Clinton
3Q/2015 Plant Inspection Findings

Initiating Events

Significance: G Sep 30, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
FAILURE TO FOLLOW PROCEDURE LEAVES CONTROL ROOM CABINET DOORS UNATTENDED IN SEISMICALLY UNANALYSED CONDITION
The inspectors identified a finding of very low safety significance (Green) and an associated NCV of 10 CFR50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the failure to maintain control room doors in a seismically analyzed condition, in accordance with station procedure CPS 1014.11, “6900/4160/480v Switchgear/Circuit Breaker Operability Program,” Revision 5a. Specifically, on several occasions the licensee failed to maintain control room cabinet doors in seismically qualified positions, while performing maintenance or trouble shooting activities, by leaving the doors open and unattended. The licensee documented the issue in the Corrective Action Program (CAP) as action request (AR) 02518477. The licensee has revised the station procedure to ensure control room cabinet doors either remain latched closed or are completely removed when unattended and has issued a standing order to ensure the requirements are reinforced.

The performance deficiency was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated September 7, 2012, because, it was associated with the configuration control performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations and is therefore a finding. Specifically, leaving the control doors in a seismically unanalyzed condition could challenge critical safety functions during a seismic event. Using IMC 0609, Attachment 4, “Initial Characterization of Findings,” and Appendix A, “The Significance Determination Process (SDP) for Findings at Power,” issued June 19, 2012, the finding was screened against the Initiating Events cornerstone and determined to be of very low safety significance (Green) because the finding did not result in exceeding the reactor coolant system leak rate for a small loss of coolant accident (LOCA), cause a reactor trip, involve the complete or partial loss of a support system that contributes to the likelihood of, or caused, an initiating event and did not affect mitigation equipment. The inspectors determined this finding affected the cross-cutting area of human performance in the aspect of resources where leaders ensure that personnel, equipment, procedures and other resources are available and adequate to support nuclear safety. Specifically, the licensee failed to ensure the personnel performing maintenance and troubleshooting had adequate documentation in written work instructions to maintain control room cabinets in seismically analyzed conditions.

Inspection Report# : 2015003 *(pdf)*

Significance: G Jun 30, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
POST MAINTENANCE TEST FAILED TO DEMONSTRATE REQUIRED FLOW THROUGH RCIC ROOM COOLER
A self-revealed finding of very low safety significance and an associated Non-Cited Violation of 10 CFR 50

Appendix B, Criterion XI, Test Control, was documented by the inspectors for the failure to perform adequate post maintenance testing that would assure that the Reactor Core Isolation Cooling (RCIC) room cooler would perform its intended function when restored to service following maintenance. Specifically, the licensee declared the room cooler operable with insufficient cooling flow through the cooler. The licensee documented the issue in the licensee's corrective action program (CAP) as action request (AR) 02447013. The licensee operated the RCIC Room Cooler outlet valve from its throttled position to fully open to flush the seat and the upstream piping and positioned the valve to maintain the required flow to restore the cooler to an operable condition.
The failure to perform adequate post maintenance testing that would assure that the RCIC Room cooler would perform its intended function when restored to service following maintenance is a performance deficiency. The performance deficiency was determined to be more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated September 7, 2012, because it was associated with the procedure quality attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences and is, therefore, a finding. Using IMC 0609, Attachment 4, "Initial Characterization of Findings," and Appendix A, "The Significance Determination Process for Findings at Power," dated June 19, 2012, the finding was screened against the Mitigating Systems cornerstone and determined to need a detailed risk evaluation because the finding represents the loss of a system and/or function. The Region III Senior Reactor Analysts (SRAs) evaluated the finding using the Clinton Station Standardized Plant Analysis Risk (SPAR) Model Version 8.17, Systems Analysis Programs for Hands-on Integrated Reliability Evaluations (SAPHIRE) Version 8.1.2. The SRAs reviewed the licensee's Apparent Cause Investigation Report IR 2447013. The exposure time was assumed to be 150.5 hours based on information in that report. The SRAs modeled the condition using failure of the RCIC pump as a surrogate for failure of the RCIC room cooler. The basic event representing the RCIC pump failure-to-run was set to "True" for the 150.5 hour duration. The result was a ?CDF of 9.98E-08/yr. The dominant sequence was a station blackout initiating event; failure of high pressure core spray; failure of reactor core isolation cooling; and failure to recover offsite or emergency AC power within 30-minutes. Based on the detailed risk evaluation, the finding is best characterized as a finding of very low safety-significance (Green). The inspectors determined this finding affected the cross-cutting area of human performance in the aspect of work management where the organization implements a process of planning, controlling, and executing work activities such that nuclear safety is the overriding priority. The work process includes the identification and management of risk commensurate to the work and the need for coordination with different groups of job activities. Specifically, the licensee failed to plan and execute adequate post maintenance testing that would have ensured the satisfactory operation of the RCIC Room cooler following planned maintenance. [H.5]

