NEXTera ENERGY SEABROOK

OCT 6 2009

SBK-L-09205

Docket No. 50-443

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville, MD 20852

Seabrook Station
Response to Request for Additional Information
Regarding NRC Generic Letter 2008-01

In a letter dated October 28, 2008, NextEra Energy Seabrook, LLC (NextEra), submitted its final response to Generic Letter 2008-01, Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems (GL2008-01) for Seabrook Station. In a letter dated September 1, 2009, the NRC provided a request for additional information regarding the NextEra submittal.

The attachment to this letter provides NextEra's response to the request for additional information.

If you have any questions regarding this response, please contact Mr. Michael O'Keefe, Licensing Manager, at (603) 773-7745.

Sincerely,

NextEra Energy Seabrook, LLC

Gene St. Pierre
Vice President - North

cc: S. J. Collins, NRC Region I Administrator
D. L. Egan, NRC Project Manager
W. J. Raymond, NRC Resident Inspector

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NEXTera ENERGY SEABROOK

I, Gene St. Pierre, Vice President North of NextEra Energy Seabrook, LLC hereby affirm that the information and statements contained within this response to a request for additional information are based on facts and circumstances which are true and accurate to the best of my knowledge and belief.

Sworn and Subscribed
before me this
6 day of October, 2009

Notary Public

Gene St. Pierre
Vice President North

Attachment to SBK-L-09205

ATTACHMENT

Response to Request for Additional Information
Regarding NRC Generic Letter 2008-01

In a letter dated October 28, 2008, NextEra Energy Seabrook, LLC (NextEra), submitted its final response to Generic Letter 2008-01, Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems (GL2008-01) for Seabrook Station. In a letter dated September 1, 2009, the NRC provided a request for additional information regarding the NextEra submittal. NextEra's responses are provided below.

1. In Reference 4, Seabrook states; "Technical Specification 3/4.5.2, ECCS Subsystems – Tavg Greater than or Equal to 350F" currently requires "Verifying that the ECCS piping is full of water" at least once per 31 days.

   What is the frequency of surveillances for subject systems not covered under Technical Specification Surveillance Requirement (SR) 4.5.2.b, specifically in modes other than 1, 2, and 3, and also for non-ECCS subsystems?

   RAI 1 Response:

   Systems not covered by SR 4.5.2.b are verified full using ultrasonic testing (UT) at the same frequency as systems covered by SR 4.5.2.b. With the exception of inaccessible locations inside containment, the piping systems are verified full of water on a 31-day frequency when the plant is in Modes 1 through 4. During a plant cooldown, the residual heat removal system (RHR) suction lines from the reactor coolant system (RCS) are verified full of water prior to placing the RHR system in operation. When the plant is in Mode 5, the systems, including the locations that are inaccessible in Modes 1 through 4, are verified full of water prior to entering Mode 4.

2. Describe what kind of testing is done after venting to verify the gas was removed and to ensure gas was not transported into a high point that was previously found to be gas-free.

   RAI 2 RESPONSE:

   Following the fill and vent procedures and prior to starting the affected pumps, the piping is verified full using UT methods in accordance with surveillance procedure OX1456.02, ECCS Monthly System Verification.

   Furthermore, prior to declaring a system operable, the TS surveillance is completed. Thereafter, completion of surveillance OX1456.02, ECCS Monthly System Verification, provides continued assurance that the system high points are full.

During operation in Modes 1 through 4, it is unlikely that a venting activity will move gas to different high points within the system piping. The piping systems do not allow operation at sufficient flow rates to move gas within the systems due the system alignments required for ECCS and CBS system operation.

3. In Reference 5, Seabrook states that if gas void sizing values are unacceptable, plant operators will "take appropriate action to bring the system into compliance with the allowable values. This includes venting or using system flow to sweep the gas to an acceptable location."

   How are these appropriate actions controlled?

RAI 3 Response:

Plant evolutions are controlled by reviewed and approved system operating procedures. For gas bubbles that exceed the allowed values and that may be identified with the reactor in Modes 1-4, additional considerations may apply to remove the gas bubble. Local venting is an option where a vent valve and a makeup source are available. The condition may require a more detailed troubleshooting plan considering the likely source of the gas bubble, the technical specifications, the reactor operating mode and the allowed system configurations. If necessary, special or temporary procedures may be developed, reviewed and approved. Any gas bubbles that are identified at the monitoring locations are documented in a corrective action document.

