

**From:** Quarles, Adam Graham <AGQUARLE@southernco.com>  
**Sent:** Thursday, September 14, 2023 5:05 PM  
**To:** Dawnmathews Kalathiveettil  
**Cc:** Joyce, Ryan M.  
**Subject:** [External\_Sender] RE: RE: Draft Round-2 RAI - Hatch, Units 1 and 2, Revise TS 1.1-1 "MODES" LAR (EPID: L-2022-LLA-0120)

Thanks, Dawnmathews. We don't have any follow-up clarification. We'll respond within 30 days of receipt of the official/final RAI.

Thank you,

Adam G. Quarles, P.E.  
Engineer

[Southern Nuclear](#) | Nuclear Licensing  
[agquarle@southernco.com](mailto:agquarle@southernco.com) | O: 205.992.7031 | C: 205.937.1700

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**From:** Dawnmathews Kalathiveettil <[Dawnmathews.Kalathiveettil@nrc.gov](mailto:Dawnmathews.Kalathiveettil@nrc.gov)>  
**Sent:** Thursday, September 14, 2023 1:06 PM  
**To:** Quarles, Adam Graham <[AGQUARLE@southernco.com](mailto:AGQUARLE@southernco.com)>  
**Cc:** Joyce, Ryan M. <[RMJOYCE@southernco.com](mailto:RMJOYCE@southernco.com)>  
**Subject:** RE: RE: Draft Round-2 RAI - Hatch, Units 1 and 2, Revise TS 1.1-1 "MODES" LAR (EPID: L-2022-LLA-0120)

Good afternoon Adam,

I spoke to the relevant NRC staff regarding the SNC edit provided for RAI-05. Staff agrees with the edit and confirms that the SNC edit zeros-in on the specific Sec XI requirement that SNC potentially wouldn't be able to meet, which is the surface exam requirement in IWB-3515.2(c). This is the case with Unit 2 Bolt 33.

Staff re-iterated that the point of the question is to understand how SNC will administratively control the situation consistent with the design analysis. Bolts that meet the applicable Section XI requirements are presumed to be "operable" and fully tensioned. Bolts not meeting the Section XI requirements are presumed to be "inoperable" (SNC staff are working on the final TS license condition language) and are either not tensioned or are assumed to fail.

Please confirm that SNC does not have any follow-up clarifications. Also, please confirm whether SNC will be providing the usual 30-day calendar response for the RAIs.

Best regards,  
Dawnmathews

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**From:** Quarles, Adam Graham <[AGQUARLE@southernco.com](mailto:AGQUARLE@southernco.com)>  
**Sent:** Wednesday, September 13, 2023 12:26 PM  
**To:** Dawnmathews Kalathiveettil <[Dawnmathews.Kalathiveettil@nrc.gov](mailto:Dawnmathews.Kalathiveettil@nrc.gov)>  
**Cc:** Joyce, Ryan M. <[RMJOYCE@southernco.com](mailto:RMJOYCE@southernco.com)>

**Subject:** [External\_Sender] RE: Draft Round-2 RAI - Hatch, Units 1 and 2, Revise TS 1.1-1 "MODES" LAR (EPID: L-2022-LLA-0120)

Hi Dawnmathews, we discussed the draft RAI internally this morning. We only have one thing to clarify on RAI-05. I don't think it will require a clarification call, but I'll leave that to you.

The last sentence of RAI-05 states:

Please discuss licensee actions that would be taken if more than one reactor head closure bolt cannot be properly examined in accordance with Table IWB-2500-1 of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI.

Table IWB-2500-1 is for volumetric exams, which can be performed without removing the stud. We were not able to foresee a scenario in which a volumetric exam could not be performed on a reactor vessel closure stud. We think the intent of the questions is around surface exams, such as the in the case of Unit 2 stud #33 where we had to seek code relief for the surface exam requirements of IWB-3515.2(c).

So we think the question/request was meant to say:

Please discuss licensee actions that would be taken if more than one reactor head closure bolt cannot be properly examined in accordance with ~~Table IWB-2500-1~~ [IWB-3515.2\(c\)](#) of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI.

Thank you,

Adam G. Quarles, P.E.

Engineer

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**From:** Dawnmathews Kalathiveettil <[Dawnmathews.Kalathiveettil@nrc.gov](mailto:Dawnmathews.Kalathiveettil@nrc.gov)>

**Sent:** Monday, September 11, 2023 12:52 PM

**To:** Quarles, Adam Graham <[AGQUARLE@southernco.com](mailto:AGQUARLE@southernco.com)>

**Cc:** John Lamb <[John.Lamb@nrc.gov](mailto:John.Lamb@nrc.gov)>; Michael Markley <[Michael.Markley@nrc.gov](mailto:Michael.Markley@nrc.gov)>

**Subject:** Draft Round-2 RAI - Hatch, Units 1 and 2, Revise TS 1.1-1 "MODES" LAR (EPID: L-2022-LLA-0120)

**Importance:** High

Adam,

Below is the draft request for additional information (RAI) for the Southern Nuclear Operating Company (SNC), Hatch, Units 1 and 2, revise Technical Specification (TSs) Table 1.1-1, "MODES" license amendment request (LAR). Specifically, the licensee is proposing to relax the required number of fully tensioned reactor pressure vessel (RPV) head closure bolts for both units. The draft RAI is being sent to you to ensure that it is understandable, the regulatory basis is clear, to ensure there is no proprietary information, and to determine if the information was

previously docketed. Additionally, review of the draft RAI allows SNC to evaluate and agree upon a schedule to respond to the RAI.