Inspection Report# : 2015002 *(pdf)*

Significance:  Jun 30, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
FAILURE TO TRANSLATE SUFFICIENT GLAND STRESS TO PACKING GLAND NUTS RESULTED IN VALVE PACKING FAILURE AND PLANT SHUTDOWN
A finding of very low safety significance and an associated Non-Cited Violation of 10 CFR50, Appendix B, Criterion III, "Design Control," was self-revealed on January 19, 2015, when a steam leak developed from the RCIC system inboard steam isolation valve (1E51F0063) stem packing. Specifically, the licensee failed to identify and implement a torque value for the gland packing nuts for the RCIC system inboard steam isolation valve 1E51F0063 to overcome service induced consolidation and prevent packing leakage. This resulted in a plant down power to 83 percent and subsequent plant shutdown due to increasing unidentified reactor coolant system leakage. The licensee documented the issue in the licensee's CAP as AR 02439437. The licensee repacked the valve utilizing the station procedure CPS 8120.37, "Valve Packing Installation," and applicable SealPro data sheet. A four ring set of A.P. Services graphite packing was installed with a new live load assembly sized to a new torque value of 59 ft-lbs. and the valve packing was tested to verify no leakage.

The inspectors determined that the failure to apply sufficient packing gland torque to overcome service induced consolidation and prevent packing leakage on the RCIC system inboard steam isolation valve was a performance deficiency. The performance deficiency was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated September 7, 2012, because, it was associated with the equipment performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations and is therefore a finding. Using IMC 0609, Attachment 4, “Initial Characterization of Findings,” and Appendix A, “The Significance Determination Process for Findings at Power,” issued June 19, 2012, the finding was screened against the Initiating Events cornerstone and determined to be of very low safety significance (Green) because the finding did not result in exceeding the RCS leak rate for a small LOCA, cause a reactor trip, involve the complete or partial loss of a support system that contributes to the likelihood of, or caused, an initiating event and did not affect mitigation equipment. The inspectors determined that no cross-cutting aspect would be associated with this finding since the performance deficiency occurred in 2010 and was not representative of current licensee performance in the of valve packing.

Inspection Report# : 2015002 *(pdf)*

Significance: G Jun 30, 2015
Identified By: NRC
Item Type: FIN Finding
FAILURE TO EVALUATE THE OPERATIONAL IMPACT OF THE TDRFP LOCKOUT SWITCH POSITION
A self-revealed finding was identified for failure to evaluate the consequences of an adverse condition, in accordance with the operational decision making process. Specifically, contrary to station procedure OP-AA-106-101-1006 “Operational Decision Making Process,” Revision 14, the licensee failed to adequately implement the procedure to ensure the consequences of leaving the switch in the lockout position were evaluated, which resulted in the loss of the manual trip function for the ‘A’ turbine driven reactor feed pump (TDRFP). The licensee documented the issue in the licensee’s CAP as action request (AR) 02440052. The licensee repaired the ground condition and returned the switch to its normal position. The licensee also revised the surveillance procedure to document the limitations associated with putting the emergency governor trip test and lockout switch in the lockout position.
The inspectors determined that the failure to adequately implement the procedure to ensure the consequences of leaving the switch in the lockout position were evaluated, which resulted in the loss of the manual trip function for the ‘A’ TDRFP, was a performance deficiency. Specifically, by not evaluating leaving the emergency governor trip test and lockout switch in the lockout position, the licensee lost the ability to manually trip the ‘A’ TDRFP, which challenged the operators during the reactor shutdown, and nearly resulted in a Level 8 reactor SCRAM. The performance deficiency was more than minor in accordance with IMC 0612, “Power Reactor Inspection Reports,” Appendix B, “Issue Screening,” dated September 7, 2012, because if left uncorrected the performance deficiency had the potential to lead to a more significant safety concern. The performance deficiency was also associated with the configuration control attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown and power operations and is therefore a finding. Using IMC 0609, Attachment 4, “Initial Characterization of Findings,” and Appendix A, “The Significance Determination Process for Findings at Power,” issued June 19, 2012, the finding was screened against the Initiating Events cornerstone and determined to be of very low safety significance (Green) because the finding did not cause a reactor trip or the loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition. The inspectors determined this finding affected the cross-cutting area of human performance in the aspect of resources where leaders ensure that personnel, equipment, procedures, and other resources are available and adequate to support nuclear safety. Specifically, the surveillance procedure for the RFPT emergency governor and trip mechanism test Section 2.1.1 stated if an actual signal was generated during testing, the lockout valve would de-energize to allow the trip mechanism to operate and trip the RFPT, which led to the understanding that the trip functions were unaffected by the switch position. (H.1)

