

March 4, 2013

MEMORANDUM TO: Chairman Macfarlane
Commissioner Svinicki
Commissioner Apostolakis
Commissioner Magwood
Commissioner Ostendorff

FROM: R. W. Borchardt **/RA Mike Johnson for/**
Executive Director for Operations

SUBJECT: 10 CFR 50.46c RULEMAKING: REQUEST TO DEFER DRAFT
GUIDANCE AND EXTENSION REQUEST FOR FINAL RULE
AND FINAL GUIDANCE

In this memorandum, the staff requests approval to defer draft guidance development related to Generic Safety Issue (GSI)-191, "Assessment of Debris Accumulation on Pressurized Water Reactor Sump Performance," until after the Title 10 of the *Code of Federal Regulations* (10 CFR) 50.46c proposed rule is published. In addition, the staff seeks Commission approval to extend the due date for the final rule and issuance of final guidance to February 28, 2016, and June 14, 2016, respectively.

Background:

The Staff Requirements Memorandum (SRM) to SECY-12-0034, "Proposed Rulemaking – 10 CFR 50.46c: Emergency Core Cooling System Performance during Loss-of-Coolant Accidents (RIN 3150-AH42)," dated January 7, 2013, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13007A478) approved publication of the 10 CFR 50.46c proposed rule, subject to the comments and edits provided in the SRM.

The following direction from SRM-SECY-12-0034 is the main focus of this memorandum:

Regarding Generic Safety Issue 191, the 10 CFR 50.46c proposed rule should contain a provision allowing [U.S. Nuclear Regulatory Commission] NRC licensees, on a case-by-case basis, to use risk-informed alternatives without an exemption request. Accordingly, the staff should modify relevant sections of the proposed rule. In addition, *Federal Register* Notice (FRN) Section VII, "Specific Request for Comments on the Proposed Rule," should be revised to solicit stakeholder comments on the proposed provision. In the questions for stakeholders, the staff should also inquire as to whether the provision should contain acceptance criteria or if the acceptance criteria should be remanded to regulatory guidance.

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The staff notes that similar direction was provided in SRM-SECY-12-0093, "Closure Options for Generic Safety Issue 191, Assessment of Debris Accumulation on Pressurized-Water Reactor Sump Performance," dated December 14, 2012 (ADAMS Accession No. ML12349A378):

The forthcoming 10 CFR 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 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....

The SRM to SECY-12-0034 also directed:

The staff should complete its research on fuel fragmentation, relocation and dispersal, and incorporate any necessary changes before requesting Commission approval of the draft final rule.

Discussion:

First Request: Defer Development of GSI-191-Related Guidance until After Proposed Rule Publication

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

The staff should publish draft guidance with proposed rules and publish final guidance with the final rule. The EDO [Executive Director for Operations] should promptly inform the Commission of any instances, and the associated reasons, where a proposed rule package will be provided to the Commission without having completed the draft guidance. Exceptions to this approach should be very limited and approved by the Commission.

The GSI-191-related guidance would be informed by the staff's review of the South Texas Project (STP) submittal of a risk-informed approach, which was received on January 31, 2013. The staff's review of that submittal is expected to be complete in December 2014. (The staff notes that three draft guides associated with the new embrittlement requirements were developed and provided to the Commission with SECY-12-0034. Those draft guides would be published with the proposed rule, per Commission direction). Publishing the proposed rule without all of the draft guidance may shorten the overall schedule for finalizing the rule, which may result in earlier regulatory stability and predictability (see scenarios A and B, below, for details).

Scenario A – Publish Proposed Rule without GSI-191-Related Guidance: Under Scenario A, the 10 CFR 50.46c proposed rule would be published upon development of the provision to allow risk-informed alternatives to address GSI-191, but prior to development of the draft guidance related to the GSI-191 provision. Under Scenario A the revised proposed rule would be returned to the Commission for 10-day review (just before publication, as directed by the

SRM) by December 20, 2013. This timeframe includes incorporation of all direction in SRM-SECY-12-0034, updates to associated documents (regulatory analysis, etc.), potential interaction with the Advisory Committee for Reactor Safeguards, and concurrence.

