

Turkey Point 3

2Q/2007 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Comply with Core Alteration Procedures for Handling of Irradiated Fuel

The inspectors identified a Green non-cited violation of Technical Specification 6.8.1 for failure to implement procedures during core alterations when operators failed to maintain reliable communications and to place irradiated fuel in a safe storage location when communications were lost between the refueling personnel and the control room. When identified to the licensee, the issue was entered into the corrective action program and actions to brief fuel handling personnel on procedure requirements were taken prior to resuming fuel movement.

The finding was more than minor because technical specification requirements to implement core alterations procedures were not being met. Using the NRC Manual Chapter 0609, Attachment 1, Checklist 4, a Phase 2 analysis was not required (conditions not met) and the finding was determined to be of very low safety significance. The Initiating Events cornerstone was affected because reliable communications and placement of the irradiated fuel assembly in a safe location on loss of communications would permit prompt protection of personnel and emergency response should a loss of the refueling water seal occur. The finding affects the cross cutting area of Human Performance - Work Practices because the licensee had not defined and effectively communicated expectations regarding procedural compliance and personnel did not follow procedures. (Section 1R20)

Inspection Report# : [2006005](#) (*pdf*)

Significance:  Aug 18, 2006

Identified By: NRC

Item Type: VIO Violation

Failure to assess and manage maintenance risk during shutdown operations

A violation of 10 CFR Part 50.65(a)(4) was identified for failure to adequately assess and manage the increase in risk of performing maintenance on the A-train 480 volt 3C load center while Unit 3 was operating in decay heat removal mode with one operating A-train residual heat removal (RHR) pump. The licensee elected to move up restoration maintenance on the A-train 480 volt 3C load center and proceeded without implementation of procedurally required measures to reduce the risk during the activity. During the maintenance activity the licensee installed a breaker associated with 3C 480 volt load center that was later determined to be defective, which caused a loss of the operating A-train RHR pump. This resulted in a loss of all decay heat removal for seven minutes, which caused reactor coolant temperature to increase from 113 F to 140 F. The finding affected the cross cutting area of Human Performance, specifically the Work Control component because the licensee did not appropriately plan work activities using risk insights. The licensee entered this issue in the Corrective Action Program as condition report (CR) 2006-7036.

The finding was greater than minor because the risk assessment failed to account for the loss of decay heat removal during shutdown operations. The Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capacity of systems that respond to initiating events to prevent undesirable consequences was affected by the finding. This finding was evaluated in accordance with NRC Inspection Manual Chapter 0609 Shutdown Appendix G Phase 1 and 2 Significance Determination Process (SDP) templates and determined to be greater than Green. Subsequently, a Phase 3 assessment was performed and determined that there were two dominant core damage sequences. One sequence involved failure of operators to start either RHR train A or B before boiling began. In this scenario, the operators were assumed to successfully initiate feed and bleed cooling but failed to maintain a long term inventory source to the refueling water storage tank (RWST) (recirculation requires the RHR pumps). The conditional core damage probability for this scenario was estimated as 3.5E-06. The other sequence involved failure of operators to start either RHR train A or B before boiling and the operators fail to initiate feed and bleed cooling before core

damage, which was estimated to be 3E-6. Therefore, the risk significance of this finding was determined to be White. (IR 05000250, 251/2006015 dated August 24, 2006)

The Final Significance Determination for A White Finding and Notice of Violation letter was issued on November 22, 2006. For administrative purposes, this letter is issued as a separate NRC Inspection Report (No. 05000250/2006016) and the above violation is identified as VIO 05000250/2006016-01, White Finding - Failure to Assess and Manage Maintenance Risk During Shutdown Operations. Accordingly, Apparent Violation (AV) 05000250/2006015-01 is closed.

