Turkey Point 4
4Q/2004 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Dec 31, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
High Head Safety Injection Pump Inoperable Due to an Increase in a Previously Identified Oil Leak
A self revealing Non-Cited Violation (NCV) of Technical Specification (TS) 3.5.2, Action statement c. occurred as a result of the licensee discovering that one of the four required High Head Safety Injection (HHSI) pumps was inoperable for greater than 30 days, and the unit was not shut down, as required. The pump was discovered to have less than the amount of lube oil needed for it to complete its required safety function and it was determined that this condition had existed for 60 days.

This finding was greater than minor because it involved the equipment performance attribute of the mitigating system cornerstone and affected the objective of ensuring that equipment is available and capable to respond to an event. An SDP Phase 3 was performed by a Regional Senior Reactor Analyst and determined that this finding was of very low safety significance (Green) because one of the remaining three HHSI pumps (two for Unit 3 and one for Unit 4) could perform its safety function. This finding directly involved cross cutting aspects of problem identification and resolution, that being inadequate assessment and initial corrective actions which resulted in the 4B HHSI pump being inoperable from June 6, 2004 until August 5. (Section 4OA3.1)

Inspection Report# : 2004005*(pdf)*

Significance: G Oct 18, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement Adequate Test Controls
The inspectors identified a non-cited violation (NCV) of 10 CFR 50 Appendix B, Criterion XI, Test Controls, for inadequate test controls. These controls were associated with tests developed and implemented for demonstrating that replacement safety-related multiplier/divider cards and peripheral amplifiers manufactured by NUS, were acceptable like-for-like replacement of Hagan components in the analog computer and for time response tests performed by the licensee for the original Hagan square root module and the summator module with 10- and 39-micro farad capacitors. The licensee entered this issue into their corrective action program as 2004-10337-CR, for tracking the development of approved test procedures and completion of response time testing.

This finding is greater than minor because inadequate test controls could result in an inadequate test of equipment in the mitigating system cornerstone and thereby result in improper equipment operation. This could result in plant operation outside of analyzed conditions. Such operation could affect the availability, reliability, and capability of mitigating systems to respond to initiating events and prevent undesirable consequences. This finding is of very low safety significance because it did not result in a loss of system function per Generic Letter 91-18. (Section 4OA2.c(2)(a))

Inspection Report# : 2004011*(pdf)*

Significance: G Oct 18, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Use Adequate I&C Procedures for Refurbishment of Westinghouse Hagan Modules
An NCV of 10 CFR 50 Appendix B, Criterion V, Instructions, Procedures and Drawings, was identified by the inspectors for the licensee's failure to prescribe by documented instructions or procedures of a type appropriate to the circumstances, activities associated with refurbishment and/or repair of reactor protection system circuit components. Specifically, technicians were using uncontrolled, unreviewed and unapproved checklists, as well as uncontrolled Excel spreadsheets, in order to affect repairs and refurbishment to Hagan modules associated with safety-related functions in the reactor protection system. The licensee entered this issue into their corrective action program as 2004-10337-CR, for the evaluation, benchmark and drafting of more formal instructions for the conduct of the Hagan Repair Program.

This finding is greater than minor because inadequate procedures which are used to repair and refurbish Hagan modules could result in changes to the performance characteristics of equipment in the mitigating system cornerstone that are less conservative than the original equipment manufacturer's (OEMs) specifications. Such changes, e.g., time response, could result in plant operation outside of analyzed conditions and could affect the availability, reliability, and capability of mitigating systems to respond to initiating events, and prevent undesirable consequences. This finding is of very low safety significance because it did not result in a loss of system function per Generic Letter 91-18. (Section 4OA2.c(2)(b))
Inspection Report# : 2004011*(pdf)*

Significance: G Oct 18, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Establish Adequate Interim Corrective Action to Preclude Use of Unqualified Capacitor
An NCV of 10CFR50 Appendix B, Criterion XVI, Corrective Action, was identified by the inspectors for the licensee's failure to take adequate corrective action to preclude the use of an inadequately evaluated alternate replacement capacitor. This issue was entered into the licensee's corrective action program as 2004-10324-CR, to revise the Instock Disposition Status of Passport Evaluation 080201, Stock Code 0003546-2, to ensure that the capacitor cannot be used for Hagan modules.

This finding is greater than minor because the licensee's actions to preclude the use of an unqualified capacitor in safety-related applications were not sufficient to prevent an I&C technician from requesting it from the stores. The part was listed as acceptable for use in the vendor technical manual, and was available from stores. The use of this unqualified capacitor in equipment in the mitigating system cornerstone could result in changes to equipment performance characteristics, and result in plant performance outside of analyzed conditions. Such operation could affect the availability, reliability, and capability of mitigating systems to respond to initiating events and prevent undesirable consequences. This finding is of very low safety significance because it did not result in a loss of system function per Generic Letter 91-18. (Section 4OA2.c(2)(c))

Inspection Report# : 2004011*(pdf)*

Significance: G Sep 25, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Corrective Action for Scaffold Construction Deficiencies
A Green NCV was identified for failing to implement adequate corrective actions per 10 CFR 50, Appendix B, Criterion XVI, for issues related to the construction of scaffolding in proximity to safety related equipment or fire protection components.

