James, Lois

From: James, Lois
Sent: Wednesday, May 24, 2017 4:26 PM
To: Eric.McCartney@nexteraenergy.com
Cc: RidsNrrDlr Resource; RidsNrrDlrRasb Resource; RidsNrrMailCenter Resource; James, Lois; Bloom, Steven; Rikhoff, Jeffrey; Ronewicz, Lynn; Poole, Justin; Danna, James; McIntyre, David; Weil, Jenny; Dacus, Eugene; Harris, Brian; Ghosh, Anita; Wachutka, Jeremy; Gray, Mel; Bower, Fred; Cataldo, Paul; Meier, Peter; Barkley, Richard; Vadella, Robert; Draxton, Mark; Tifft, Doug; Sheehan, Neil; Screnci, Diane; Eric.McCartney@nexteraenergy.com; Kenneth.J.Browne@nexteraenergy.com; Richard.Turcotte@nexteraenergy.com; Edward.Carley@nexteraenergy.com; Christine.Thomas@nexteraenergy.com; Holston, William; Morey, Dennis
Subject: SEABROOK STATION, UNIT 1 – FINAL REQUEST FOR ADDITIONAL INFORMATION REGARDING SEABROOK LICENSE RENEWAL APPLICATION – SET 26 (CAC NO. ME4028)
Attachments: Final Seabrrook RAI B.2.1.9-3 re Bolting Integrity.pdf; Draft Seabrook RAI B 2 1 9-3 Bolting Integrity - e-mail.pdf

By letter dated May 25, 2010, (Agencywide Documents Access and Management System (ADAMS) Package Accession No. ML101590094), NextEra Nuclear Seabrook, LLC, (NextEra or the applicant) submitted an application pursuant to Title 10 of *the Code of Federal Regulations* Part 54, "Requirements for Renewal of Operating Licenses for Nuclear Power Plants," to renew the operating license NPF-86 for Seabrook Station, Unit 1.

On May 9, 2017, the U.S Nuclear Regulatory Commission (NRC) staff sent NextEra the draft Request for Additional Information (RAI) attached as Enclosure 2. The application subsequently informed the NRC staff that a clarification call was needed to discuss the information requested. The clarification call was held on May 18, 2017, between NRC staff and NextEra representatives, during which the subject information request was discussed. The draft RAIs were modified based on the discussion.

During the call, NextEra explained that they have plant-specific inspections procedures that require inspectors to use a snoop medium to detect potential leakage from bolted connections on air-filled and gas-filled systems. The staff stated that the procedure steps that required the use of a snoop medium should be linked to license renewal requirements. The staff also stated that an alternative means would be required if there were any in-scope bolted connections in systems that are normally at atmospheric pressure (e.g., checking for loose closure bolts). Based on the discussion, the staff modified the RAI. The revised RAI is attached as Enclosure 1.

During the May 9, 2017, call, Edward Carley agreed to provide a response to this final RAI within 30 days of the date of this email.

Sincerely,
Lois James
Project Manager – Seabrook
NRR/DLR
(301) 415-3306

Enclosure:
1. Final Request for Additional Information
2. Email Transmitting Draft Request for Additional Information

cc w/encl: Listserv

ADAMS Accession No.: ML17139B835

OFFICE	PM:RPGB:DLR	RARB:DLR	BC:RARB:DLR	BC:RPGB:DLR
NAME	LJames*	WHolston*	DMorey*	SBloom*
DATE	05/19/2017	05/22/2017	4/13/2017	5/23/2017

OFFICE	PM:RPGB:DLR
NAME	LJames*
DATE	5/23/2017

OFFICIAL RECORD COPY

SEABROOK STATION
LICENSE RENEWAL APPLICATION (LRA)
REQUESTS FOR ADDITIONAL INFORMATION (RAI)

RAI # B.2.1.9-3

Background

Section 54.21(a)(3) of 10 CFR requires the applicant to demonstrate that the effects of aging for structures and components will be adequately managed so that the intended function(s) will be maintained consistent with the current licensing basis for the period of extended operation. As described in SRP-LR, an applicant may demonstrate compliance with 10 CFR 54.21(a)(3) by referencing the GALL Report and when evaluation of the matter in the GALL Report applies to the plant.

GALL Report AMP XI.M18 states:

> Degradation of pressure boundary closure bolting due to crack initiation, loss of preload, or loss of material may result in leakage from the mating surfaces or joint connections of pressure boundary components. Periodic inspection of pressure boundary components for signs of leakage ensures that age-related degradation of closure bolting is detected and corrected before component leakage becomes excessive. Accordingly, pressure retaining bolted connections should be inspected at least once per refueling cycle.

LRA Section B.2.1.9 states that the Bolting Integrity program "includes periodic inspection of closure bolting assemblies to detect signs of leakage that may be indicative of loss of preload… Periodic inspection of bolted closures in conjunction with the Seabrook Station Inservice Inspection Program and Seabrook Station External Surfaces Monitoring Program will detect the aging effects and joint leakage." The LRA states that the External Surfaces Monitoring and Inservice Inspection programs use visual inspections to detect leakage which could indicate a loss of preload for closure bolting.