The NRC performed a supplemental inspection to assess the adequacy of the licensee's evaluation, extent of condition/cause review and associated corrective actions. The licensee's problem identification, root cause and extent-of-condition evaluations, and corrective actions for this White inspection finding were generally adequate. Therefore, the White finding is considered closed. Given the licensee's performance in addressing this issue, the White finding will only be considered in assessing plant performance for a total of four quarters (from the third quarter of 2006) in accordance with the guidance in NRC Inspection Manual Chapter 0305, "Operating Reactor Assessment Program." (IR 05000250, 251/2007007 date May 31, 2007)

Inspection Report# : [2006015](#) (*pdf*)

Inspection Report# : [2007007](#) (*pdf*)

Mitigating Systems

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain Design of Valves Important to Safety

The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, for failure of the licensee to promptly identify and correct the nonconformance of equipment important to safety, specifically the operation of air solenoids in the charging system outside the design maximum operating differential pressure (MOPD). When identified, the licensee scheduled repair/replacement of the solenoids.

The finding was more than minor because it affected the equipment performance attribute of the Mitigating Systems cornerstone objective to ensure reliability of systems that respond to initiating events to prevent undesirable consequences. The finding screened as Green using NRC Inspection Manual Chapter (MC) 0609, Appendix A, because it represented a design deficiency that had not been evaluated but did not result in any loss of function. The cause of the finding is related to the cross-cutting area of Human Performance, specifically Resources because the licensee did not minimize long-standing equipment issues and ensure maintenance backlogs were low enough to support safety, (MC 0305 aspect H.2(a)).

Inspection Report# : [2007003](#) (*pdf*)

Significance:  Jun 08, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Initiate Condition Reports for Conditions Adverse to Quality as Required by Procedure

The inspectors identified a Green non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion V, Instructions, Procedure, and Drawings. Specifically, the inspectors identified several conditions adverse to quality where the licensee failed to initiate condition reports as required by procedure. The licensee entered this issue into the corrective action program.

This finding is greater than minor because, if left uncorrected, the issue would become a more significant safety concern involving programmatic and equipment issues. In addition, the inspectors determined that the Mitigating Systems Cornerstone attribute of equipment performance to ensure the availability and reliability systems that respond

to initiating events to prevent undesirable consequences was adversely affected. The inspectors determined that the finding was not suitable for SDP evaluation because the failure to initiate the condition reports did not directly result in degraded or inoperable equipment. Therefore, this finding was reviewed by Regional Management, in accordance with IMC 0612 Section 05.04c, and determined to be of very low safety significance. The cause of the finding is related to the cross-cutting element of problem identification and resolution. [Section 40A2.a(3)(I)]

Inspection Report# : [2007008](#) (*pdf*)

Significance:  Jun 08, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Prevent Recurring Scaffolding Installation Deficiencies

The inspectors identified a Green non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action. Specifically, the licensee failed to implement effective corrective actions to prevent recurring deficiencies associated with the erection of scaffolding near safety-related equipment. The licensee entered this issue into the corrective action program.

This finding is more than minor because it is associated with the mitigating system cornerstone attributes of protection against external factors such as a seismic events, and equipment performance such as availability and reliability. The finding is of very low safety significance because the finding was not a design or qualification deficiency, did not represent a loss of safety function, and did not render equipment inoperable due to a seismic event. The cause of the finding is related to the cross-cutting element of problem identification and resolution. [Section 40A2.a(3)(iii)]

Inspection Report# : [2007008](#) (*pdf*)

Significance:  Sep 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to implement adequate corrective actions to prevent recurring deficiencies in flood protection barriers

The inspectors identified a Green, non-cited violation (NCV) of 10 CFR 50 Appendix B, Criterion XVI, Corrective Actions, for failure to take actions to prevent repeated deficiencies with external flood protection equipment. Although deficiencies with wooden stoplogs had been identified and left uncorrected at the start of hurricane season in 2005, corrective actions were not sufficient to prevent recurring problems that extended into the hurricane season in 2006. The licensee entered the issue in their corrective action program and planned to replace the vulnerable wooden stoplogs with an aluminum design.

The finding is more than minor because it was repetitive and affected protection against external factors of systems in the Mitigating Systems Cornerstone. The finding screens to be of very low safety significance (Green) because the inspectors judged that the licensee would have successfully prevented loss of one or more trains of a system that supports a safety function had a maximum hurricane and flood occurred. The cause of the finding is related to the Problem Identification and Resolution cross-cutting area in that the licensee did not take appropriate corrective actions in a timely manner, following problems with flood barriers in 2005, to prevent recurring degraded barriers during the hurricane season in 2006

Inspection Report# : [2006004](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : August 24, 2007