

NRR-PMDAPEm Resource

From: Lamb, John
Sent: Monday, May 11, 2015 11:51 AM
To: Ossing, Michael (Michael.Ossing@nexteraenergy.com)
Cc: 'Willoughby, Paul' (Paul.Willoughby@nexteraenergy.com); Brown, Victoria - Seabrook Station Licensing Dept (Victoria.Brown@nexteraenergy.com); Kilby, Gary (Gary.Kilby@nexteraenergy.com); Broaddus, Doug; Baxter, Angela; Wilson, George; Shoop, Undine; Blumberg, Mark; Chernoff, Margaret; Elliott, Robert; Hon, Andrew
Subject: For Your Review - DRAFT Second Round RAI - Seabrook Radiation Monitor LAR (MF4572)
Attachments: 2nd Round of RAIs for Seabrook RAIs only Rev 0.docx
Importance: High

Mike,

Attached, for your review, is a DRAFT second round RAI regarding the Seabrook Radiation Monitor License Amendment Request (LAR).

Please review to ensure that the questions are understandable, the regulatory basis is clear, there is no proprietary information contained in the DRAFT RAI, and to determine if the information was previously docketed.

Please also let me know if NextEra wishes to have a conference call to clarify the DRAFT RAI, and how much time NextEra needs to respond to the RAI.

Thanks.
John

Hearing Identifier: NRR_PMDA
Email Number: 2113

Mail Envelope Properties (John.Lamb@nrc.gov20150511115100)

Subject: For Your Review - DRAFT Second Round RAI - Seabrook Radiation Monitor
LAR (MF4572)
Sent Date: 5/11/2015 11:51:07 AM
Received Date: 5/11/2015 11:51:00 AM
From: Lamb, John
Created By: John.Lamb@nrc.gov

Recipients:

"Willoughby, Paul" (Paul.Willoughby@nexteraenergy.com)" <Paul.Willoughby@nexteraenergy.com>
Tracking Status: None
"Brown, Victoria - Seabrook Station Licensing Dept (Victoria.Brown@nexteraenergy.com)"
<Victoria.Brown@nexteraenergy.com>
Tracking Status: None
"Kilby, Gary (Gary.Kilby@nexteraenergy.com)" <Gary.Kilby@nexteraenergy.com>
Tracking Status: None
"Broaddus, Doug" <Doug.Broaddus@nrc.gov>
Tracking Status: None
"Baxter, Angela" <Angela.Baxter@nrc.gov>
Tracking Status: None
"Wilson, George" <George.Wilson@nrc.gov>
Tracking Status: None
"Shoop, Undine" <Undine.Shoop@nrc.gov>
Tracking Status: None
"Blumberg, Mark" <Mark.Blumberg@nrc.gov>
Tracking Status: None
"Chernoff, Margaret" <Margaret.Chernoff@nrc.gov>
Tracking Status: None
"Elliott, Robert" <Robert.Elliott@nrc.gov>
Tracking Status: None
"Hon, Andrew" <Andrew.Hon@nrc.gov>
Tracking Status: None
"Ossing, Michael (Michael.Ossing@nexteraenergy.com)" <Michael.Ossing@nexteraenergy.com>
Tracking Status: None

Post Office:

Files	Size	Date & Time
MESSAGE	561	5/11/2015 11:51:00 AM
2nd Round of RAIs for Seabrook RAIs only Rev 0.docx		39383

Options

Priority: High
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

OFFICE OF NUCLEAR REACTOR REGULATION
REQUEST FOR ADDITIONAL INFORMATION
FOR A LICENSE AMENDMENT REQUEST TO CHANGE
TECHNICAL SPECIFICATION 3.3.3.1,
“RADIATION MONITORING FOR PLANT OPERATIONS”
NEXTERA ENERGY SEABROOK
SEABROOK STATION
DOCKET NOS. 50-443
TAC NO.MF4572

By application dated July 24, 2014, (Agencywide Documents Access and Management System (ADAMS) Accession Number ML14209A919), as supplemented by a letter dated December 11, 2014 (ADAMS Accession Number ML14349A644), NextEra Energy Seabrook, LLC (NextEra) submitted a license amendment (LAR) for Seabrook Station. The LAR, in part, proposes to modify the applicability of Technical Specification (TS) 3.3.3.1, “Radiation Monitoring for Plant Operations,” by adding a requirement for the control room air intake radiation monitors to be operable during the movement of irradiated fuel.

The Nuclear Regulatory Commission (NRC) Staff completed our review and determined that the enclosed additional information is required to complete the evaluation.

ARCB2-RAI-3

NUREG-0800, Standard Review Plan (SRP) 15.0.1, “Radiological Consequence Analyses Using Alternative Source Terms,” dated July 2000 (ADAMS Accession Number ML003734190), states, in part, that:

The methodology and assumptions for calculating the radiological consequences should reflect the regulatory positions of RG [Regulatory Guide] -1.183.

Appendix B of RG-1.183, “Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors” (ADAMS Accession Number ML003716792), Regulatory Position 1.1 states, in part that:

The number of fuel rods damaged during the accident should be based on a conservative analysis that considers the most limiting case. This analysis should consider parameters such as the weight of the dropped heavy load or the weight of a dropped fuel assembly (plus any attached handling grapples), the height of the drop, and

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the compression, torsion, and shear stresses on the irradiated fuel rods. Damage to adjacent fuel assemblies, if applicable (e.g., events over the reactor vessel), should be considered.

Updated Final Safety Analysis Report Section 15.7.4.3 states:

The FHA [fuel handling accident analysis] is consistent with the guidance provided in RG 1.183 Appendix B, "Assumptions for Evaluating the Radiological Consequences of a Fuel Handling Accident.

The proposed change to the applicability of Technical Specification 3.3.3.1, "Radiation Monitoring for Plant Operations," (i.e. Table 3-6, Functional Units 5.a.1 and 5.a.2) from requiring the operability of the control room air intake radiation monitors from "All" Modes to include "during the movement of irradiated fuel" does not address movement of loads other than "irradiated fuel assemblies" over the spent fuel pool. For example, Section 15.7.4.1 of the Updated Final Safety Analysis Report considers dropping new fuel assemblies. Section 15.7.4.1 states that:

Dropping or damaging an assembly [not an irradiated assembly] within the Fuel Storage Building is another postulated accident addressed in this analysis.

It is unclear how the proposed revised applicability for Functional Units 5.a.1 and 5.a.2 are derived from the Seabrook fuel handling accident analysis and how the fuel handling analysis bounds Regulatory Guide 1.183, Regulatory Position 1.1. To clarify, how does the fuel handling analysis determine the most limiting control room dose and how does the fuel handling analysis show that the limiting control room dose is not the drop of a new fuel assembly or object¹ other than a recently irradiated fuel assembly assuming no credit² for the control room intake monitors? Please provide enough detail (inputs, assumptions and methodology) so that the NRC staff can independently verify the results of the fuel handling accident. Alternatively, change the Applicability of Technical Specification LCO 3.9.7 to include "during the movement of fuel assemblies and objects³ over the reactor core."

¹ "Object" rather than load is consistent with the terminology in the current Seabrook Technical Specifications (See Technical Specifications 3.8.1.2).

²Regulatory Guide 1.183, Regulatory Position 5.1.2 states that credit for Engineered Safeguard Features may be taken for accident mitigation features that are classified as safety-related and are required to be operable by technical specifications. The control room intake monitors are not required to be operable by Technical Specifications during the movement of new fuel assemblies and other loads and, therefore, would not be credited in the fuel handling accident safety analysis.

³Objects not covered under the "Heavy Loads" program.