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Seabrook 1 – Quarterly Plant Inspection Findings

2Q/2017 – Plant Inspection Findings

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Initiating Events

Significance: G Sep 02, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Inadequate Corrective Actions to Preclude Repetition of a Significant Condition Adverse to Quality

The team identified a finding of very low safety significance, involving a non-cited violation of Title 10 of the Code of Federal Regulations, Part 50, Appendix B, Criterion XVI, "Corrective Action," for not performing corrective actions to preclude repetition of a significant condition adverse to quality. Specifically, in 2008, two of four primary component cooling water (PCCW) pump motors failed within a four month period due to a manufacturing defect. NextEra established but did not perform a corrective action to replace all four motors with re-wound motors, free of the identified manufacturing defect. Subsequently, in 2015, a third motor failure occurred due to the same manufacturing defect. NextEra's immediate corrective actions included entering this issue into their corrective action program (AR 2153536), implementing an electrical testing program that would provide an early indication of further degradation of the manufacturing defect until motor replacement, and completing a prompt operability determination to assess current PCCW system operability.

This finding was more than minor because it was associated with the Equipment Performance attribute of the Initiating Events Cornerstone and adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during power operations. In accordance with IMC 0609.04, "Initial Characterization of Findings," and Exhibit 1 of IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," the team screened the finding for safety significance and determined that a detailed risk evaluation (DRE) was required because the finding involved a partial loss of a support system (PCCW pump 'B') that would increase the likelihood of an initiating event and impacted mitigating equipment (Item C - Support System Initiators of Exhibit 1). The DRE, performed by a Region I senior reactor analyst (SRA), concluded that the performance deficiency resulted in a change in core damage frequency of high E-7/yr, or very low safety significance (Green).

The finding had a cross-cutting aspect in Problem Identification and Resolution (Resolution), because NextEra did not take effective corrective actions to address this issue in a timely manner commensurate with its safety significance. Specifically, NextEra did not perform motor replacements for susceptible installed PCCW motors within a reasonable due date as specified by the 2009 corrective action to preclude repetition (CAPR); and plant procedures, programs and resources were available for the decision-making process to schedule the motor replacement.

Inspection Report# : 2016007 (*pdf*)

Mitigating Systems

Barrier Integrity

Significance:  Sep 02, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Perform Required ASME In-Service Testing of Manual Isolation Valves for the Atmospheric Steam Dump Valve Block Valves

The team identified a finding of very low safety significance, involving a non-cited violation of Seabrook Technical Specification Surveillance Requirement 4.0.5, "Surveillance Requirements for In-Service Inspection and Testing of American Society of Mechanical Engineers (ASME) Code Class 1, 2, and 3 Components." Specifically, the manual isolation valves for the atmospheric steam dump valves had an active safety function to close, in order to mitigate the radiological consequences of a steam generator tube rupture (SGTR) accident, but had not been placed in the Seabrook In-Service Test Program and tested, as required by the Technical Specifications and ASME Code. As a result, degraded valve performance could go uncorrected without adequate acceptance criteria to ensure that a SGTR would not result in an unacceptable increase in the consequences of that accident (e.g., a more than minor reduction in the margin between the postulated licensing basis radiological release and the regulatory limits). In response, NextEra entered the issue into their corrective action program (AR 2153195) and performed a preliminary assessment of the valves, which concluded that they were fully operable.

This finding was more than minor because it was associated with the System, Structure, or Component (SSC), and Barrier Performance attribute of the Containment Barrier Cornerstone and adversely affected the cornerstone objective of ensuring the reliability of associated risk-important SSCs. The team determined that the finding was of very low safety significance (Green) because it was a deficiency confirmed not to represent an actual open pathway in the physical integrity of reactor containment and did not involve an actual reduction in function of hydrogen igniters in the reactor containment. The finding did not have a cross-cutting aspect because it was not considered indicative of current licensee performance.

Inspection Report# : 2016007 (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Security

The security cornerstone is an important component of the ROP, which includes various security inspection activities the NRC uses to verify licensee compliance with Commission regulations and thus ensure public health and safety. The Commission determined in the staff requirements memorandum (SRM) for SECY-04-0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," dated November 9, 2004, that specific information related to findings and performance indicators associated with the security cornerstone will not be publicly available to ensure that security-related information is not provided to a possible adversary. Security inspection report cover letters will be available on the NRC Web site; however, security-related information on the details of inspection finding(s) will not be displayed.

Miscellaneous

Current data as of : September 05, 2017

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