Issue

While the staff notes that visual inspections will be capable of detecting leakage of liquid-filled systems, a visual inspection may not be sufficient to detect leakage for air- or gas-filled systems. LRA Table 3.3.2-8, "Containment Online Purge System," and 3.3.2-20, "Instrument Air System," are examples of systems that cite the Bolting Integrity Program to manage aging effects associated with closure bolting that could be or are air-filled or gas-filled. Based on a review of LRA Section B.2.1.9 and SER with Open Items Section 3.0.3.1.7, "Bolting Integrity," it is not clear how aging effects for closure bolting installed in air-filled or gas-filled systems will be effectively managed because in these systems there is typically limited or no visual signs of leakage.

Request

1. For air-filled systems, gas-filled systems, and systems at internal atmosphere pressure for which aging effects for closure bolting will be managed by the Bolting Integrity Program, state how the aging effects will be managed.

2. State any enhancements to plant-specific procedures and/or to the Bolting Integrity program necessary to incorporate how these aging effects will be managed.

James, Lois

From: James, Lois
Sent: Tuesday, May 09, 2017 2:26 PM
To: 'Edward.Carley@nexteraenergy.com'; Browne, Kenneth
Subject: SEABROOK, UNIT 1 – DRAFT REQUEST FOR ADDITIONAL INFORMATION REGARDING SEABROOK LICENSE RENEWAL APPLICATION (CAC NO. ME4028)
Attachments: Draft SEABROOK RAI B 2 1 9-3 Bolting Integrity.pdf

By letter dated May 25, 2010 (Agencywide Documents Access and Management System (ADAMS) Package Accession No. ML101590094), NextEra Energy Seabrook, LLC, (the applicant or NextEra) submitted an application pursuant to Title 10 of the *Code of Federal Regulations* Part 54, "Requirements for Renewal of Operating Licenses for Nuclear Power Plants," to renew the operating license(s) NPF-86 for Seabrook Station, Unit 1.

The U.S. Nuclear Regulatory Commission (NRC) staff has determined that additional information, as described in the attached request for additional information (RAI), is required for the staff to complete its review of the Seabrook's license renewal application.

This RAI is identified as draft at this time to confirm your understanding of the information that the NRC staff needs to complete the evaluation. If the request for information is understood, please respond to this request for additional information within 30 days of the date of this request. Please call me at 301-415-3306 if you would like to set up a conference call to clarify this request for information.

Sincerely,

Lois M. James
Senior Project Manager – Seabrook LRA
NRR/DLR
(301) 415-3306

Enclosure:
Requests for Additional Information

SEABROOK STATION
LICENSE RENEWAL APPLICATION (LRA)
REQUESTS FOR ADDITIONAL INFORMATION (RAI)

RAI # B.2.1.9-3

Background

Section 54.21(a)(3) of 10 CFR requires the applicant to demonstrate that the effects of aging for structures and components will be adequately managed so that the intended function(s) will be maintained consistent with the current licensing basis for the period of extended operation. As described in SRP-LR, an applicant may demonstrate compliance with 10 CFR 54.21(a)(3) by referencing the GALL Report and when evaluation of the matter in the GALL Report applies to the plant.

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LRA Section B.2.1.9 states that the Bolting Integrity program "includes periodic inspection of closure bolting assemblies to detect signs of leakage that may be indicative of loss of preload… Periodic inspection of bolted closures in conjunction with the Seabrook Station Inservice Inspection Program and Seabrook Station External Surfaces Monitoring Program will detect the aging effects and joint leakage." The LRA states that the External Surfaces Monitoring and Inservice Inspection programs use visual inspections to detect leakage which could indicate a loss of preload for closure bolting.

Issue

While the staff notes that visual inspections will be capable of detecting leakage of liquid-filled systems, a visual inspection may not be sufficient to detect leakage for air- or gas-filled systems. LRA Table 3.3.2-8, "Containment Online Purge System," and 3.3.2-20, "Instrument Air System," are examples of systems that cite the Bolting Integrity Program to manage aging effects associated with closure bolting that could be or are air-filled or gas-filled. Based on a review of LRA Section B.2.1.9 and SER with Open Items Section 3.0.3.1.7, "Bolting Integrity," it is not clear how aging effects for closure bolting installed in air-filled or gas-filled systems will be effectively managed because in these systems there is typically limited or no visual signs of leakage.

Request

1. List the in-scope systems that have portions that are air-filled and gas-filled for which aging effects associated with closure bolting are being managed by the Bolting Integrity Program.

2. State how the aging effects will be managed.

3. State any enhancements to plant-specific procedures and/or to the Bolting Integrity program necessary to incorporate how these aging effects will be managed.