Inspection Report# : 2015002 *(pdf)*

Significance: G Dec 31, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
STATION PROCEDURES FAILED TO PROVIDE CONTROLS FOR MATERIAL NEAR TRANSFORMERS
The inspectors identified a non-cited violation associated with a failure to provide controls for material near the station transformers. Specifically, station procedure CPS 4302.01, "Tornado/High Winds", Revision 21b does not include guidelines or examples of the types of materials to control as potential missiles in high velicity winds or tornadoes, and does not include triggers to perform walkdowns when high winds are predicted, prior to off-normal entry, to control material adjacent to the offsite power transformers that could result in the loss of offsite power. The licensee entered this issue into the corrective action program as action request (AR) 2388608.

The failure to provide guidelines or examples of the types of materials to control as potential missiles in high velicity winds or tornadoes and provide triggers to perform walkdowns when high winds are predicted was a performance deficiency. The performance deficiency was more than minor because it was associated with the equipment performance attribute of the Initiating Events Cornerstone and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations and is therefore a finding. Using Manual Chapter 0609, Attachment 4 "Initial Characterization of Findings," and Appendix A "The Significance Determination Process for Findings at Power", issued June 19, 2012, the finding was screened against the initiating events cornerstone and determined to be of very low safety significance (Green) because the finding did not involve the complete or partial loss of a support system that contributes to the likelihood of, or caused, an initiating event and did not affected mitigation equipment.

The inspectors determined this finding affected the cross-cutting area of problem identification and resolution in the aspect of operating experience where the organization systematically and effectively collects, evaluates, and implements relevant internal and external operating experience in a timely manner. Specifically, the licensee opearting experience program failed to ensure evaluation and implementation of interal operating experience in a timely manner after previous identification in the corrective action progrma. (IMC 0310 P.5)
Inspection Report# : 2014005 *(pdf)*

Mitigating Systems

Significance: G Sep 30, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
FAILURE TO IMPLEMENT AND COMPLY WITH TRANSIENT EQUIPMENT/MATERIALS PROGRAM
The inspectors identified a green finding and an associated NCV of 10 CFR 50, Appendix B, Criterion V “Instructions, Procedures, and Drawings” for the licensee’s failure to implement and comply with station procedure CPS 1019.05, “Transient Equipment/Materials,” Revision 23, to ensure that transient equipment and materials are controlled so there is no impact to safe operation of plant equipment. Specifically, on numerous occasions the inspectors identified equipment and materials improperly staged, improperly secured or in areas without engineering evaluations. The licensee documented the issue in the CAP as action requests (AR) 02507167 and AR 02529227. In each occasion identified by the inspectors the licensee subsequently removed the items identified to restore

compliance with the station procedures.

The inspectors determined the licensee's failure to implement and comply with station procedures to ensure that transient equipment and materials are controlled so there is no impact to safe operation of plant equipment was a performance deficiency. The performance deficiency was determined to be more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Screening," dated
September 7, 2012, because if left uncorrected it had the potential to lead to a more significant safety concern. Specifically, transient equipment and material in proximity of safety related components has the potential of impacting these components during a seismic event, potentially rendering them unable to fulfill their safety function. The performance deficiency is also associated with the protection against external factors attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability and capability of systems that response to initiating events to prevent undesirable consequences, and is therefore a finding. Using IMC 0609, Attachment 4, "Initial Characterization of Findings," and Appendix A, "The Significance Determination Process (SDP) for Findings at Power," issued June 19, 2012, the finding was screened against the Mitigating Systems cornerstone and determined to be of very low safety significance (Green) because the finding did not represent a loss of system or function, it did not represent an actual loss of function of at least a single train for > its TS allowed outage time and it did not represent an actual loss of one or more not TS trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program. The inspectors determined this finding affected the cross-cutting area of human performance in the aspect of field presence where leaders are commonly seen in the work areas of the plant observing, coaching, reinforcing standards and expectation. Deviations from standards and expectations are corrected promptly. Specifically, after various examples of material placement being an issue, the licensee didn't perform in field observations, caching and reinforcement of standards and expectations in the identified areas.

