

Seabrook 1

2Q/2012 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

Reactor Trip Caused by Inadequate Condensate Pump Restoration

A self-revealing finding was identified regarding the improper maintenance restoration of a condensate pump resulted in a reactor trip. NextEra workers aligned the B condensate pump for service following maintenance without first venting air from the pump casing in accordance with the system operating procedure. The finding is greater than minor because it is associated with the equipment performance attribute of the Initiating Events cornerstone, and because it adversely affects the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during power operations. The inspectors conducted a Phase 1 SDP screening in accordance with IMC 0609 and determined that the finding is of very low safety significance. The finding has a cross-cutting aspect in the area of human performance because NextEra did not ensure that adequate procedures and work packages were available (H.2.c). Specifically, neither the work package nor tagout used to restore the condensate pump to service vented the pump casing, and as a result, air from the pump entered the condensate-feedwater train causing a reactor trip when the "A" main feedwater pump tripped on low suction pressure.

Inspection Report# : [2011005](#) (*pdf*)

Mitigating Systems

Significance: G Jan 20, 2012

Identified By: NRC

Item Type: FIN Finding

Inadequate Operability Determination for Degraded Concrete Structures Housing Safety-Related Equipment

The inspectors identified a finding in that NextEra failed to fully evaluate potential structural and seismic response impacts in accordance with the requirements in NextEra procedure EN-AA-1001 after identifying a degraded and nonconforming condition related to degraded conditions for some safety related structures due to Alkali-Silica Reaction (ASR). Specifically, the evaluation did not consider the following effects due to changed properties of concrete, as reflected in reduced values of the modulus of elasticity as measured directly from concrete core samples: 1) building natural frequency in the dynamic response; 2) performance of anchorages and embedment of systems and components attached to the structures; and, 3) shear strength or capacity of affected structures and the dynamic/flexural response especially those buildings without corresponding shear reinforcement.

The failure to conduct adequate prompt operability determinations per procedure EN-AA-203-1001 for degraded and nonconforming conditions associated with ASR was a performance deficiency relative to a self imposed standard. Specifically, the prompt operability determinations conducted following the identification of ASR in safety-related structures did not completely analyze the effects of the reduced modulus of elasticity on the dynamic and flexural response of the structures to seismic events for certain conditions. This performance deficiency was associated with the design control aspect of the Mitigating Systems cornerstone; and, based on a comparison to Example 3.i of Appendix E of IMC 0612, it was determined to be more than minor. Specifically, the failure to conduct adequate operability determinations adversely affected the Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences because it required an additional evaluation to confirm that the design bases was met. The issue was evaluated using IMC 0609, "significance Determination Process," and was determined to be of very low safety significance (Green). Specifically,

when evaluated under IMC 0609, Attachment 4, the performance deficiency was a design or qualification deficiency confirmed not to result in an actual loss of safety function. The finding had a cross cutting aspect in the area of problem identification and resolution, P.1(c), related to ensuring that issues potentially impacting nuclear safety are thoroughly evaluated. Specifically, NextEra did not fully evaluate conditions adverse to quality, including evaluating the effects of the reduced concrete modulus of elasticity for impact on operability of the affected structures.

Inspection Report# : [2011010](#) (*pdf*)

Significance: N/A Jan 20, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Properly Complete a 50.59 Screen for EC272057

The inspectors identified a Severity Level IV non-cited violation (NCV) of Title 10 of the Code of Federal Regulations (10 CFR) 50.59(dX1), "Changes, Tests, and Experiments," because NextEra did not adequately evaluate a "use-as-is" determination, resulting in a defacto design change, for certain ASR impacted safety related structures. Specifically, NextEra did not complete a 10 CFR 50.59 evaluation, to ensure that the identified reduction in concrete modulus of elasticity did not present a more than minimal increase in the likelihood of the occurrence of a malfunction of a structure, system, or component (SSC) important to safety previously evaluated in the updated safety analysis report (USAR) prior to implementing changes to the facility as described in the engineering change EC272057 issued on April 25,2011.

