

Turkey Point 4 1Q/2015 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2014

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Inadequate Procedure to Realign Steam Supply to the Gland Sealing Steam System

Green. A self-revealing non-cited violation (NCV) of Technical Specification (TS) 6.8.1, "Procedures", was identified for the licensee's failure to maintain an adequate procedure for gland sealing steam supply realignment. Specifically, the licensee failed to have initial conditions in place in the procedure that provided specific direction that steam supply to the gland sealing system cannot be transferred from the main steam system to the auxiliary steam system with a unit in Mode 1 or 2. The licensee took corrective action to add initial conditions to procedure 4-GOP-103 that would not allow gland seal system steam supply realignment while in Modes 1 or 2. The licensee entered this issue into their corrective action program (CAP) as action request (AR) 1967899.

The performance deficiency was more than minor because it was associated with the procedure quality attribute of the initiating events cornerstone and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during power operations. Specifically, the failure to have specific guidance in procedure 4-GOP-103 that prevented realigning the gland sealing steam supply while in Mode 1 or 2 resulted in lowering condenser vacuum and a subsequent reactor trip on low condenser vacuum when the gland sealing steam supply was being realigned with Unit 4 in Mode 1. The inspectors screened the finding using Attachment 4 to NRC Inspection Manual Chapter (IMC) 0609 and determined that the finding was a transient initiator contributor which required evaluation using Exhibit 1, "Initiating Events Screening Questions," of IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power" (July 19, 2012). The inspectors determined that the finding was of very low safety significance (Green) because the performance deficiency did not result in a reactor trip and loss of mitigating equipment relied upon to transition the plant to a safe shutdown condition. The finding was associated with a cross-cutting aspect in the resources component of the human performance area because the licensee failed to ensure an adequate general operating procedure was available to support nuclear safety (H.1).

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

Significance: G Dec 31, 2014

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Perform an Adequate Design Verification

Green: A self-revealing finding was identified for the licensee's failure to ensure an adequate design change was implemented during Unit 3 and Unit 4 instrument air compressor system upgrade modifications completed in 2013. Specifically, plant modifications EC 246991 and EC 246990 were accepted and placed in service by the licensee without verifying the control logic configuration would function properly and load under all conditions. As a result, the diesel-driven compressors would not load and pressurize the instrument air header in the event of a loss of instrument air pressure while in the standby mode of operation. Corrective actions included an immediate modification to the standby compressor loading control circuit to ensure the machine loaded automatically and

revising general procedural guidance for compressor operation. The licensee entered this performance deficiency in their corrective action program as AR 01983607.

The performance deficiency was more than minor because it was associated with the design control attribute of the initiating events cornerstone and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during power operations. Specifically, the failure to have an adequate design for controlling the operation of the standby instrument air compressor resulted in a reactor trip due to the loss of instrument air pressure. The inspectors screened the issue under the initiating events cornerstone using Attachment 4 (June 19, 2012) and Exhibit 1 (June 19, 2012) of Appendix A to Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (June 2, 2011). The inspectors concluded that a detailed risk evaluation would be required because the finding was associated with the loss of a support system that resulted in a reactor trip and affected equipment that could be used by plant operators to mitigate the resulting plant transient. A senior reactor analyst (SRA) performed a detailed risk evaluation of this issue. The NRC model for Turkey Point was adjusted by: 1) increasing the initiating event frequency for a loss of instrument air (LOIA) event by one order-of-magnitude, and 2) the failure-to-run probability of the backup air compressors was set equal to 1.0. The change in core damage frequency results were below the 1E-6 threshold and the issue was determined to be of very low risk significance (Green). The finding was associated with a cross-cutting aspect in the resources component of the human performance area because the licensee failed to ensure instrument air system equipment was available and adequate to support nuclear safety (H.1).

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

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to implement a surveillance procedure to perform a RCS unidentified leak rate statistical calculation

The NRC identified a non-cited violation (NCV) of Technical Specification 6.8.1, Procedures, for the licensee's failure to implement procedure 4-OSP-041.1, Reactor Coolant System (RCS) Leak Rate Calculation. Specifically, the licensee did not perform a Unit 4 reactor coolant system leak rate statistical calculation to determine the change in the average unidentified RCS leak rate which resulted in not performing a Level 3 RCS leak rate investigation. Corrective actions included performing the calculation, performing a detailed leak investigation, and entering the performance deficiency in their corrective action program as action request 01962745.

The performance deficiency was determined to be more than minor because it was associated with the initiating events cornerstone attribute of human performance and 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, the inspectors determined that the licensee's failure to fully implement the procedure directly resulted in not performing an RCS Level 3 leak rate investigation. The finding was screened using IMC 0609, Significance Determination Process, Attachment 0609.04, Initial Characterization of Findings, Tables 2 and 3, dated July 1, 2012, and Appendix A, The Significance Determination Process (SDP) for Findings At-Power, Exhibit 1 for Initiating Events, dated July 1, 2012. The inspectors determined the finding was of very low safety significance because after a reasonable assessment of the degradation, the inspectors determined the finding would not have likely affected other systems used to mitigate a Loss of Coolant Accident (LOCA) resulting in total loss of their function. This finding was associated with a cross-cutting aspect in the procedure adherence component in the human performance area because the licensee failed to fully implement the RCS leak rate calculation procedure (H.8). (Section 1R22)

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

Mitigating Systems

Significance:  Feb 23, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Establish a Reasonable Maintenance Effectiveness Demonstration for Unit 3 Containment Atmospheric Temperature System

Green: The NRC identified a Green non-cited violation (NCV) of 10 CFR 50.65, “Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants,” for the licensee’s failure to adequately monitor the performance or condition of the Unit 3 containment atmospheric temperature system against licensee established goals or demonstrate that the performance of the containment atmospheric temperature system was being effectively controlled through preventive maintenance, such that the system remained capable of performing its intended function. Specifically, there were multiple individual component failures on both units since March 2011 and the Unit 3 containment atmospheric temperature system was non-functional from November 5, 2014, to January 17, 2015. In response to the NRC identified issue, the licensee initiated action report (AR) 02023116, and classified the temperature elements into 10 CFR 50.65(a)(1) status on February 23, 2015, under AR 02004990.

The inspectors determined that the performance deficiency was more than minor because it affected the Equipment Performance attribute of the Mitigating Systems cornerstone objective. The licensee did not ensure the availability, reliability, and capability of the Unit 3 containment atmospheric temperature system that was used for emergency operating procedures. The inspectors determined the finding to be of very low safety significance (Green) because it was not a deficiency affecting the design or qualification of a mitigating structure, system, or component (SSC), it did not represent the loss of a system and/or function, it did not represent an actual loss of function of at least a single train or two separate safety systems out-of-service for greater than its Technical Specifications (TS) allowed outage time, and it did not represent an actual loss of a non-TS equipment designated as high safety-significant in accordance with the licensee’s maintenance rule program for greater than 24 hours. The inspectors determined the finding was indicative of present licensee performance and was associated with the cross-cutting aspect of Evaluation, in the area of Problem Identification and Resolution. Specifically, the licensee failed to thoroughly evaluate issues that were identified in the last three years associated with containment atmospheric temperature system failures to ensure that resolutions addressed causes and extent of conditions commensurate with their safety significance.

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Inspection Report# : [2015007](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

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

Last modified : June 16, 2015