

**AFFIRMATION ITEM**

**RESPONSE SHEET**

TO: Annette Vietti-Cook, Secretary  
FROM: Commissioner Caputo  
SUBJECT: SECY-16-0142: DRAFT FINAL RULE—MITIGATION  
OF BEYOND-DESIGN-BASIS EVENTS (RIN 3150-AJ49)

Approved  Disapproved  Abstain  Not Participating

COMMENTS: Below  Attached  None

**Entered in STARS**

Yes

No

  
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SIGNATURE

11-8-18  
\_\_\_\_\_  
DATE

**Commissioner Caputo's Comments on SECY-16-0142:  
Draft Final Rule-Mitigation of Beyond-Design-Basis Events (RIN 3150-AJ49)**

I commend the staff for their continued efforts to work through the regulatory implications of the tsunami and subsequent nuclear accident at the Fukushima Daiichi Nuclear Power Station. The staff has followed the agency practices of notice and comment and provided a substantial package for the Commission to consider. The history of Commission action following the Fukushima Daiichi event is complex and multi-faceted.

As such, I devoted considerable time to study and internal deliberation in preparing my vote. In addition to the draft final rule, its regulatory analysis, and backfit assessment, I reviewed previous staff papers and carefully examined past Commission direction on this issue and related regulatory recommendations. I also reviewed the non-concurrences filed by NRC staff, comments by external stakeholders, the Advisory Committee on Reactor Safeguards letter to the Commission on this draft final rule and the votes already cast by my colleagues. Lastly, my staff and I received excellent briefings from the agency staff. I greatly appreciate the significant and meaningful effort of the staff in helping me digest the information.

My review of the draft final rule was through the eyes of a new Commissioner who is determined to practice the NRC's Principles of Good Regulation. The Principles I found particularly relevant to this matter are the Principle of Reliability ("Once established, regulation should be perceived to be reliable and not unjustifiably in a state of transition. Regulatory actions should always be fully consistent with written regulations") and the Principle of Efficiency ("Regulatory activities should be consistent with the degree of risk reduction they achieve").

Having read the Chairman's vote, I share her observations regarding requirements in the draft final rule that do not meet the agency's backfitting or issue finality requirements and agree with her conclusion to remove them from the rule. I also share Chairman Svinicki's concerns regarding the staff's disregard for the Backfit Rule.

Since the proposed requirements in the draft final rule exceed the minimum requirements established by the Commission for complying with the Orders,<sup>1</sup> the proposed requirements should have been evaluated in accordance with the backfit or issue finality provisions contained in 10 CFR Parts 50 and 52. Licensees have all notified the NRC that they are in compliance with the Orders. As such, any regulatory changes extraneous to making the Orders generically applicable would constitute new requirements mandating analysis under the Backfit Rule. I find it troubling that such analysis is noticeably absent in the material supporting the draft final rule. Our adherence to procedures should be no less than the level of adherence we expect from licensees.

In SRM-SECY-15-0065, the Commission clearly directs the staff to "ensure that any NRC-endorsed *guidance* for the proposed rule will provide appropriate coordination of the FLEX support guidelines, extreme damage mitigating guidelines and voluntarily maintained SAMGs with the existing Emergency Operating Procedures at each plant." (emphasis added) Instead of

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<sup>1</sup> Order EA-12-049, "Order Modifying Licenses With Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events" (Mitigation Strategies Order), and Order EA-12-051, "Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation" (SFPI Order).

continuing to address these matters in regulatory guidance, the staff included them in the draft final rule as regulatory requirements for an “integrated response capability” while providing no analysis that elevating this regulatory guidance to requirements would result in a substantial increase in safety.

The staff attempts to address this backfit concern by stating that even if the elements of the rule that are not explicitly included in the Orders are considered backfits they are necessary for adequate protection of public health and safety or common defense and security. The staff argues that these elements are necessary for implementation of the Orders so they are, in essence, necessary for adequate protection by mere association. I’m concerned by this approach. While the Commission determined the Orders were necessary to provide reasonable assurance of adequate protection of public health and safety, staffing and communication issues, training matters, and the need for drills of mitigation strategies have, to date, been adequately addressed through regulatory guidance.<sup>2</sup> No new information was provided demonstrating that a substantial safety increase would be achieved by escalating these matters from regulatory guidance to requirements.

On the other hand, the staff appropriately evaluated and dispositioned an issue that was identified as a possible backfit. The staff received a public comment that the backfit justification supporting the proposed multiple source term dose assessment requirement was insufficient. After comparing the proposed requirement with the current emergency preparedness regulations, the staff concluded “that the imposition of multiple source term dose assessment requirement would not provide a substantial increase in the protection of public health and safety.”<sup>3</sup>

My review of the staff’s Regulatory Analysis also showed a minimal effort to assess the benefits of this rule. The staff provided a very limited, qualitative statement of benefits that included such things as enhanced regulatory efficiency, avoidance of future regulatory actions like the issuance of orders or license conditions, and preserving regulatory stability.<sup>4</sup> The staff claimed it was unable to monetize the benefits of this rule and there is no indication of an attempt to quantify any risk reduction achieved through its implementation.<sup>5</sup> Despite the staff’s alleged inability to quantify benefits, they indicated that the benefits would be only incremental to public health, occupational health, offsite property, onsite property, and environment considerations and the resulting costs would be “relatively high compared to the risk that would be reduced.”<sup>6</sup> Since the staff cannot provide a sufficient explanation of benefits to support a demonstration of a cost-justified substantial increase in safety, I must conclude that no such justification can successfully

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<sup>2</sup> Additionally, the Advisory Commission on Reactor Safeguards (ACRS) recognized in its December 6, 2016 letter to the staff, staffing and communication, training, drills, and emergency response procedures were effectively covered in guidance.<sup>2</sup> Maintaining these matters in guidance also complies with the Commission’s statement in SRM-SECY-11-0124, that “[i]n order to be effective, approaches should be flexible and able to accommodate a diverse range of circumstances and conditions.”

