNATURE

07/ 24 /15

DATE

Entered on "STARS" Yes ✓ No _____

**Commissioner Svinicki's Comments on SECY-15-0085
Evaluation of the Containment Protection and Release Reduction for
Mark I and Mark II Boiling Water Reactors Rulemaking Activities**

I approve in part and disapprove in part the staff's proposed path forward to pursue containment protection and release reduction (CPRR) rulemaking. This information paper was converted to a voting matter at my request because, upon review of the paper, I discovered that the staff's path forward in addressing filtering strategies and severe accident management issues related to Mark I and Mark II boiling water reactor containments incorporates an approach to cost benefit analysis having a singular reliance upon the unquantified benefit of "enhancing defense-in-depth" that I rejected in my vote on SECY-15-0065, the draft proposed rule on Mitigation of Beyond-Design-Basis Events, and for which it cannot be assumed there exists majority Commission support. Consequently, I initiated conversion of this paper to a voting matter to create the opportunity for the Commission to speak to the underlying analysis and issues and to align the staff's activities to conform to the Commission's eventual deliberative outcome on these points.

I approve the staff's planned activity to pursue rulemaking to address overall BWR Mark I and Mark II containment protection against multiple failure modes, including over-pressurization, by making Order EA-13-109 generically applicable, but I disapprove including requirements for external water addition points that would allow for water addition into the reactor pressure vessel or drywell to prevent containment failure from both over-pressurization and liner melt-through. Such measures are important, to be sure, but under NRC's risk informed, performance based regulatory framework, these measures are the "how," not the "what," and reside appropriately in guidance as *a means*, but not *the exclusive means*, of complying with the "how" performance objectives of Order EA-13-109 – specifically, the Phase 2 Order requirement that licensees "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."

Although the paper was transmitted as an Information Paper, and therefore does not include options *per se*, my approval aligns most closely with the staff's CPRR Alternative 2 of codifying Order EA-13-109 into regulation, but I would add the additional direction to the staff that the "requirements" outlined in Alternative 3 of severe accident water addition and severe accident water management should instead be enshrined in guidance, typifying one means of compliance, but not to exclude others that licensees could propose to the NRC. Having participated as a member of the Commission that directed the staff's work to date on the issue of filtering, it is my view that this outcome aligns most closely with the Commission's previous direction and intention on this matter.

Notwithstanding that, however, the staff's preliminary cost benefit analysis in the draft regulatory basis to justify including the water addition and water management elements as rule requirements suffers from the same defects as those I pointed out in my vote on SECY-15-0065, resulting in my disapproval of the inclusion of Severe Accident Management

Guidelines (SAMGs) in the proposed rule enclosed with that paper. The parallels are strong. Namely, the staff has concluded that "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 . . . 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."

The staff also notes that "[t]here is no early fatality risk for any of the cases analyzed and the [individual latent cancer fatality] ILCF risk (per event) is *more than a factor of 10 lower* than the [quantitative health objectives] QHO level." (emphasis added) I would remind the staff of its own words from the draft regulatory basis: "The safety goal screening evaluation is designed to answer whether a regulatory requirement should not be imposed generically on nuclear power plants because the risk to the population is already acceptably low. This evaluation is intended to eliminate some proposed requirements from further consideration independently of whether they could be cost-beneficial." The staff has its answer.

Consequently, the draft regulatory basis should not be promulgated for public comment. Rather, the next step should be the preparation of a proposed rule and accompanying draft guidance that codifies Order EA-13-109. Given that most of the analytical heavy lifting on this matter has already been completed, the staff should be able to present the draft proposed rule expeditiously to the Commission for its review. Proceeding in this fashion will bring to closure more rapidly one aspect of our response to the Fukushima events while continuing to provide for adequate protection of public health and safety.

Finally, I am bothered that the staff tallies "costs" based on the following logic: "The staff's proposal has minimal costs because it is being implemented as part of the industry's response to Order EA-13-109." I shudder to think that we torture logic in this way: "If I order someone to do something, I can later tabulate the cost as being free." This falls far short of meeting the spirit of the authentic examination of costs and benefits required when examining various public policy choices. The same thing was attempted on SAMGs. I reject this logic. The NRC is capable of doing cost benefit analysis with greater financial integrity than this. It is my hope that, subsequent to the Commission's final decisions on SECY-15-0065 and SECY-15-0085, we will return to doing so.