Inspection Report# : 2015003 *(pdf)*

Significance: G Mar 31, 2015
Identified By: NRC
Item Type: FIN Finding
FAILURE TO PERFORM ADEQUATE CHANNEL CALIBRATION ON SEISMIC INSTRUMENTATION
The inspectors identified a Green Finding associated with the licensee's failure to perform an adequate channel calibration to determine the functionality of the stations seismic monitoring equipmen used for evaluaing earthquakes. Specifically, station procedure CPS 9437.21, "Trix Time-History Accelerometer Channel Calibration," Revision 39c, did not include steps to ensure that battery backup power was provided to operate the equipment on a loss of the normal power source as part of the operability requirements. The licensee documented the issue in the corrective action program as action request (AR) 02454630. As a corrective action the licensee planned to correct procedure CPS 9437.21 to verify proper battery operation.

The licensee's failure to perform an adequate channel calibration to determine the functionality of the stations seismic monitoring equipment used for evaluating earthquakes was a performance deficiency. Specifically, station procedures did not include steps to ensure that battery backup power was provided to operate the equipment on a loss of the normal power source. The performance deficiency was more than minor because it adversely impacted the protection against external factors attribute of the Mitigating Systems cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Using Manual chapter 0609, Attachment 4 "Initial Characterization of Findings," and Appendix A "The Significance Determination Process for Findings at Power," issued June 19, 2012, the inspectors answered "yes" to the Mitigating Systems cornerstone question, "Does the finding involve the ... degradation of equipment ... specificallty designed to mitigate a seismic ... initiating event ..." Therefore, the inspectors addressed the questions in Exhibit 4, "External Event Screening Questions." The inspectors answered "no" to the two questions in Exhibit 4. Specifically, 1) if completely failed the seismic monitor would not cause an initiating event or degrade multi-trains or risk-significant systems; and 2) the

finding does not involve the total loss of any safety function. The inspectors determined this finding affected the cross-cutting area of human performance in the aspect of conservative bias where individuals use decision making-practices that emphasize prudent choices over those that are simply allowable and a proposed action is determined to be a safe in order to proceed, rather than unsafe in order to stop. Specifically, the licensee documented the issue of the voltage being high out of specification and instead of performing additional corrective actions to determine if leaving the voltage out of specification was appropriate marked the step as not applicable and proceeded with the rest of the procedure. (Section 1R15)
Inspection Report# : 2015001 *(pdf)*

Significance: G Mar 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
UNQUALIFIED SAFETY-RELATED CABLES USED IN A SUBMERGED ENVIRONMENT
The inspectors identified a finding and an associated non-citied violation of 10 CFR 50 Appendix B, Criterion III, "Design Control," for the failure to maintain safety-related cables for the SX system in an environment for which they were designed. Specifically, the licensee failed to maintain SX safety-related cables in an environment for which they were designed when the cables were allowed to be submerged in water inside cable vaults. The licensee documented this issue in their corrective action program (CAP) as action request (AR) 02474543. Corrective actions included draining the cable vaults so that the cables were no longer submerged.

The licensee's failure to maintain safety-related cables for the SX system in an environment for which they were designed was a performance deficiency. The performance deficiency was determined to be more than minor because the finding was associated with the Mitigating Systems Cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licnesee failed to maintain SX safety-related cables in an environment for which they were designed when the cables were allowed to be submerged in water inside cable vaults. Using IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," issued on June 19, 2012. Specifically, the inspectors used IMC 0609 Appendix A "SDP for Findings At-Power," issued June 19, 2012, Exhibit 2, "Mitigating Systems Screening Questions" to screen the finding. The finding screened as of very low safety significance (Green) because the inspectors answered yes to the question "does the SSC maintain its operability or functionality." Specifically, the SX system submerged cables did not cause the SX system to be inoperable or nonfunctional. The inspectors determined this finding affected the cross-cutting area of problem identification and resolution in the aspect of resolution, where the organization takes effective corrective actions to address issues in a timely manner commensurate with their safety significance. Specifically, the licensee failed to implement effective corrective actions to address an adverse trend of water in cable vaults which led to (SX) safety-related cables being submerged in water.
Inspection Report# : 2015001 *(pdf)*

Significance: W Mar 31, 2015
Identified By: NRC
Item Type: AV Apparent Violation
FAILURE OF THE DIVISION 3 SHUTDOWN SERVICE WATER PUMP DUE TO AN INADEQUATE BUSHING DESIGN
A self-revealed finding, preliminarily determined to be of low to moderate safety significance (White) and an associated AV of 10 CFR 50 Appendix B, Criterion III, Design Control, was identified for the failure to verify the suitability of the replacement pump design for the Division 3 Shutdown Service Water system. Spceifically, the design of the suction bell bushing for the replacement pump was inadequate to pass sufficient cooling water flow to the pump internals without being affected by mud and silt from the lake water. This finding was self-revealed on September 16, 2014, during a surveillance test to ensure operability of the Division 3 shutdown cooling water pump

after the pump failed to start due to a damaged bushing rendering the pump inoperable. This finding does not represent an immediate safety concern because the licensee replaced the pump in September of 2014 with a pump of similar design and provided adequate documentation that assures the pump will remain operable until a different design for the bushing that failed can be installed by June of 2016.

