# Turkey Point 4
# 1Q/2007 Plant Inspection Findings

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## Initiating Events

**Significance:** G 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)*

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## Mitigating Systems

**Significance:** G 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)*

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# Barrier Integrity

**Significance:** G Dec 31, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
**Failure to Identify Indications During a Steam Generator Eddy Current Examination**
The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, “Corrective Actions.” During the 2003 outage, the licensee failed to identify two tubes in the Steam Generator ‘A’, that had wear indications that exceeded TS tube plugging criteria. The licensee operated the past two cycles with two tubes that exceeded the plugging limit criteria as defined in the plants TS. The issue was documented in the corrective action program and the affected tubes were subsequently removed from service by plugging.

The finding was more than minor since it affected the barrier integrity cornerstone objective of barrier performance in that the licensee permitted tubes to remain in service that exceeded the Technical Specification tube plugging criteria. The finding was evaluated using Phase 1 of the NRC IMC 0609, Appendix J, “Steam Generator Tube Integrity Findings Significance Determination Process (SDP).” Using Table 1 of Appendix J, “Steam Generator Tube Integrity SDP Matrix,” the finding was found to be of very low safety significance (Green) because it met the criteria of one or more steam generator tubes that should have been repaired as a result of the previous inspection. (Section 1R08)

Inspection Report# : 2006005 *(pdf)*

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# Emergency Preparedness

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# Occupational Radiation Safety

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# Public Radiation Safety

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# Physical Protection

Physical Protection information not publicly available.

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# Miscellaneous

**Significance: N/A** May 19, 2006
Identified By: NRC
Item Type: FIN Finding
**Supplemental Inspection 95001**
This supplemental inspection was conducted in accordance with Inspection Procedure 95001, to assess the licensee’s evaluation associated with; (1) the performance indicator for excessive safety system unavailability for the heat removal system (due to a degraded auxiliary feedwater pump) crossing the threshold from Green (very low risk significance) to White (low to moderate risk significance) for Units 3 and 4 in the fourth quarter of 2005, and (2) the White finding for the auxiliary feedwater pump B being out of service for greater than the technical specification allowed outage time due to an

incorrectly installed bearing and subsequent inadequate corrective actions, NOV 05000250,251/2006010. Specifically, the Unit 3 and 4 shared “B” turbine driven auxiliary feedwater pump was discovered in a degraded condition on November 7, 2005. The licensee determined the pump had an incorrectly installed bearing which resulted in inadequate lubrication of the inboard pump bearing. The pump was determined to be inoperable and unable to meet its expected mission time from December 14, 2004 until November 11, 2005.

The licensee’s problem identification, root cause and extent-of-condition evaluations, and corrective actions for the degraded pump were generally adequate. However, several deficiencies were identified by the inspector relating to the thoroughness and quality of the root cause evaluation and subsequent corrective actions. Of note, the root cause evaluation did not identify that an evaluation required by the ASME code was not completed when the auxiliary feedwater pump B was returned to service with high vibrations on September 3, 2003. Therefore, the White finding, NOV 05000250,251/2006010, will remain open pending development of corrective actions to address these NRC-identified weaknesses.

Inspection Report# : 2006013 *(pdf)*

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