

## Robinson 2

# 1Q/2015 Plant Inspection Findings

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### Initiating Events

**Significance:**  Jun 30, 2014

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

#### **Failure to Identify and Correct Degraded Wire Labels in the Reactor Protection Relay Cabinets**

A self-revealing Green non-cited violation (NCV) was identified for the licensee's failure to promptly identify and correct degraded wire labels in the reactor protection cabinets, which were a condition adverse to quality, as required by 10 CFR Part 50, Criterion XVI, Corrective Action. This resulted in an automatic reactor trip. Immediate corrective actions included inspection of both trains of relay racks to identify and remove any potential foreign material. The licensee also tested both trains of reactor protection relays to verify no foreign material was present. Additionally, the licensee plans to replace the wire labels in the reactor protection and safeguards relay racks during refueling outages 29 and 30. The licensee documented the issue in the corrective action program as CR 654789.

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 of limiting the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the degraded wire labels became lodged between contact 2-6 on relay LC-496A1-X(B), which set up the half-trip condition to cause a reactor trip, during the surveillance testing. Using IMC 0609, Appendix A, issued June 19, 2012, The Significance Determination Process (SDP) for Findings At-Power, the inspectors determined that this finding is of very low safety significance (Green) because although the finding caused a reactor trip, it did not cause the loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition. This finding had a cross-cutting aspect of identification in the area of problem identification and resolution because the licensee failed to implement a corrective action program with a low enough threshold for identifying issues in that the licensee process did not recognize, during review of the work requests for the degraded wire labels, that this issue should have been entered into the corrective action program as a nuclear condition report. (P.1)

Inspection Report# : [2014003](#) (*pdf*)

**Significance:**  May 09, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

#### **Failure to Take Adequate Corrective Action to Preclude Repetition of a Significant Condition Adverse to Quality Associated with the Steam Generator Tube Leak**

The team identified a Green NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions," for the licensee's failure to take adequate corrective action to prevent repetition of a significant condition adverse to quality regarding steam generator tube leakage due to poor maintenance practices. Specifically, on February 27, 2014, the "C" steam generator showed indications of a primary to secondary tube leak due to foreign material that was introduced during the fall 2013 refueling outage. As immediate corrective actions, on March 7, 2014, the licensee shutdown the plant and repaired the leak. This violation was entered into the licensee's CAP as nuclear condition reports (NCRs) 683695, 683593, and 683591.

The licensee's failure to implement appropriate corrective actions to address poor worker practices to prevent recurrence of a steam generator tube leak was a performance deficiency. The finding was more than minor because it

was associated with the initiating events cornerstone equipment performance attribute and it adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, foreign material entered the steam generator and damaged a steam generator tube, which increased the likelihood of a steam generator tube rupture. The finding screened as Green because testing showed that the affected steam generator tube could sustain three times the differential pressure across the tube during normal full power and that the steam generator did not violate the accident leakage performance criterion. The performance deficiency does not have a cross cutting aspect because the last revision of the root cause evaluation was completed in 2011 and it is not indicative of current licensee performance.

Inspection Report# : [2014008](#) (*pdf*)

## Mitigating Systems

**Significance:** N/A Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

### **Inadequate 10 CFR 50.59 Evaluation Results in RPI System Inoperability**

The inspectors identified a severity level IV (SLIV) non-cited violation (NCV) of 10 CFR 50.59, “Changes, Tests, and Experiments,” for the licensee’s failure to obtain a license amendment prior to implementing a change to licensee procedure OST-20, “Shiftly Surveillances.” Specifically, a note was added to procedure OST-20 to allow the use of the Emergency Response Facility Information System (ERFIS) as an acceptable alternate method to determine Analog Rod Position Indication (ARPI) System operability if the position indicators were not indicating properly. This change resulted in an associated Green NCV of Technical Specification (TS) 3.1.7, “Rod Position Indication,” for failing to shut down the reactor or follow remedial actions permitted by a TS action requirement when a Limiting Condition for Operation (LCO) was not met. Upon determination that the practice of crediting ERFIS for rod position indication (RPI) operability was not allowed by the current licensing basis (CLB), Standing Instruction 14 023 was issued to suspend the practice and condition report (CR) 720726 was written to document the issue.