The inspectors determined that the licensee's failure to verify the suitability of the design for the Division 3 Shutdown Service Water pump was a performance deficiency warranting a significance evaluation. The inspectors determined that the finding was more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated September 7, 2012, because it was associated with the Mitigating Systems Cornerstone attributes of design control and equipment performance and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. A Significance and Enforcement Review Panel (SERP), using IMC 0609, Appendix A, "Significance Determination Process For Findings At-Power," dated June 19, 2012, preliminarily determined the finding to be of low to moderate safety significance (White). The performance deficiency associated with this finding did not reflect current licensee performance; therefore, no cross cutting aspect was identified with this finding.
Inspection Report# : 2015001 *(pdf)*

Significance: G Mar 20, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Inadequate 50.59 Evaluation for Switchgear in Seismically Unanalyzed Conditions (Section 1R17.1b.)
Severity Level IV Green. The inspectors identified a finding of very-low safety significance, and an associated Non-Cited Violation of Title 10, Code of Federal Regulations Part 50, Section 59, “Changes, Tests and Experiments,” (effective January 1, 1997) for a procedure change dated May 2, 1997, where the licensee allowed safety-related switchgear to operate for a limited period of time during plant operation in equipment configurations that were seismically unanalyzed. Specifically, for Safety Evaluation Log 97 060, “CPS [Clinton Power Station] Procedure No. 1014.11,” Revision 0, the licensee failed to include a written safety evaluation which provided the bases that concluded for all switchgear configurations that a seismically unanalyzed condition does not involve an unreviewed safety question, and the possibility for a malfunction of a different type than any evaluated previously in the Safety Analysis Report may be created. The licensee entered the issue into their Corrective Action Program as Action Request 02471583, “NRC Mod 50.59 Inspection Safety Eval 97 060 for CPS 1014.11,” dated March 20, 2015.

The performance deficiency was determined to be more than minor because the finding was associated with the Mitigating Systems cornerstone attribute of protection against external factors and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, switchgear in a seismically unanalyzed condition when relied upon to perform a safety function did not ensure the availability, reliability, or capability of the associated Mitigating Systems to respond to an initiating event such as an earthquake. The inspectors determined that the underlying technical issue was of very-low safety significance (Green) using a detailed risk evaluation. The inspectors did not identify a cross-cutting aspect associated with the finding because the finding was not representative of current performance.
Inspection Report# : 2015008 *(pdf)*

Significance: G Dec 31, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
FAILURE TO TRANSLATE SEISMIC DESIGN REQUIREMENTS INTO APPLICABLE PROCEDURES
The inspectors identified a green non-cited violation of 10 CFR 50, Appendix B, Criterion III, Design Control, for the

failure to adequately translate seismic requirements from a design calculation into applicable procedures. Specifically the licensee failed to incorporate the seismic requirements for the Division III 4.16 KV switchgear as described in calculation IP-Q-0391 “Seismic Qualification of 480V ABB Unit Sub Switchgears, Div I & II Westinghouse Switchgears and Div III GE 4.16KV Switchgears”, into procedure CPS 1014.11 “6900/4160/480V Switchgear/Circuit Breaker Operability Program”, resulting in the licensee incorrectly declaring Division III switchgear operable when in a seismically unanalyzed condition. The licensee entered this issue into their corrective action program as AR 2386676.

The inspectors determined that the failure to adequately incorporate the seismic requirements of the design calculation into the applicable procedure was a performance deficiency. The finding is more than minor because it is associated with the design control attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. In accordance with IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Initial Characterization of Findings,” dated June 19, 2012, and Appendix A, “The Significance Determination Process for Findings At-Power,” Exhibit 4, “External Events Screening Questions,” dated June 19, 2012, the inspectors answered “Yes” to question 1 of External Events screening questions, because the finding could potentially degrade one train of the emergency power system. Thus the inspectors consulted the regional senior reactor analyst (SRA).