 Kristine L. Svinicki 07/24/15

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary

FROM: COMMISSIONER SVINICKI

SUBJECT: SECY-15-0085: EVALUATION OF THE
CONTAINMENT PROTECTION AND RELEASE
REDUCTION FOR MARK I AND MARK II BOILING
WATER REACTORS RULEMAKING ACTIVITIES (10
CFR PART 50) (RIN-315-AJ26)

Approved XX In Part Disapproved XX In Part Abstain _____

Not Participating _____

COMMENTS: Below _____ Attached XX None _____



SIGNATURE

08/ 12 /15

DATE

Entered on "STARS" Yes ✓ No _____

**Commissioner Svinicki's Supplemental Comments on SECY-15-0085
Evaluation of the Containment Protection and Release Reduction for
Mark I and Mark II Boiling Water Reactors Rulemaking Activities**

I supplement and revise aspects of the vote I filed on July 24, 2015, as described in these additional comments. I revise my vote only with respect to giving my approval to a different approach to this matter. Although I continue to approve in part and disapprove in part the staff's proposed path forward as outlined in the information paper submitted to the Commission on June 18, 2015 (and subsequently converted at my request into a voting matter), I now extend my previous reasoning and align my approval to the staff's Alternative 1, vice the modified Alternative 2 I previously supported.

In my comments cast on July 24, 2015, I outlined my disapproval of the staff's basis for developing a rule addressing overall BWR Mark I and Mark II containment protection and release reduction (CPRR), which would have additionally required, in the rule itself, measures to address over-pressurization and liner melt-through. I approved, instead, pursuit of rulemaking but solely to make Order EA-13-109 (already undergoing implementation at impacted operating sites) generically applicable to sites of that design.

In my deliberations at that time, the choice between Alternatives 1 and 2 was a close call. As a general matter, I support the codification of orders into the agency's regulations in the Code of Federal Regulations as a recommended practice. Given the limited number of licensees to which this issue is relevant and that site-specific actions dispositioning the issue are already underway, however, it is reasonable to assess whether the agency staff effort and resources it would take to complete this housekeeping step would be a true priority usage of agency funds. In my prior comments, I noted that "[g]iven that most of the analytical heavy lifting on this matter has already been completed, the staff should be able to present the draft proposed rule expeditiously to the Commission for its review" and that doing so would "bring to closure one aspect of our response to the Fukushima events more rapidly while continuing to provide for adequate protection of public health and safety." An extension of this logic, however, supports staff's Alternative 1, to continue to implement Order EA-13-109 without additional rulemaking action related to BWR Mark I and Mark II containments.

Although the rulemaking codification advocated in my previous vote comments is a reasonable path forward, uncertainty exists over the agency's Fiscal Year 2016 funding level and elevating pursuit of the "regular order" of codifying Order EA-13-109 for form's sake over other agency priorities is not likely to be the most judicious use of agency resources. Consequently, I revise my approval to align with the staff's CPRR Alternative 1, the continued implementation of Order EA-13-109 without further rulemaking action. Methods to comply with Phase 2 aspects of Order EA-13-109 requiring the capability for severe accident water addition should continue to reside in guidance.



Kristine L. Svinicki

08/12/15

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary

FROM: Commissioner Ostendorff

SUBJECT: SECY-15-0085: EVALUATION OF THE
CONTAINMENT PROTECTION AND RELEASE
REDUCTION FOR MARK I AND MARK II BOILING
WATER REACTORS RULEMAKING ACTIVITIES (10
CFR PART 50) (RIN-315-AJ26)

Approved _____ Disapproved XX Abstain _____ Not Participating _____

COMMENTS: Below _____ Attached XX None _____

Entered in STARS

Yes ✓

No _____


Signature

8/13/15
Date

**Commissioner Ostendorff's Comments on SECY-15-0085:
"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)"**

I do not approve the staff's plan (referred to as Alternative 3 in SECY-15-0085) to develop the proposed rulemaking to make generally applicable the measures imposed by Order-EA-13-109, including the implementation of Phase 2 of that order that uses external water addition. Instead, for the reasons discussed below, I approve Alternative 1, Order EA-13-109 implementation without additional regulatory actions.

