

August 9, 2013

Mr. Edwin M. Hackett, Executive Director  
Advisory Committee on Reactor Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

SUBJECT: REVISIONS TO DRAFT PROPOSED RULE FOR 10 CFR 50.46c, "EMERGENCY  
CORE COOLING SYSTEM PERFORMANCE DURING LOSS-OF-COOLANT  
ACCIDENTS"

Dear Mr. Hackett:

The purpose of this correspondence is to provide a status report on the draft proposed rule for Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.46c since the U.S. Nuclear Regulatory Commission (NRC) staff's last interaction with the Advisory Committee on Reactor Safeguards (ACRS). As you recall, the NRC staff participated in the 590th meeting of the ACRS on January 29, 2012, to present the draft proposed rule for 10 CFR 50.46c, as well as the NRC staff's safety assessment and audit of the margin assessments from the boiling-water reactor and pressurized-water reactor owners' groups. In a letter dated January 26, 2012 (NRC Agencywide Documents Access and Management System (ADAMS) Accession No. ML12034A147), the ACRS recommended (among other suggestions) that the proposed rule be published for comment. The NRC staff responded to ACRS's recommendations in a letter dated February 17, 2012 (ADAMS Accession No. ML120260893).

The NRC staff provided the draft proposed rule package, SECY-12-0034, "Proposed Rulemaking – 10 CFR 50.46c: Emergency Core Cooling System Performance During Loss-of-Coolant Accidents (RIN 3150-AH42)" (ADAMS Accession No. ML112520186), to the Commission on March 1, 2012. The NRC staff updated the proposed rule package in a memo from Eric Leeds to the Commission dated June 1, 2012 (ADAMS Accession No. ML12137A852). The Commission reviewed the draft proposed rule and issued its staff requirements memorandum (SRM) on January 7, 2013 (ADAMS Accession No. ML13007A478).

Among other directions, the SRM stated: "Regarding Generic Safety Issue [(GSI)-] 191, the 10 CFR 50.46c proposed rule should contain a provision allowing NRC licensees, on a case-by-case basis, to use risk-informed alternatives without an exemption request." The NRC staff's incorporation of this direction is the most significant revision to the draft proposed rule package since the January 2012 ACRS meeting.

The NRC staff determined that the scope of this direction (i.e., the risk-informed alternative) is limited to using a risk-informed approach to evaluate the effects of debris for long-term cooling. The staff also concluded that the provision should be developed such that alternatives like those expected to be piloted by South Texas Project Nuclear Operating Company (STP) would not require exemptions to any regulations (i.e., 10 CFR 50.46c and General Design Criteria (GDC) -35, -38, and -41).

In accordance with the SRM, the NRC staff revised the draft proposed rule language previously provided to the ACRS to incorporate the SRM-directed provision allowing risk-informed

consideration of the effects on long-term cooling. As revised, the proposed rule would require the NRC to review and approve the risk-informed alternative, and identifies the corrective actions and reporting criteria if errors or changes are identified after that approval is obtained. The NRC staff made conforming changes to GDC-35, -38, and -41, such that exemptions would not be required for licensees that choose to use the alternative. The statements of consideration and section-by-section analysis describe the background of, and basis for, the changes. The NRC staff also updated the regulatory analysis to reflect the added provision.

In December 2010, STP submitted a letter of intent to pilot a risk-informed approach for addressing GSI-191 (ADAMS Accession No. ML103481027). Subsequently, the NRC received a pilot submittal from STP on January 31, 2013 (ADAMS Accession No. ML13043A013) and a supplement on June 19, 2013 (ADAMS Accession No. ML131750250). In parallel with the NRC staff's review of the application, the NRC will develop draft guidance for the risk-informed alternative to address the effects of debris on long-term cooling. The draft guidance will be published for comment upon completion, which is currently anticipated for early- to mid-calendar year 2015. The NRC will then evaluate public comments received on the draft guidance, and will develop the final guidance on a timeline that ensures all guidance (both for the risk-informed alternative and the new proposed embrittlement criteria) is available when the NRC staff provides the final 10 CFR 50.46c rule to the Commission (currently scheduled for February 2016).

The draft proposed rule package, as revised to address the SRM, is due to the Office of the Secretary on December 20, 2013, for a 10-day review prior to publication, per the SRM. The NRC staff appreciates ACRS's continued interest in this rulemaking activity and looks forward to meeting with the ACRS during finalization of the rule.

Sincerely,

**/RA/**

T.J. McGinty, Director  
Division of Safety Systems

cc: Christopher Brown

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ADAMS Accession No: ML13198A282

\*Via E-mail

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