Based on the Detailed Risk Evaluation, the inspectors determined that the finding was of very low safety significance (Green). The inspectors determined that there was no cross-cutting aspect associated with this finding because the cause of the performance deficiency occurred more than fifteen years ago, and was not representative of current licensee performance.

Inspection Report# : 2014005 *(pdf)*

Significance: G Dec 31, 2014
Identified By: Self-Revealing
Item Type: NCV Non-Cited Violation
FAILURE TO PROVIDE PROCEDURE INSTRUCTION RESULTS IN EXCEEDING TECHNICAL SPECIFICATION HEAT UP RATE DURING PLANT START UP
The inspectors are documenting a self-revealing non-cited violation of Technical Specification 5.4., “Procedures,” for the licensee’s failure to establish instructions in station procedure CPS 9059.01, “Reactor Coolant System Leakage Test,” Revision 9b. Specifically, the licensee failed to provide instructions to ensure that the main steam piping between the reactor vessel and the inboard main steam isolation valves were completely drained of water at the completion of testing. The licensee entered this issue into the corrective action program as action request AR 01590671.

The inspectors determined that the licensee’s failure to establish instructions to ensure that the main steam piping between the reactor vessel and the inboard main steam isolation valves were completely drained of water prior to starting up the reactor was a performance deficiency. The performance deficiency was more than minor because it was associated with the equipment performance attribute of the mitigating systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and is therefore a finding.

Using Manual Chapter 0609, Attachment 4 “Initial Characterization of Findings,” and Appendix A “The Significance Determination Process for Findings at Power” the finding was screened against the mitigating systems cornerstone and determined to be of very low safety significance (Green) because the finding was/did not: 1) a deficiency affecting the design or qualification of a mitigating structure, system or component, 2) represent a loss of system and/or function, 3) represent an actual loss of function of a single train for greater than its technical specification

allowed outage time, 4) represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant for greater than 24 hours and 5) did not involve the loss or degradation of equipment or function specifically designed to mitigate a seismic, flooding or severe weather event. The inspectors determined this finding affected the cross cutting area of human performance in the aspect of work management where the organization implements a process of planning, controlling, and executing work activities such that nuclear safety is the overriding priority. Specifically, the licensee failed to have a plan or provide a control method to ensure the main steam piping was drained prior to commencing reactor start up. (IMC 0301 H.5)

Inspection Report# : 2014005 *(pdf)*

Barrier Integrity

Significance: G Sep 30, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
FAILURE TO OBTAIN A LICENSE AMENDMENT PRIOR TO MAKING MODIFICATIONS TO SECONDARY CONTAINMENT
The inspectors identified a Severity Level IV non-cited violation of 10 CFR 50.59(d)(1), “Changes, Tests, and Experiments” for the licensee’s failure to provide a written evaluation, which provided the basis for determining that the change to the secondary containment completed on December 18, 2014 did not require a license amendment. Specifically, the licensee made a change pursuant to 10 CFR 50.59(c), to the secondary containment, and eliminated the tornado wind and tornado missile loading condition from the FB Railroad Airlock (the enclosure walls and roof) and associated outer door (1SD1-31) Seismic Category I requirements and did not provide a written evaluation to provide a basis for the determination that this change would not result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system or component important to safety.

The inspectors determined that the licensee’s failure to provide a written evaluation, which provided the basis for determining that the change to the secondary containment completed on December 18, 2014 did not require a license amendment was a performance deficiency. Specifically, the licensee made a change pursuant to 10 CFR 50.59(c) to the secondary containment and eliminated the tornado wind and tornado missile loading condition from the FB Railroad Airlock (the enclosure walls and roof) and associated outer door and did not provide a written evaluation to provide a basis for the determination that this change would not result in more than a minimal increase in the likelihood of occurrence of a malfunction of an SSC important to safety. The performance deficiency was determined to be more than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated September 7, 2012, because it was associated with the design control attribute of the barrier integrity cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system and containment) protect the public from radionuclide releases caused by accidents or events. In addition, the associated violation was determined to be more than minor because the inspectors could not reasonably determine if the changes to secondary containment would have required NRC prior approval. The licensee documented the issue in the CAP as action request (AR) 02534694. The licensee is complying with technical specifications anytime the inner railroad bay door is opened by entering the applicable action statements, evaluating weather conditions and impact to plant risk and establishing the necessary mitigating actions required prior to opening the door. Violations of 10 CFR 50.59 are dispositioned using the traditional enforcement process instead of the SDP because they are considered to be violations that potentially impede or impact the regulatory process. However, if possible, the underlying technical issue is evaluated under the SDP to determine the severity of the violation. In this case, the inspectors used IMC 0609, Attachment 4, “Initial Characterization of Findings,” and Appendix A, “The Significance Determination Process for Findings at Power,” issued June 19, 2012,

the finding was screened against the barrier integrity cornerstone and determined to be of very low safety significance (Green) because the finding did not represent a degradation only of the radiological barrier function for the Standby Gas Treatment (SBGT) system nor did it represent a degradation of the function of the control room against smoke or toxic atmosphere. The inspectors determined this finding affected the cross-cutting area of human performance in the aspect of procedure adherence where individuals follow processes, procedures and work instructions. Specifically, the licensee failed to follow the 50.59 regulatory process as defined in station procedure LS-AA-104-1000, "50.59 Resource Manual," Revision 9.