The failure to evaluate changes to the facility as described in EC272057 was contrary to 10 CFR 50.59(d)(1) and was a performance deficiency warranting a significance evaluation in accordance with the NRC Enforcement Manual for Traditional Enforcement and IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Disposition Screening." The violation was determined to be more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because it could not reasonably be determined that the changes would not have ultimately required prior NRC approval. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, this violation is categorized as Severity Level IV because the resulting changes were evaluated by the SDP as having very low safety significance (Green), because it was a design or qualification deficiency confirmed not to result in an actual loss of safety function and because further evaluation determined that the structures remained operable despite the degraded modulus condition. The finding had a cross cutting aspect in the area of human performance work practices, H.4(b), because NextEra personnel did not follow procedures. Specifically, NextEra personnel did not follow the requirements of Section 5.2.2 of the 5059 Resource Manual when preparing the 50.59 screen for EC272057.

Inspection Report# : [2011010](#) (*pdf*)

Significance:  Sep 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Functionality Assessment for Fire Protection System

The inspectors identified a non-cited violation (NCV) of Technical Specification (TS) 6.7.1.a that requires written procedures be established and implemented, including administrative procedures that define authorities and responsibilities for safe operation. Specifically, NextEra identified a degraded condition in the fire protection system on July 15, 2011, but did not properly or thoroughly evaluate the fire protection system performance as required by NextEra procedure EN-AA-203-1001. As corrective action, NextEra completed an operability evaluation that identified degraded fire protection system performance under certain operating conditions for which NextEra implemented administrative controls that would prevent the degraded Performance

The performance deficiency was more than minor because a reasonable doubt of operability existed until further engineering evaluations were completed to demonstrate adequate fire system performance under design basis conditions. The finding affected the Mitigating Systems cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events in order to prevent core damage. The issue was evaluated using Appendix F of IMC 0609, "Significance Determination Process" (SDP), and was determined to be of very low safety significance (Green) because the finding had minimal impact on fire system performance. The finding had a cross

cutting aspect in the area of problem identification and resolution, P.1(c), because NextEra personnel did not adequately implement the operability determination process to ensure that fire system performance was thoroughly evaluated for operability to assure timely and appropriate corrective actions were completed.

Inspection Report# : [2011004](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Significance: **W** Apr 19, 2012

Identified By: NRC

Item Type: AV Apparent Violation

Failure of Exercise Critique to Identify an RSPS Weakness as a DEP PI Opportunity Failure

The NRC identified an apparent violation (AV) for the licensee's exercise critique process not properly identifying a weakness associated with a risk-significant planning standard (RSPS) that was determined to be a Drill/Exercise Performance (DEP) Performance Indicator (PI) opportunity failure during a full-scale exercise. The AV is associated with emergency preparedness planning standards 10 CFR 50.47(b)(14) and 10 CFR 50.47(b)(5) and the requirements of Section IV.F.2.g of Appendix E to 10 CFR Part 50. This finding was entered into the licensee's corrective action program.

The failure of NextEra to identify the exercise weakness related to an incorrect protective action recommendation (PAR) during their exercise critique was a performance deficiency that was reasonably within NextEra's ability to foresee and prevent. The finding is more than minor because it is associated with the emergency response organization attribute of the Emergency Preparedness Cornerstone and affected the cornerstone objective to ensure that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. This finding was determined to potentially have greater-than-Green safety significance because the licensee's exercise critique process did not properly identify a weakness associated with a RSPS that was determined to be a DEP PI opportunity failure during a biennial full-participation exercise. The finding is related to the cross-cutting area of Problem Identification and Resolution, Corrective Action Program, in that NextEra personnel did not identify a RSPS issue completely, accurately, and in a timely manner commensurate with the safety significance [P.1(a)]. Specifically, during the biennial full-participation exercise evaluation Next Era failed to identify a weakness.

Inspection Report# : [2012503](#) (*pdf*)

Occupational Radiation Safety

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary.

Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

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