The licensee’s failure to obtain a license amendment for a change that resulted in a change to technical specifications incorporated in the license was a performance deficiency. The performance deficiency was determined to be more than minor because it was associated with the mitigating systems cornerstone attribute of procedure quality and adversely affected the objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the procedure change adversely impacted the availability and capability of systems to respond to a design basis event because it allowed the use of a non CLB method for determining rod position after failure of the ARPI system. Rod position indication is required to determine maximum rod misalignment which is an initial assumption in the safety analysis that directly affects core power distributions and assumptions of available shutdown margin. The finding was screened using IMC 0609 Appendix A Exhibit 2.C, Reactivity Control Systems, dated June 19, 2012, and was determined to be of very low safety significance (Green) because the finding did not result in a mismanagement of reactivity by operators. The violation was determined to be a SLIV violation using the Enforcement Policy example 6.1.d.2, because it resulted in a condition having very low safety significance. No cross-cutting aspect was assigned in association with the ROP finding because the change to the procedure was performed greater than three years ago and did not reflect current licensee performance.

Inspection Report# : [2015001](#) (*pdf*)

**Significance:**  Dec 31, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

### **Failure to Protect Diesel Driven Equipment from Effects of Extreme Cold Temperatures**

The inspectors identified a Green non-cited violation (NCV) of Technical Specification (TS) 5.4.1, for failure to establish procedural guidance to protect diesel driven equipment important to safety from the effects of extreme cold temperatures. Specifically, the licensee's cold weather procedures failed to include actions to maintain fuel oil temperatures above the diesel fuel oil cloud point for the dedicated shutdown diesel generator (DSDG) and/or the engine driven fire pump (EDFP). The licensee entered this into the corrective action program (CAP) as AR 715032 and took immediate corrective actions to revise station procedures to protect the diesel driven equipment during periods of extreme low temperatures.

The failure to establish procedural guidance to protect diesel-driven equipment important to safety from the effects of extreme cold temperatures was a performance deficiency. This issue was more than minor because if left uncorrected this finding would have the potential to lead to a more significant safety concern. Specifically, failure to maintain the fuel oil temperatures for the DSDG and/or the EDFP greater than the measured cloud point, may impact the operation of the equipment during extreme low temperature conditions, due to the associated fuel oil transfer system becoming non-functional. A detailed risk assessment was performed by a regional Senior Reactor Analyst in accordance with NRC IMC 0609 Appendices A and F. The latest NRC Robinson SPAR risk model was used to quantify the internal events risk and a calculation was performed to estimate the fire risk. The major analysis assumptions included: both the EDFP and the DSDG were simultaneously considered unavailable without recovery for a 1-day exposure interval, DSDG fire scenarios were considered for the emergency switchgear room (ESWGR), the cable spreading room, and the main control room, where fire could cause a loss of offsite power and the emergency diesel generators (EDGs), compartment total ignition frequency data from the Robinson NFPA 805 project was used and a bounding Conditional Core Damage Probability for the fire scenarios of 1.0. The dominant sequence was a fire in the ESWGR which remained unsuppressed long enough to cause a loss of offsite power and the EDGs requiring use of alternate shutdown which failed due to the performance deficiency impact on the DSDG resulting in station blackout, and core damage due to an unmitigated reactor coolant pump seal loss of cooling accident. The risk was mitigated by the low likelihood of the initiators occurring during the specific cold weather vulnerability periods. The risk due to the performance deficiency was determined to be an increase in core damage frequency of  $<1E-6$ /year, a GREEN finding of very low safety significance. The performance deficiency had a cross cutting aspect of Evaluation in the area of Problem Identification and Resolution because the licensee failed to thoroughly evaluate the effects of cold weather on the fuel system for diesel driven equipment to ensure that resolutions address the extent of conditions commensurate with their safety significance (P.2).

Inspection Report# : [2014005](#) (pdf)

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## **Barrier Integrity**

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## **Emergency Preparedness**

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## **Occupational Radiation Safety**

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## **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.

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## Miscellaneous

Last modified : June 16, 2015