In SRM-SECY-12-0157, "Consideration of Additional Requirements for Containment Venting Systems for Boiling Water Reactors [BWR] with Mark I and Mark II Containments," the staff was directed to provide an information paper to the Commission with the technical basis to support rulemaking for BWR Mark I and II containments. In the two and a half years that have passed since issuance of SECY-12-0157, the state of knowledge has increased significantly and the associated quantitative analysis has been refined, accordingly. The results in SECY-15-0085 show that there is no early fatality risk and the conservative latent cancer fatality risk is approximately 7×10^{-8} per reactor year, approximately 30 times lower than the latent cancer fatality Quantitative Health Objective (QHO) of 2×10^{-6} per year.

The staff has done outstanding work in developing the draft regulatory basis provided in SECY-15-0085 by staying true to the Commission direction in SRM-SECY-12-0157 and presenting the best currently available information to inform regulatory decision making. Based on the information presented in SECY-15-0085, in particular the updated quantitative analysis, I now conclude that Order EA-13-109 provides an adequate permanent regulatory footprint for this issue and that rulemaking is not necessary. I agree with Chairman Burns that the NRC can ensure an equivalent level of safety without any additional rulemaking and expenditure of additional resources.

Severe Accident Capable Vents

Order EA-13-109 required all licensees of BWRs with Mark I and Mark II containments to implement requirements for reliable hardened containment vents capable of operation under severe accident conditions. Implementation of this order is currently underway. As discussed in Chairman Burns' vote, from a legal and enforcement perspective, orders are no less robust than other means of imposing regulatory requirements. As a matter of policy, the NRC often conducts rulemaking to make orders generically applicable; however, there is no requirement to do so. For example, Order EA-06-137, "Order Requiring Compliance with Key Radiological Protection Mitigation Strategies," and portions of Order EA-02-026, "Order for Interim Safeguards and Security Compensatory Measures," are still in place with no plans to conduct rulemaking to codify these orders. In this case, Order EA-13-109 is applicable to only a subset of licensees of a specific design, and there is no expectation for a future application to license a new BWR with a Mark I or II containment. As such, there are no clear benefits to codifying this Order as generically applicable from an administrative perspective and, more importantly, there are no safety benefits to codifying the Order as the safety outcome would be identical.

Regarding openness and transparency, in SRM-SECY-12-0157, the Commission directed the staff to "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." As such, there has been a high level of stakeholder engagement over the past two years, including public meetings to discuss the draft of Order EA-

13-109 and the associated regulatory guidance and the technical basis for filtering strategies. I believe further stakeholder participation through a rulemaking process would not provide significant new information. Further, not conducting the rulemaking would preserve limited agency resources with no negative impact on safety.

Therefore, I do not approve rulemaking solely to codify the requirements of Order EA-13-109 (referred to as Alternative 2 in SECY-15-0085).

Severe Accident Water Addition

After extensive analysis of BWR Mark I and II severe accident containment performance, industry developed an approach for complying with Order EA-13-109 that includes severe accident water addition (SAWA) and severe accident water management (SAWM). This approach has been formally endorsed in guidance¹ by the NRC as an acceptable means of compliance with Order EA-13-109 and provides additional safety benefits beyond the overpressure protection intended by the Order. Specifically, this approach provides cooling of core debris and would reduce offsite release. From a safety perspective, the outcome of Alternatives 1, 2 and 3 is the same since SAWA and SAWM is an integral component of the industry's approach to meeting Phase 2 of the order. However, based on the staff's quantitative analysis, the additional benefits of SAWA and SAWM would not constitute a substantial safety enhancement and would not pass the backfit rule test. There is no early fatality risk and the individual latent cancer fatality risk is more than a factor of 10 lower than the NRC's quantitative health objective. Specifically, the conservative latent cancer fatality risk is approximately 7×10^{-8} per reactor year, approximately 30 times lower than the latent cancer fatality Quantitative Health Objective (QHO) of 2×10^{-6} per year. As such, I do not approve a prescriptive requirement for SAWA and SAWM (referred to as Alternative 3 in SECY-15-0085) in addition to the performance-based requirement for containment protection contained in Order EA-13-109 that, as implemented, provides an equivalent level of safety.