Scenario B – Publish Proposed Rule with GSI-191-Related Guidance: Under Scenario B, the 10 CFR 50.46c proposed rule would NOT be published until development of the draft guidance document associated with the GSI-191-related provision. As discussed previously, the staff's review of the STP submittal is expected to be complete by December 2014. The staff estimates based on that schedule, draft guidance could be developed by March 2015. Thus, the proposed rule and draft guidance could be published by March 2015 under Scenario B.

The staff notes that, under both scenarios, if the public comment period for the GSI-191-related guidance generates comments that warrant a subsequent comment period, the staff will provide such an opportunity. Nevertheless, the staff will ensure that the final GSI-191-related guidance document is published with the 10 CFR 50.46c final rule.

Second Request: Extension Request for 10 CFR 50.46c Final Rule and Final Guidance Issuance

The staff is requesting an extension to provide the 10 CFR 50.46c final rule allowing for a more performance-based approach to meeting emergency core cooling system (ECCS) acceptance criteria, which was due February 28, 2013, to a proposed date of February 28, 2016. Additionally, staff is requesting an extension to issue the final regulatory guidance for rulemaking to modify 10 CFR 50.46c, which is currently due June 14, 2013, to a proposed date of June 14, 2016. The justification for the reset is SECY Criterion No. 2, "Commission direction has changed (by a subsequent SRM or other communication from the Commission offices)." Specifically, direction received in SRM-SECY-11-0032 and SRM-SECY-12-0034 (discussed previously) creates the need for a schedule adjustment. Although the requested dates are driven by the GSI-191-related direction and the additional time to incorporate the CER process enhancements, the staff also notes that the additional time would allow the staff to address the direction related to fuel fragmentation, relocation, and dispersal. The table below demonstrates the timelines for Scenario A (publish proposed rule without GSI-191-related guidance) and Scenario B (hold publication of proposed rule until development of GSI-191-related guidance).

Milestone	Scenario A	Scenario B
Proposed Rule Publication	January 2014	March 2015
GSI-191-Related Guidance Published for Comment	March 2015*	March 2015
Comment Period (75 days + request for additional 75 days = 150 days)	August 2014	October 2015
Final Rule Development (1 year)	August 2015	October 2016
Public Meeting on Implementation (4 weeks)	September 2015	November 2016
Finalize Guidance (6 months)	February 2016	April 2017
Revised Final Rule Due Date	February 28, 2016	April 30, 2017
Revised Due Date for Issuing Final Guidance (Final Rule Due Date to Commission + 3 months)	June 14, 2016	August 14, 2017

* Under Scenario A, GSI-191-related guidance publication does NOT impact any proposed rule milestone dates.

Recommendation:

The staff recommends developing the rulemaking in accordance with Scenario A. Publishing the proposed rule expeditiously (i.e., without holding the proposed rule pending the development of the GSI-191-related guidance) will likely shorten the overall rulemaking schedule and ensure the scope of expansion of this adequate protection rule does not unduly delay implementation of these safety significant requirements. As such, the staff recommends the Commission grant the staff permission to publish the proposed rule without the GSI-191-related guidance, and also grant the staff's extension request providing the 10 CFR 50.46c final rule to the Commission on February 28, 2016, and issuance of the final guidance on June 14, 2016.

The staff notes that, although the staff determined that this rulemaking is necessary to maintain adequate protection of public health and safety, the NRC completed a preliminary safety assessment of currently operating reactors and found that a sufficient safety margin exists for operating reactors when accounting for realistic fuel rod power history, and measured cladding performance under loss of coolant accident conditions. To confirm the preliminary assessment, the boiling water reactor and pressurized water reactor owners groups provided plant-specific emergency core cooling system data, and the staff conducted an audit to confirm safety of the operating reactors. Per SRM-SECY-12-0034, the staff will continue to periodically (i.e., on an annual basis) confirm continued safety of the operating reactors.

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