4. In Reference 5, Seabrook states, "Gas voids that meet the allowable value are documented in the plant procedure data sheets and are then trended by the system engineer."

   What is involved in the trending done by the system engineer?

RAI 4 Response:

Trending is performed in accordance with an existing plant engineering guideline. The guideline requires trending the system high points within the scope of GL 2008-01. The results of the UT surveillances are documented on procedure data sheets and are then trended in an EXCEL spreadsheet. Each point is listed and the result of each surveillance is noted as SAT or UNSAT. If a void is present, either SAT or UNSAT, the void existence is noted in a comment embedded in the cell on the spreadsheet. The data is typically entered quarterly during the development of the Chemical and Volume Control System (CS) system health report. At that time the data is further reviewed for any apparent trends or other issues. If an adverse trend is noted during the data entry and review, a corrective action document is initiated to document the condition.

The trending allows the system engineer to compare results of a prior surveillance to determine if a particular gas bubble is increasing or decreasing or to initiate further corrective action.

5. In Reference 5, Seabrook states, "Based on the results of the procedure reviews, the systems are not subject to inadvertent draining when current procedures are followed."

Explain what measures are taken to guard against gas intrusion because of inadvertent draining, system realignments, incorrect maintenance procedures, or other evolutions.

RAI 5 RESPONSE:

System operating procedures are developed and reviewed by trained operators. The procedure development process may include system process and instrumentation diagram reviews, equipment drawing reviews and system walk downs to ensure that the desired results of the procedures are obtained. Operators are trained on the use of system operating and surveillance procedures. As system alignment activities are performed, the operating staff is further trained to apply human performance tools to ensure procedure compliance and successful system operation. Seabrook's operating procedures are mature procedures that may be further enhanced by feedback from training, operations, or other procedure reviews.

System maintenance activities are controlled using a work planning process that considers the plant operating mode, the technical specification requirements, and overall risk. System alignments for maintenance include a tag-out process to allow any system draining. The system tag-out boundaries are established by Operations Department personnel for the particular maintenance activity. The system tag-out is performed by Operations Department personnel. The maintenance activity is controlled by a work order. The work control process controls the work activity scheduling and the operations interaction with the work activity. Once the maintenance activity is complete and the system is available to be returned to service, Operations Department personnel remove the tags, align the systems, and conduct the system fill and vent in accordance with established procedures.

In summary, use of system operating procedures, human performance tools, work planning and Operations Department control of system configurations are the measures taken to guard against gas intrusion because of inadvertent draining, system realignments, incorrect maintenance, or other evolutions.

6. Describe how work packages are controlled and revised due to changes in maintenance work scope, including review and reauthorization of the package and any new temporary procedures.

RAI 6 Response:

System maintenance activities are controlled using a work planning process that considers the plant operating mode, the technical specification requirements, and overall risk. System alignments for maintenance include a tag-out process to allow any system draining. The system tag-out boundaries are established by Operations Department personnel for the particular maintenance activity. The system tag-out is performed by Operations Department personnel. The maintenance activity is controlled by a work order. The work control process controls the work activity scheduling and the operations interaction with the work activity. A revision to the work activity that results in a change to the intent or scope of the work instructions requires that work instructions be re-planned and re-authorized. Once the maintenance activity is complete and the system is available to be returned to service, Operations Department personnel remove the tags, align the systems, and conduct the system fill and vent in accordance with established procedures.

7. Training was not identified in the GL but is considered to be a necessary part of applying procedures and other activities when addressing the issues identified in the GL. Briefly discuss training.

RAI 7 Response:

Training on INPO SOER 97-1, Potential Loss of High Pressure Injection and Charging Capability from Gas Intrusion, is provided to the Operations, Maintenance and Engineering staff on a periodic basis. This training discusses gas intrusion sources and the effects on system operation, such as the effect on pump performance and the potential for hydraulic transients in pump discharge piping. The training has been updated to include past industry experience.

Operations personnel are trained on the use of system operating and surveillance procedures, including those used for fill and vent, fluid sweeping in the systems within the scope of GL 2008-01, and the surveillance procedure to verify that system piping is full.

Engineers that perform ultrasonic testing are trained on an engineering procedure specific to ultrasonic equipment calibration and examination for water solid evaluations including equipment settings, equipment calibration, and use of calibration pipe standards.