Filtering Strategies

In SECY-12-0157, the staff recommended a requirement to install an engineered filtering system for BWRs with Mark I and II containments. Based on the results of additional quantitative analysis as discussed above, the benefits of filtering are less than assumed in SECY-12-0157 and the staff now concludes in SECY-15-0085 that the benefits of such a requirement are well below the quantitative threshold for a substantial safety enhancement and the cost would far exceed the calculated benefits. Based on this analysis, I agree with the staff that a requirement for filtration strategies (referred to as Alternative 4 in SECY-15-0085) is not justified.

Conclusion

I appreciate the staff's thoughtful implementation of the Commission's direction contained in SRM-SECY-12-0157 as their work has allowed me to have a fuller appreciation of the alternatives available to the Commission for addressing the issue of containment protection for BWRs with Mark I and Mark II containments. My philosophy in voting has been for the NRC to put out the best product that represents the thoughts of the Commission at all stages of the

¹ JLD-ISG-2015-01, "Compliance with Phase 2 of Order EA-13-109, Order Modifying Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation under Severe Accident Conditions," issued April 2015.

rulemaking process. It is in this spirit that I conclude that Order EA-13-109 provides an adequate permanent regulatory footprint and that rulemaking is not necessary. Therefore, I do not approve publication of the draft regulatory basis but rather I approve Alternative 1, Order EA-13-109 implementation without additional regulatory actions. In keeping with the NRC's Principle of Efficiency, "[r]egulatory activities should be consistent with the degree of risk reduction they achieve." Where several effective alternatives are available, the option which minimizes the use of resources should be adopted." Where we see little or no safety benefit to proceeding with a rulemaking or other regulatory action, then we should not proceed.

The staff should leverage the draft regulatory basis to the extent applicable to support resolution of the post-Fukushima Tier 3 item related to containments of other designs (Near-Term Task Force Recommendation 5.2).

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary

FROM: Commissioner Baran

SUBJECT: SECY-15-0085: EVALUATION OF THE
CONTAINMENT PROTECTION AND RELEASE
REDUCTION FOR MARK I AND MARK II BOILING
WATER REACTORS RULEMAKING ACTIVITIES (10
CFR PART 50) (RIN-315-AJ26)

Approved XX Disapproved _____ Abstain _____ Not Participating _____

COMMENTS: Below _____ Attached XX None _____



SIGNATURE

7/24/15

DATE

Entered in "STARS" Yes XX No _____

**Commissioner Baran's Comments on SECY-15-0085,
"Evaluation of the Containment Protection and Release Reduction for Mark I and Mark II
Boiling Water Reactors Rulemaking Activities"**

On March 19, 2013, in the Staff Requirements Memorandum for SECY-12-0157, the Commission directed the NRC staff to proceed with "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 Commission explicitly directed the staff to consider in the technical bases and rulemaking the option of requiring the "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." The SRM also stated that "[t]he rulemaking should fully explore the requirements associated with measures to enhance the capability to maintain containment integrity and to cool core debris." Moreover, the Commission instructed the staff to "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."

Consistent with the Commission's direction, the staff prepared a draft regulatory basis for a containment protection and release reduction (CPRR) rulemaking. The draft regulatory basis was provided to the Commission as an information paper. Prior to the conversion of the information paper to a notation vote paper, the staff planned to issue a *Federal Register* notice requesting public comment on the draft regulatory basis, "hold a public meeting to provide members of the public an opportunity to ask questions and have discussions about the draft CPRR regulatory basis," and present the draft regulatory basis to ACRS in order to obtain independent expert feedback on the document. After this public comment and ACRS review, the staff was scheduled to provide the final regulatory basis to the Commission by September 19, 2015, the proposed rule by September 19, 2016, and the final rule by December 19, 2017.

In my view, it is premature for the Commission to consider the draft regulatory basis at this time without the benefit of public comment or ACRS review. I approve the staff's established plan, based on clear Commission direction, to seek public comment and ACRS review of the draft regulatory basis prior to its submission to the Commission for a notation vote.