Please review and let me know if SNC wishes to have a clarification call. If so, please provide SNC's availability for the next few weeks. Please inform me by September 13<sup>th</sup> close of business if a clarification call is needed. Otherwise, these RAIs will be released for response with a 30-day calendar response requirement.

Best Regards,

**Dawnmathews T. Kalathiveettil**

Hatch Project Manager

Plant Licensing Branch (LPL 2-1)

DORL - O8 C02

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U.S. Nuclear Regulatory Commission

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## **DRAFT RAI**

By letter dated August 19, 2022 (Agencywide Documents and Access Management System (ADAMS) Accession No. ML22231B055), Southern Nuclear Operating Company (SNC, the licensee) submitted a license amendment request (LAR) for Edwin I. Hatch Nuclear Plant (Hatch), Units 1 and 2. Specifically, the licensee is proposing to relax the required number of fully tensioned reactor pressure vessel (RPV) head closure bolts in Technical Specification (TSs) Table 1.1-1, "MODES" of the Hatch units.

By letter dated December 21, 2022 (ADAMS Accession No. ML22355A208), NRC staff requested additional information. By letter dated January 20, 2023 (ADAMS Accession No. ML23020A902), SNC responded with supplemental information. Public meetings were held with SNC on March 28, 2023 (ADAMS Accession No. ML23088A388) and May 2, 2023 (ADAMS Accession No. ML23136B294), to further discuss the licensee's submittal and supplemental information. To complete its review, the NRC staff requests additional information as shown below.

## **REQUEST FOR ADDITIONAL INFORMATION (RAI)**

Title 10 of the Code of Federal Regulations (10 CFR) Part 50.36, "Technical Specifications," specifies the content required to be included in TSs.

10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," Appendix A, "General Design Criteria [GDC] for Nuclear Power Plants," includes the following GDCs applicable to the licensee's LAR:

- GDC 1, “Quality Standards and Records,” requires, in part, that structures, systems, and components important to safety be designed, fabricated, erected, and tested to quality standards commensurate with the importance of the safety function to be performed.
- GDC 14, “Reactor coolant pressure boundary,” requires the design, fabrication, erection, and testing of the reactor coolant pressure boundary so as to have an extremely low probability of abnormal leakage, or rapidly propagating failure, and of gross rupture.
- GDC 30, “Quality of reactor coolant pressure boundary,” which requires in part, that components comprising the reactor coolant pressure boundary be designed, fabricated, erected, and tested to the highest quality standards practical.

Hatch Unit 1 was licensed to the applicable Atomic Energy Commission (AEC) preliminary general design criteria identified in Federal Register 32 FR 10213, published July 11, 1967 (ML043310029). The Hatch Unit 1 Updated Final Safety Analysis Report (UFSAR), Appendix F, “Conformance to the AEC Criteria,” contains the comparison of the applicable AEC criteria to the 10 CFR 50, Appendix A, GDCs.

#### **RAI-01**

The Hatch submittal uses the term “out of service” extensively in describing the proposed technical specification TS changes for RPV bolts.

- 1) Please provide an explanation of SNC’s proposed use of “out of service” in the TS as compared to the current TS OPERABLE/OPERABILITY definition.
- 2) If a bolt is less than fully tensioned, is it considered OPERABLE, and if so, please justify?

#### **RAI-02**

In its January 20, 2023, RAI response submittal (ADAMS Accession No. ML23020A902), the licensee states that it fully intends to employ sound engineering principles to maintain all RPV bolts in service. If a flaw is found during a Section XI inspection in an RPV bolt that will not be repaired or replaced, what are the licensee’s requirements to determine the maximum allowable torque that will be applied during tensioning of that bolt prior to plant startup?

#### **RAI-03**

If approved, the latest proposed TS changes provided by the licensee during the public meeting on May 2, 2023 (Summary - ADAMS Accession No. ML23136B294), would allow one bolt from each unit to either not be installed or installed and not fully torqued. Please explain how this does not constitute a material alteration of the facility as originally designed and licensed. Based on the above, please discuss whether the assertion in the No Significant Hazards Consideration that “no hardware changes are proposed” accurately reflects the proposed change, which would allow operation with up to two RPV head closure bolts not installed or torqued.

#### **RAI-04**

During the NRC’s May 2, 2023, public meeting (Summary - ADAMS Accession No. ML23136B294), SNC proposed a revision to Unit 2 TS Table 1.1-1 footnotes along with a

proposed Unit 2 license condition. Please provide any updated proposed revisions to TS Table 1.1-1 along with SNC's proposed license condition(s) for each unit.

**RAI-05**

During the NRC's May 2, 2023, public meeting (Summary - ADAMS Accession No. ML23136B294), SNC proposed a revision to Unit 2 TS Table 1.1-1 footnotes along with a proposed Unit 2 license condition. Please discuss licensee actions that would be taken if more than one reactor head closure bolt cannot be properly examined in accordance with Table IWB-2500-1 of the American Society of Mechanical Engineers *Boiler and Pressure Vessel Code*, Section XI.

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**Sent Date:** 9/14/2023 5:04:38 PM  
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**From:** Quarles, Adam Graham

**Created By:** AGQUARLE@southernco.com

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Tracking Status: None

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Tracking Status: None

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