Turkey Point 3
3Q/2005 Plant Inspection Findings

Initiating Events

Significance: G Sep 30, 2005
Identified By: Self-Revealing
Item Type: FIN Finding
Inadequate Installation of a Seal Assembly Resulted in an Oil Fire and Reactor Trip
A self-revealing finding was identified for when Unit 3 generator exciter turbine water cooler leaked from an improperly installed gasket during refurbishment. The leakage entered the vital switchgear and caused the operators to manually trip the reactor, declare a residual heat removal pump inoperable, and stop a component cooling pump and an intake cooling water pump. The licensee entered the problems into their corrective action program for resolution. Completed corrective actions included examining Unit 3 coolers for inadequate gasket joints and making repairs, and repair of the gasket seals that allowed water to enter the vital switchgear. The issue involved the cross cutting element of Human Performance because an inadequate oversight to assure correct installation of a water cooler gasket resulted in a water leak into the safety-related equipment room.

The finding was more than minor because it affected the Initiating Events (reactor trip) cornerstone objective of limiting the likelihood of events that upset plant stability and the Mitigating Systems (residual heat removal (RHR) pump declared out of service) cornerstone objectives of ensuring the availability and capability of systems that respond to initiating events to prevent undesirable consequences. Significance Determination Process (Manual Chapter 0609) Phase 1 and 2 worksheets were completed and determined to be of very low safety significance because there was no loss of RHR safety function. (Section 4OA3.5)

Inspection Report# : 2005004*(pdf)*

Significance: G Sep 30, 2005
Identified By: Self-Revealing
Item Type: FIN Finding
Inadequate Technical Guidance to a Vendor Cause Cooling Water Gasket Failure That Affected Safety Equipment and Resulted in a Reactor Trip
A self-revealing finding was identified for when Unit 3 generator exciter turbine water cooler leaked from an improperly installed gasket during refurbishment. The leakage entered the vital switchgear and caused the operators to manually trip the reactor, declare a residual heat removal pump inoperable, and stop a component cooling pump and an intake cooling water pump. The licensee entered the problems into their corrective action program for resolution. Completed corrective actions included examining Unit 3 coolers for inadequate gasket joints and making repairs, and repair of the gasket seals that allowed water to enter the vital switchgear. The issue involved the cross cutting element of Human Performance because an inadequate oversight to assure correct installation of a water cooler gasket resulted in a water leak into the safety-related equipment room.

The finding was more than minor because it affected the Initiating Events (reactor trip) cornerstone objective of limiting the likelihood of events that upset plant stability and the Mitigating Systems (residual heat removal (RHR) pump declared out of service) cornerstone objectives of ensuring the availability and capability of systems that respond to initiating events to prevent undesirable consequences. Significance Determination Process (Manual Chapter 0609) Phase 1 and 2 worksheets were completed and determined to be of very low safety significance because there was no loss of RHR safety function. (Section 4OA3.5)

Inspection Report# : 2005004*(pdf)*

Mitigating Systems

Significance: G Sep 30, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Maintain Operability of Accident Monitoring Instrumentation Affected by Heat Damage
: A self-revealing Non-cited violation of Technical Specification Table 3.3-5, Accident Monitoring Instrumentation was identified for failure to maintain the required number of channels of pressurizer level indication operable because of heat damage to instrument cables located near reactor coolant system piping in the containment building. The licensee entered the failure of the cables into their corrective action program for

resolution. The licensee replaced the affected cables with higher temperature rating cables and improved the cooling in the vicinity of the cabling. The finding involved the cross-cutting aspect of Problem Identification and Resolution because a similar failure in 2003 was not adequately assessed and resolved to prevent recurrence in 2005.

The issue was more than minor because it is associated with the Mitigating Systems cornerstone and affected the reliability of systems (instrumentation) used to respond to initiating events as well as accident monitoring. The finding was determined to be of very low safety significance because there was no complete loss of function with one of the three redundant channels remaining available. (Section 4OA3.1)

Inspection Report# : 2005004*(pdf)*

Significance: G Jun 30, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to identify and report conditions potentially adverse to plant safety involving availability of operators for event response duties when assigned collateral duties
The inspectors identified a non-cited violation of 10 CFR 50, Appendix B Criterion XVI, Corrective Action, and licensee administrative procedure NAP-204, Condition Reporting when the licensee failed to enter a condition adverse to quality in the corrective action program in that on multiple occasions a plant responder was not available to respond to an event by virtue of being locked out of the plant protected area.