This finding is more than minor because it affected the Mitigating Systems cornerstone. Improper construction of scaffolding, and lack of engineering review of scaffolding not built in accordance with the procedure, could prevent proper operation of fire protection features, limit or prevent access to components required of emergency response, or render equipment inoperable as a result of a seismic event. This finding is of very low safety significance because it did not result in an actual loss of safety function and would not render equipment inoperable due to seismic events. The finding is related to the cross-cutting element of problem identification and resolution, that being ineffective and untimely corrective actions. (Section 4OA2.2)

Inspection Report# : 2004004*(pdf)*

Significance: G Jun 25, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement Configuration Control of Steam Generator Water High-high Level Instrument Uncertainty Calculation of Record
A non-cited violation of 10 CFR 50, Appendix B, Criterion III, Design Control, was identified for failure to implement configuration control measures for the calculation of record for the steam generator water high-high level overfill protection function instrument uncertainty calculation. This resulted in Calculation WCAP-12745, "Westinghouse Set point Methodology for Protection Systems, Turkey Point Units 3 & 4 Thermal Uprate Project," Revision 1, dated December 1995, not containing the correct "Allowable Value" for the steam generator high-high level protection function set point.

This finding is greater than minor because inadequate design control for engineering calculations can propagate incorrect information into subsequent plant modifications. This could eventually result in plant operation outside of analyzed conditions, which could affect the availability, reliability, and capability of mitigating systems to respond to initiating events and prevent undesirable consequences. This finding is of very low safety significance because it is a design deficiency that did not result in a loss of system function per Generic Letter 91-18. (Section 1R21.23)
Inspection Report# : 2004008*(pdf)*

Significance: G Feb 13, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Install Full Area Fire Detection and Fixed Suppression Systems in the Unit 3 and 4 Mechanical Equipment Room
A non-cited violation (NCV) of 10 CFR 50, Appendix R, Section III.G.3 and License Condition 3.D was identified for failure to provide full area fire detection and a fixed suppression system in the Unit 3 and 4 mechanical equipment room for fires in Fire Area (FA) MM [Fire Zone (FZ) 97]. Upon discovery, the licensee declared the detection and suppression inoperable, established an hourly fire watch for FZ 97, and entered this issue into its corrective action program.

The finding adversely affected the fire detection and suppression capability defense-in-depth elements. The finding is greater than minor because it is associated with the protection against external factors attribute and degraded the reactor safety mitigating systems cornerstone objective. Because the fire ignition frequency was low, the fire detection in the emergency recirculating filter was not degraded, and alternative shutdown systems and procedures were available to mitigate a fire in this area, the finding was determined to have very low safety significance. (Section R05.10.b.2)
Inspection Report# : 2004007*(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance: G Mar 27, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Correctly Calibrate Selected Effluent Monitoring Instrumentation In Accordance With ODCM Requirements
The inspectors identified a non-cited violation (NCV) of Technical Specification (TS) 6.8.1.d for failure to correctly calibrate selected effluent monitoring instrumentation in accordance with Offsite Dose Calculation Manual (ODCM) specifications. Specifically, the licensee failed to use National Institute of Standards and Technology (NIST) traceable secondary sources related to the initial monitor calibrations during the most recent calibrations of the gas decay tank noble gas effluent monitor (R-14), the liquid radioactive waste effluent monitor (R-18), the Unit 3 (U3) and Unit 4 (U4) Steam Jet Air Ejector monitors (R-3/4-15), and the U3 and U4 Steam Generator Blow-Down monitors (R-3/4-19).

This finding is greater than minor because it adversely affects the effluent monitoring equipment attribute of the Public Radiation Safety cornerstone in that failure to use NIST traceable secondary sources could impair the accuracy of effluent monitoring equipment required to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operations. The finding is of very low safety significance because there was no failure to assess dose to the public and doses did not exceed Appendix I to10 CFR Part 50 design criteria. (Section 2PS1)

Inspection Report# : 2004002*(pdf)*

Significance: G Mar 27, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Maintain QC Activities for the Conduct of Representative Sampling and Monitoring of Particulates in the Main Plant Vent Airborne Effluents
The inspectors identified a non-cited violation of TS 6.8.1.e for failure to implement Quality Control activities for the conduct of representative sampling and monitoring of particulates in the main plant vent airborne effluents. Specifically, the main plant vent airflow flow characteristics were outside of the design specified exhaust flowrate and resultant velocities necessary to maintain isokinetic sampling of particulates by the

main plant vent Sample Particulate Iodine, and Noble Gas (SPING) monitoring and sampling equipment (RAD 6304).

This finding is greater than minor because it adversely affects the effluent monitoring program and process attribute of the Public Radiation Safety cornerstone in that failure to maintain isokinetic sampling could impact representative sampling and subsequent monitoring of particulates in airborne effluents released into the public domain as a result of routine civilian nuclear reactor operations. The finding is of very low safety significance because there was no failure to assess dose to the public from airborne particulates released from the main plant vent and doses did not exceed Appendix I to10 CFR Part 50 design criteria. (Section 2PS1)

Inspection Report# : 2004002*(pdf)*

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Significance: N/A Mar 26, 2004
Identified By: NRC
Item Type: FIN Finding
Identification and Resolution of Problems
The licensee was generally effective at identifying problems at a low threshold and entering them into the corrective action program. One exception was noted regarding the failure to identify and implement effective corrective actions to prevent recurring charging pump valve seat functional failures. The licensee adequately prioritized issues and performed evaluations that were technically accurate and of sufficient depth. One negative observation was identified for not consistently classifying Condition Reports (CRs) at an appropriate significance level as warranted, in accordance with the corrective action program procedure guidance. The inspectors concluded that the licensee was vulnerable to repetitive equipment failures by routinely not performing root cause evaluations when it is warranted, based on the significance of the condition. A second negative observation was identified involving a weakness in documentation in the reviewed CRs, primarily related to severity level classification justification. Formal root cause evaluations for significant conditions adverse to quality were normally thorough and detailed. The licensee's self-assessments and audits were effective in identifying deficiencies in the corrective action program. Based on discussions conducted with plant employees from various departments the inspectors did not identify any reluctance to report safety concerns.
Inspection Report# : 2004006*(pdf)*

Last modified : March 09, 2005