Inspection Report# : 2015003 *(pdf)*

Significance: G Sep 30, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
FAILURE TO ENTER APPROPRIATE TS ACTION STATEMENT FOR INOPERABLE RADIATION MONITORS DURING OPDRV ACTIVITIES
The inspectors identified a green finding and associated NCV of T.S. 3.3.6.1 "Primary Containment and Drywell Isolation Instrumentation" and 3.3.6.2 "Secondary Containment Isolation Instrumentation," for the failure to enter the appropriate action statement and take the associated actions related to inoperable containment radiation monitor instrumentation during operations with the potential to drain the reactor vessel. Specifically, with the containment ventilation dampers closed, the containment radiation monitor instrumentation would not be able to perform its safety function of sending a containment isolation signal for elevated containment radiation levels as required during OPDRVS. At the time of discovery the licensee had already concluded OPDRV activities and was therefore no longer in a mode of applicability. The licensee documented the issue in the CAP as action request (AR) 2566708. When this issue was identified the maintenance on the VR/VQ system was complete and no OPDRVs were in progress, therefor the T.S. noncompliance was no longer in effect.

The inspectors determined that the failure to enter T.S. 3.3.6.1 and 3.3.6.2 when the radiation monitor instrumentation was not able to perform its safety function during an OPDRV, was a performance deficiency. Specifically, the licensee failed to recognize that when the containment ventilation dampers were closed, the radiation monitors could not detect the radiation levels in primary containment and therefore could not fulfill their safety function of sending containment isolation signals in the case of elevated radiation levels in containment. The performance deficiency was more than minor in accordance with IMC 0612, "Power Inspection Reports," Appendix B, "Issue Screening," dated September 7, 2012, because, it was associated with the SSC and Barrier Performance attribute of the Barrier Integrity cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events, and is therefore a finding. Specifically, the automatic containment isolation signal function of the radiation monitors was impacted when the containment ventilation dampers were closed during OPDRV operations. Using IMC 0609, Attachment 4, "Initial Characterization of Findings," and Appendix G, Attachment 1, "Shutdown Operations Significance Determination Process Phase 1 Initial Screening and Characterization of Findings," dated May 9, 2014, the finding was screened against the Barrier Integrity cornerstone and determined to need a detailed risk evaluation because the finding represents a degradation of the ability to close or isolate the containment. Using Appendix G Exhibit 4, "Barrier Integrity Screening Questions," the Senior Reactor Analyst (SRA) determined that the finding degraded the ability to close or isolate the containment per Section B, "Containment Barrier," Question 6. Therefore, the evaluation was continued using IMC 0609 Appendix H, "Containment Integrity Significance Determination Process." The SRA determined this to be a "Type B" finding, because it was related to a degraded condition that had implications for containment integrity without affecting the likelihood of core damage. The SRA used Section 6.2 of Appendix H, "Approach for Assessing Type B Findings at Shutdown." Based on information from the inspectors, during all OPDRV time windows, the reactor water level was confirmed to be greater than the minimum level required for movement of irradiated fuel assemblies (i.e., greater than 22'8" above the flange). This plant condition meets the definition of "Plant Operating State 3 (POS 3) of Appendix H. Therefore, based on the plant being in POS 3 during

the OPDRV time windows, the finding screens as Green based on Step 2.1 of Section 6.2 of Appendix H. The inspectors determined this finding affected the cross-cutting area of human performance in the aspect of conservative bias where individuals use decision making practices that emphasize prudent choices over those that are simple allowable. A proposed action is determined to be safe in order to proceed, rather than unsafe in order to stop. Specifically, the licensee relied solely on the successful completion of the surveillance requirements to determine the radiation monitor instrumentation was operable rather than considering the impact the closed dampers would have on their ability to fulfill their safety function.

