From: Lamb, John
Sent: Wednesday, February 15, 2012 3:50 PM
To: OKeefe, Michael
Cc: Kilby, Gary; Willoughby, Paul; Khanna, Meena; Lund, Louise; Evans, Michele; Ennis, Rick; Tate, Travis; Dennig, Robert; Elliott, Robert; Schulten, Carl; Blumberg, Mark; Sallman, Ahsan; Duvigneaud, Dylanne
Subject: For Your Review - Draft RAI - Seabrook CEEACS LAR

Importance: High

Mike,

Below, for your review, is a draft RAI regarding Seabrook CEEACS LAR. Please review to ensure that the questions are understandable, the regulatory basis is clear, there is no proprietary information contained in the RAI, and to determine if the information was previously docketed.

Please let me know if you want a conference call to ensure you understand the questions, to ensure you understand the regulatory basis, to inform us that there is no proprietary information contained in the RAI, and to let us know if the information was previously docketed. Please also let me know how much time NextEra needs to respond to the RAI.

Thanks.
John

DRAFT RAI

Question 1

By letter dated September 16, 2011 (Agencywide Document Access and Management System (ADAMS) Accession No. ML 11266A041), NextEra Energy Seabrook (Seabrook), LLC (licensee) submitted “Response to Request for Additional Information Regarding License Amendment Request 10-02, Regarding the Containment Enclosure Emergency Air Cleanup System:” The NRC staff request for additional information stated:

Given the differences in format and content between NUREG-1431 and Seabrook TS, please describe how the proposed TS change provides an equivalent level of safety compared to that found in NUREG- 1431.

The NRC staff received a response to its request that compared the Seabrook containment design function to the containment design function in NUREG-1431, Standard Technical Specifications Westinghouse Plants (STS). The response concluded that the Seabrook's Containment Enclosure Building Integrity (TS 3.6.5.3) is similar to the STS Shield Building (TS 3.6.8) in that the Enclosure Building forms a secondary boundary to containment. The difference between the design functions is that Seabrook's Containment Enclosure Building is maintained at a negative pressure following an accident (emphasis added), not prior to the event as is assumed for the STS design function. Consequently, the Seabrook Containment Enclosure Building Integrity technical specification 3.6.5.2 permits breaching the boundary in SR 3.6.5.2 during “normal transit entry and exit” through the single door access openings.

The licensee response also compared the Seabrook TS proposed required actions for an inoperable Containment Enclosure Building to STS required actions for an inoperable Shield Building. The comparison discussed that Shield Building TS 3.6.8 requires SR 3.6.8.4 to be performed and met to demonstrate Shield Building operability. SR 3.6.8.4 verifies that the Shield Building can be maintained at a specified negative pressure with a specified air flow within a specified time following receipt of actuation signal by the Shield Building Air Cleanup System (TS 3.6.13). The licensee concluded that the primary purpose of the STS SR 3.6.8.4 is to ensure Shield Building integrity (emphasis added), i.e., operability. Compared to the STS, the Seabrook Containment Enclosure Emergency Air Cleanup System (CEEACS) SR 4.6.5.1.d.4 demonstrates the CEEACS (TS 3.6.5.1) is operable by verifying the CEEACS system produces a negative pressure of greater than or equal to 0.25 inch Water Gauge in the annulus within 4 minutes after a start signal. The licensee concluded that the primary purpose of proposed required Action b for CEEACS is to allow a 24 allowed outage time for both air-handling trains inoperable due to an inoperable boundary (emphasis added). For Seabrook, only the Containment Enclosure Building operability is affected when doors are opened, except for normal transit entry and exit. Thus, boundary integrity allowed outage time allowances are addressed differently in STS as compared to proposed Seabrook TS required actions.

Seabrook TS definition 1.21, “Operable/Operability” requires:

A system, subsystem, train, component or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified function(s), and when all necessary attendant instrumentation, controls, electrical power, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its function(s) are also capable of performing their related support function(s).

In accordance with the regulations under 10 CFR 50.36(c)(2(i), “Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met.” Also under 10 CFR 50.36(c)(3), “Surveillance requirements are requirements relating to test [..] to assure that the necessary quality of systems and components is maintained, […] and that the limiting conditions for operation will be met.”

Based on the RAI response the NRC staff considered that Seabrook CEEACS, Shield Building and Structural Integrity TS surveillances do not matchup with STS SBACS and Shield Building surveillances. For Seabrook, only the Containment Enclosure Building operability is affected when doors are opened, except for normal transit entry and exit. Specifically, STS Shield Building SR 3.6.8.4 demonstrates that the Shield Building is operable by verifying that the Shield Building Air Cleanup System (TS 3.6.13) will maintain the Shield Building at a pressure equal to or more negative than [-0.5] inch water gauge in the annulus with final flow ? [ ] cfm within [22] seconds after a start signal. Contrary to STS, Seabrook CEEACS SR 4.6.5.1.d.4 demonstrates the CEEACS is operable by verifying the CEEACS system produces a negative pressure of greater than or equal to 0.25 inch Water Gauge in the annulus within 4 minutes after a start signal. Thus, boundary integrity allowed outage time allowances are addressed differently in STS as compared to proposed Seabrook TS required actions.

Please provide additional justification for why Seabrook SR 4.6.5.1.d.4 demonstrates operability of the Seabrook CEEACS or propose other TS changes such that this negative pressure test is

associated with demonstrating operability of the Containment Enclosure Building Integrity (LCO 3.6.5.2).

Question 2

The licensee's September 16, 2011, response to the NRC staff's request for additional information compared the Seabrook containment to the containment arrangements addressed in NUREG-1431. The discussion concluded that Seabrook's containment enclosure building is similar to the shield building described in NUREG-1431.

The shield building functions to ensure proper operation of the Shield Building Air Cleanup System (SBACS) and to limit radioactive leakage from the containment to those paths and leakage rates assumed in the accident analysis. SBACS functions to ensure that radioactive materials that leak from the primary containment into the shield building following a design basis accident are filtered and absorbed prior to exhausting to the environment. NUREG-1431, STSs 3.6.8 and 3.6.13 provide the specific requirements for the shield building and SBACS, respectively, to ensure they meet the intended functions.

In establishing the shield building requirements, the staff describes in the Bases of STS 3.6.8 that the intent is to not breach the shield building boundary at any time when the shield building is required. The staff indicates this is achieved by maintaining the barrier closed at all times. The staff also describes that shield building access doors are normally kept closed, except when the access opening is being used for entry and exit or when maintenance is being performed on an access opening. In establishing the SBACS requirements, the staff describes in the Bases of STS 3.6.13 that in the event of a design basis accident, one SBACS train is required to provide the minimum particulate iodine removal assumed in the safety analysis.

The proposed change attempts to model the TS requirements for the Seabrook containment enclosure building and the containment enclosure emergency air cleanup system to be consistent with NUREG-1431 requirements for the shield building and SBACS. The proposed changes include the insertion of a note to Seabrook TS 3.6.5.1 which states: "The containment enclosure boundary doors may be opened for normal transit under administrative control."

Based on the background provided above, please provide a justification for the proposed note to provide assurance consistent with STSs 3.6.8 and 3.6.13 that radioactive leakage from the containment will be limited to those paths and leakage rates assumed in the accident analysis.