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## Turkey Point 4 – Quarterly Plant Inspection Findings

### 3Q/2017 – Plant Inspection Findings

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#### Initiating Events

**Significance:** G Mar 18, 2017

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

#### **Inadequate Foreign Materials Exclusion Controls for Thermo-Lag Activities Renders Electrical Equipment Inoperable and Results in a High Energy Arc Flash**

A self-revealing Green (NCV) of Technical Specification (TS) 6.8.1.a., "Procedures and Programs," was identified for the failure to appropriately implement foreign material exclusion (FME) controls during Thermo-Lag fire barrier modifications. Specifically, maintenance procedure 0-GMP-102.21, "Installation, Modification and Maintenance of Thermo-Lag Fire Barrier System," Rev. 0C, did not include instructions in sufficient detail to prevent foreign material used in the installation of Thermo-Lag fire barriers from entering nearby electrical equipment and was a performance deficiency (PD) which affected the operation of two redundant safety-related battery chargers and caused a high energy arc fault (HEAF) that damaged the 3A 4kV switchgear bus. After the HEAF, the licensee promptly ceased all Thermo-Lag installation activities. The licensee completed a root cause evaluation in Action Request (AR) 2192198 and revised the installation procedure to prevent foreign material from entering nearby electrical equipment.

The PD was more than minor because it caused both a reactor trip and resulted in the unavailability of the 3A 4kV switchgear bus. The inspectors evaluated the significance of this finding by utilizing IMC 0609 Attachment 4, "Initial Characterization of Findings," and IMC 0609 Appendix A, "The Significance Determination Process for Findings At-Power," and determined the finding's significance could not be screened to Green because it caused both a reactor trip and the loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition. Therefore a detailed risk evaluation was required to complete the significance determination. Based upon the results of the evaluation the finding was considered to be Green, or equivalent to low safety significance. The cross-cutting aspect (CCA) that best corresponds to the root cause as described in IMC 0310, "Aspects Within the Cross-Cutting Areas," was "Resources;" leaders ensure that personnel, equipment, procedures, and other resources are available and adequate to support nuclear safety (H.1).

Inspection Report# : 2017002 (*pdf*)

## Mitigating Systems

**Significance:** G Dec 31, 2016

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

### **Unrecognized Inoperable Reactor Protection System Instrument Channel**

Green: A self-revealing NCV of Technical Specification (TS) Limiting Condition for Operation (LCO) 3.3.1 was identified for the licensee's failure to input the correct Eagle 21 resistance temperature detector (RTD) coefficients into the Eagle 21 reactor protection system (RPS) which resulted in channels being inoperable for longer than their allowed outage times. Immediate corrective actions to restore compliance included inputting the correct RTD coefficients into the Eagle 21 RPS. Planned corrective actions to prevent recurrence included revising engineering procedures to include validation that the RTD coefficients were derived via the correct methodology. This issue was entered into the licensee's corrective action program as action request (AR) 02129632.

The licensee's failure to input the correct RTD coefficients into the Eagle 21 RPS 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 to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage) because the specified safety function of each functional unit was not met. The inspectors evaluated the significance of this finding and determined the finding was of very low safety significance (Green) because the finding did not affect the function of other redundant or diverse methods of reactor shutdown. The NRC assigned a cross cutting aspect associated with the Resources element of the Human Performance area because the licensee failed to ensure that procedures related to RTD replacement contained adequate information for verifying and inputting correct RTD coefficients [H.1].

Inspection Report# : 2016004 (*pdf*)

## **Barrier Integrity**

### **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 : November 29, 2017

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