The issue was more than minor because if left uncorrected, it would become a more significant safety concern, that being degradation of the ability of the licensee to respond to initiating events to prevent undesirable consequences. The finding was determined to be of very low safety significance because the times the operator was locked out were brief (less than one hour) and safe shutdown equipment was not affected. The Mitigating Systems Cornerstone was affected and the finding was associated with the attributes of Protection Against External Factors (fire). The finding involved the cross-cutting element of Problem identification and Resolution. (1R14)

Inspection Report# : 2005003*(pdf)*

Significance: G Mar 31, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Plant Shutdowns Due to Drop of Shutdown Bank B Rod E-11 During Low Power Physics Testing Due to an Inadequate Vendor Procedure
A Green self-revealing Non-Cited Violation (NCV) of 10 CFR 50, Appendix B, Criterion V was identified for the failure to include adequate instructions in procedures which resulted in two manual reactor trips due to two rod drop events.

This finding was greater than minor because it involved the procedure quality and adequacy attributes of the initiating events cornerstone and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown and power operations. The finding was analyzed using the Significance Determination Process (SDP) Phase 1, and was determined to be of very low safety significance (Green). While the finding resulted in two events where Shutdown Bank B Rod E-11 dropped into the core and subsequent manual reactor trips due to being in a conditions where Technical Specification 3.0.3 was entered, the finding did not result in the likelihood that mitigation equipment or functions would not be available.
Inspection Report# : 2005002*(pdf)*

Significance: G Dec 31, 2004
Identified By: Self-Revealing
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)*

Barrier Integrity

Significance: G Dec 31, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Four Examples of Violation of 10 CFR Part 50.55a(b)(2)(ix) for Failure to Correct Deficiencies Identified During Examination of the Unit 3 Containment Moisture Barrier
The inspectors identified a NCV of 10 CFR Part 50.55a(b)(2)(ix) with four examples; failure to correct deficiencies identified during examination of the Unit 3 reactor containment building moisture barrier; failure to conduct augmented inspections; failure to expand the sample size; and, failure to perform re-examination of areas of degradation during the next inspection period in accordance with the requirements of Subsection IWE of ASME Section XI.

This finding is more than minor because if left uncorrected, these examples could become a more significant concern, that being loss of the reactor containment building barrier integrity. The finding was of very low safety significance (Green) because the existing condition did not result in an actual open pathway in the physical integrity of the containment. The finding involved the cross-cutting aspects of problem and identification of resolution, in that a CR was not initiated to document the degraded moisture barrier conditions until after the inspectors questioned the extent of the deficiencies and planned resolution. Additionally, the licensee did not appropriately evaluate or incorporate operating experience on this issue disseminated in NRC Information Notice (IN) 2004-009, Corrosion of Steel Containment and Containment Liner, and is considered another example of a cross-cutting aspect of problem identification and resolution. (Section 1R08)

Inspection Report# : 2004005*(pdf)*

Significance: G Dec 31, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Perform the Pre-placement Inspection of the Unit 3 Containment Construction Opening Prior to Concrete Placement
The inspectors identified a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V for failure to perform the pre-placement inspection of the Unit 3 containment construction opening prior to concrete placement in accordance with the requirements of paragraph 13.5.1 of Specification 7012-SPEC-C-003, Rev. 1.

This finding is more than minor significance because if left uncorrected, failure to identify and remove the excess free water from the bottom of the concrete forms would have resulted in a reduction in the compressive strength of the replacement concrete and could have resulted in significant degradation of the containment. The failure to remove the water was of very low safety significance (Green) because the water was identified by the inspectors and removed prior to concrete placement, and did not result in an actual open pathway in the physical integrity of the containment. (Section 4OA5.4)

Inspection Report# : 2004005*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Last modified : November 30, 2005