Inspection Report# : 2015003 *(pdf)*

Significance: G Dec 31, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
FAILURE TO UPDATE THE UPDATED SAFETY ANALYSIS REPORT - 1VR08C FUNCTION
The inspectors identified a Severity Level IV non-cited violation of Title 10 Code of Federal Regulations (CFR) 50.71 (e), "Periodic Update of the USAR" and an associated Green finding for the licensee's failure to update the USAR with the correct description of the function of 1VR08C. Specifically the licensee did not update Section 9.4.5.5 of the USAR to include the correct function of 1VR08C as described in a commitment made to the NRC in letter U-600850. Consequently the licensee performed a 50.59 evaluation for abandoning a portion of the system that did not consider the correct function of the component. The licensee entered this issue into their corrective action program as AR 1692665.

The inspectors determined that the failure to update the USAR with the correct function of 1VR08C was a performance deficiency. The performance deficiency was determined to be more than minor in accordance with Inspection Manual Chapter (IMC) 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated September 7, 2012, because, if left uncorrected, the performance deficiency would have the potential to lead to a more significant safety concern and is therefore a finding. Specifically, failure to update the USAR with the correct safety related function of VR08C could result in the licensee making operability and functionality determinations based on incorrect assumptions. Additionally, the failure to update the USAR with the correct function of the fan was more than minor because it was associated with the Barrier Integrity Cornerstone attribute of design control, plant modifications and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events.

Using IMC 0609, Attachment 4, "Initial Characterization of Findings," and Appendix A, "The Significance Determination Process for Findings at Power," the finding was screened against the Barrier Integrity cornerstone and determined to be of very low safety significance (Green) because the finding does not represent an actual open pathway in the physical integrity of reactor containment, containment isolation system, and heat removal components and it did not involve an actual reduction in function of hydrogen igniters in reactor containment. The performance deficiency associated with this finding did not reflect current licensee performance; therefore, no cross cutting aspect was identified with this finding.

Additionally, in accordance with Section 6.1.d.3 of the NRC Enforcement Policy, this violation was categorized as Severity Level IV because the licensee's failure to update the USAR as required by 10 CFR 50.71(e) had not yet resulted in any unacceptable change to the facility or procedures.

Inspection Report# : 2014005 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Jun 30, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
CONTRACT WORKERS NOT MONITORED FOR OCCUPATIONAL RADIATION EXPOSURE
The inspectors identified a finding of very-low safety significance and an associated NCV of Technical Specification (TS) 5.4.1, "Procedures," for the failure to monitor the radiation dose received by a group of workers as required by station procedure RP-AA-210, "Dosimetry Issue, Usage, and Control." Specifically, contractor employees who did not wear individual dosimetry were not monitored by the usage of an Area Badging Program and the workers were not excluded from wearing individual dosimetry by the usage of medical isotopes or external radioactivity being detected, or a previously performed evaluation by RP Supervision. The licensee documented the issue in the licensee's CAP as action request AR 02452005. The trailer was relocated to a distance further away from the radioactive material storage area. This reduced the radiation dose rate in the trailer.
The inspectors determined that the issue of concern was a performance deficiency because the licensee did not monitor a group of workers using one or more methods as required by procedure, RP-AA-210, "Dosimetry Issue, Usage and Control." The licensee did not assign radiation dosimetry to each worker, nor was an Area Badging Program in place. The inspectors determined that the cause of the performance deficiency was reasonably within the licensee's ability to foresee and correct and should have been prevented. The issue was not subject to traditional enforcement since the concern did not have a significant safety consequence, did not impact the NRC's ability to perform its regulatory function, and was not willful. The performance deficiency was determined to be of more than minor safety significance in accordance with IMC 0612, Appendix B, "Issue Screening," issued September 7, 2012, because it was associated with the program and process attribute of the Occupational Radiation Safety Cornerstone, and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, the licensee could not demonstrate compliance with other sections of 10 CFR Part 20, such as occupational dose limits, and records and reporting of individual monitoring results. The inspectors also reviewed the guidance in IMC 0612, Appendix E, "Examples of Minor Issues," and did not find any similar examples. In accordance with IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," issued August 19, 2008, the inspectors determined that the finding had very low safety significance (Green) because the finding: (1) did not involve as-low-as-reasonably-achievable planning and controls; (2) did not involve a radiological overexposure; (3) there was not a substantial potential for an overexposure; and (4) there was no compromised ability to assess dose. This finding has a cross-cutting aspect in the area of Human Performance, Change Management, because the primary cause of the finding was due to inadequate change management. Specifically, licensee supervision incorrectly located the trailer near a posted radiation area without performing an appropriate evaluation to ensure the personnel or area was correctly monitored. [H.3]

Inspection Report# : 2015002 *(pdf)*

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

Last modified : December 15, 2015