<sup>3</sup> U.S. Nuclear Regulatory Commission, “Final Rule to Address Mitigation of Beyond-Design-Basis Events,” Commission Paper SECY-16-0142, Enclosure 1, at 35, December 2016.

<sup>4</sup> U.S. Nuclear Regulatory Commission, “Regulatory Guide: Final Rule to Address Mitigation of Beyond-Design-Basis Events,” Commission Paper SECY-16-0142, Enclosure 6, at viii, December 2016.

<sup>5</sup> *Id.* at 38

<sup>6</sup> *Id.* at 36.

be made. Given that lack of a clear justification, the elements of the draft final rule that are not explicitly included in the Orders should be removed from the final rule.

Regarding the proposed staffing and communication requirements, the staff claims in its backfit assessment that these requirements are not backfits because they have been part of the implementing guidance for the Mitigation Strategies Order and licensees have been demonstrating these capabilities. This approach ignores the Backfit Rule's clear focus on "new or amended provision[s] in the Commission's *regulations*" and not on the mere existence of certain processes or procedures.<sup>7</sup> Further, under this logic staff could completely circumvent the requirements of the Backfit Rule by incorporating a requirement into guidance before ultimately incorporating it into a rule.

With regard to flooding and seismic reevaluations, a review of the record clarifies the precise direction given to the staff. In SRM-COMSECY-14-0037, the Commission approved the staff's Recommendation 1 that licensees for operating nuclear power plants need to address the reevaluated flooding hazards within their mitigating strategies for beyond-design-basis external events. The Commission also approved Recommendation 2 that licensees for operating nuclear power plants may need to address some specific flooding scenarios that could significantly damage the site by developing targeted or scenario-specific mitigating strategies, possibly including unconventional measures, to prevent fuel damage in reactor cores or spent fuel pools.

The Commission did *not*, however, approve the staff's Recommendation 3 to integrate the flooding assessments into the implementation of the Mitigating Strategies Order and the MBDBE rulemaking. In fact, the Commission directed that the "NRC staff should continue to work with licensees toward the expeditious completion of the flooding hazard reevaluations in order to ensure that flooding hazards are understood for every site using the current flooding regulations and guidance. The closure of the § 50.54(f) letter should proceed in parallel with implementation and closure of Order EA-12-049 and the associated MBDBE rulemaking and should not impact the schedule for these actions." This direction was consistent with the NRC staff's approach to seismic hazard evaluations as outlined in staff's letter to the ACRS.<sup>9</sup>

Accordingly, the consideration of whether, in light of the reevaluated external hazards analyses, the operating licenses for power reactor licensees should be modified, suspended, or revoked is being accomplished on a plant-specific basis under staff's ongoing 50.54(f) letter closure process. Much of the flooding and seismic reevaluation work has been complete with the remaining work scheduled to conclude for flooding and seismic reevaluations in 2019 and 2020, respectively. Therefore, addressing reevaluated hazards in the rule is unnecessary.

Based on the preceding determinations, I approve the draft final rule and notice for publication in the Federal Register, as edited in the Chairman's vote. I also approve the Backfitting and Issue Finality Assessment Supporting the Mitigation of Beyond-Design-Basis Events Final Rule, as edited in the Chairman's vote. The staff should make any necessary conforming changes in other rulemaking documents to reflect the changes identified in the FRN and in the Backfitting and Issue Finality Assessment attached to the Chairman's vote.

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<sup>7</sup> 10 C.F.R. § 50.109(a)(1) (emphasis added).

<sup>9</sup> Letter from Victor M. McCree to Dr. Dennis C. Bley, "Draft Final Rule On Mitigation Of Beyond-Design-Basis Events and Associated Regulatory Guidance," December 15, 2016.

Additionally, considerable effort has gone into explaining the term “reasonable protection” in the rule. The staff should make the appropriate changes to ensure that application of the term is limited to equipment whose sole purpose is for the mitigation strategies for beyond-design-basis events from external hazards.

Finally, I wish to comment on two areas related to staff practice that review of the rulemaking material revealed. First, SECY-16-0142 illustrates the challenges inherent in transforming the agency’s culture to become more risk-informed. Risk information should be factored into *daily* decision-making, much less a significant rulemaking developed over several years such as the one before us. While the staff had ample time for considering and including risk information into the draft final rule, it provided scant evidence that risk information was used. As noted earlier, the Regulatory Analysis accompanying the rule does not show any effort made to quantify risk reduction as a benefit of the draft final rule. This failure does not comply with our Principle of Efficiency, which directly ties regulatory activities to the degree of risk reduction they achieve. This oversight is particularly disappointing considering the 21 concurrences necessary before this draft final rule was provided to the Commission.

Second, SECY-16-0142 also illustrates the shortcomings of the agency’s consideration of the cumulative effects of regulation (CER). To the extent that CER efforts are limited to gathering comments and considering some limited compliance schedule flexibility, I find it misses the mark. The CER process should be an opportunity to take a holistic, risk-informed look at the need for proposed regulatory changes in comparison to existing requirements. As the NRC seeks to expand the use of risk information in decision-making, CER concerns may be resolved by reevaluating the need for the proposed requirements through the risk-informed lens.