The draft regulatory basis describes four alternatives for the development of a proposed rule: (1) implement the severe accident capable hardened vents order without any additional regulatory actions, such as those to prevent containment liner melt through; (2) codify the requirements of the order through rulemaking to protect containments against over-pressurization only; (3) pursue rulemaking to protect containments against multiple failure modes (including containment liner melt through) by codifying the order and requiring severe accident water addition and management; and (4) pursue a rulemaking to codify the order, require severe accident water addition and management, and require the scrubbing or filtering of fission products vented from the containment. The draft regulatory basis analyzes all four alternatives and explains that the staff plans to develop a proposed rule consistent with alternative 3.

We should not direct the staff to eliminate the discussion of any of these alternatives from the draft regulatory basis at this stage without public comment. A regulatory basis document or proposed rule that ignores the alternative of requiring filtered vents would represent a significant departure from what was contemplated in 2013 when the agency initiated the rulemaking. At that time, two Commissioners supported a requirement to install engineered

filtered vents (one favored establishing the requirement through order, the other through rulemaking) and a third Commissioner was “persuaded that engineered filtered vents offer a mature technological approach to enhance defense-in-depth by reducing the potential for radiological releases in the event of a severe accident” and supported a “rulemaking process that considers engineered filtered vents.”

In their votes, every Commissioner who favored a rulemaking emphasized the importance of getting public comment on the question of whether to require filtered vents. For example, Commissioner Svinicki wrote, “this complex issue would benefit from a full evaluation under the notice and comment rulemaking process of the Administrative Procedure Act.” Former Commissioner Apostolakis stated, “Vibrant debate continues to take place on this issue and there remain technical questions to be resolved regarding the installation and performance requirements of an engineered filter. Pursuing such requirements through the rulemaking process will give all stakeholders the opportunity to discuss candidate performance criteria and other technical issues.” Former Commissioner Magwood wrote: “The issue of containment filtering, in my view, is precisely the type of issue that should be vetted through a careful, thoughtful, transparent rulemaking process. Such a process would allow for a full consideration of site-specific issues, alternative strategies, and broad public comment and input.” Similarly, Commissioner Ostendorff stated, “In order to facilitate stakeholder input, a rulemaking is a better forum to ensure full consideration of all the pros and cons of various approaches.”

However, interested stakeholders have not yet had the opportunity to formally comment on any of the four alternatives. In developing the draft regulatory basis, the staff held 13 public meetings with nuclear industry representatives between June 2013 and December 2014, but none of these meetings provided non-industry stakeholders with the opportunity to formally express their views. And the meetings obviously could not provide a chance for broad public comment on the draft regulatory basis because the document had not yet been completed. In a recent email to a senior NRC manager, one interested stakeholder writing on behalf of several public interest groups explained:

Many of us have participated in the public meetings between the NRC staff and industry representatives on this topic. But the snippets of time allotted to the public during these industry meetings do not really permit us to present our perspectives on the subject. Those very brief opportunities (which I call Bobblehead moments because the public really only has enough time to nod or shake our heads in agreement or disagreement) haven’t given us the chance to share our views in a meaningful way.

If the agency intends to drop the filtered vents alternative, the public should have an opportunity to weigh in. Taking broad public comment on the filtered vents alternative as well as the other alternatives presented in the draft regulatory basis is appropriate, necessary, and consistent with the stated expectations of the Commissioners who voted to initiate the rulemaking in 2013.

Furthermore, there is no reason for the Commission to vote on the draft regulatory basis before the ACRS has reviewed and provided recommendations on the document. Under the staff’s original schedule, the ACRS planned to hold a subcommittee meeting and provide a letter to the Commission after the staff received and addressed public comments on the draft regulatory basis. The staff should resume this course. Though the staff previously presented the draft results of the rulemaking analysis to the ACRS, this will be the first time the ACRS will examine the draft regulatory basis as a whole and share its thoughts with the Commission. We

should wait for the ACRS letter before making substantive decisions about the draft regulatory basis.

This is an important post-Fukushima rulemaking. A wide range of stakeholders will have a variety of perspectives on the four alternatives presented in the draft regulatory basis. We should hear their views and critiques of these alternatives and the staff's regulatory analysis before taking any alternatives off the table. Therefore, consistent with existing Commission direction, the staff should carry out its plan to seek public comment and ACRS review of the draft regulatory basis prior to its submission to the Commission in the next few months for a notation vote.