

Turkey Point 3

1Q/2004 Plant Inspection Findings

Initiating Events

G**Significance:** Jun 28, 2003

Identified By: Self Disclosing

Item Type: FIN Finding

A Personnel Error Resulted in a Secondary Plant Transient

A self-revealing finding was identified concerning a human performance issue which resulted in a secondary plant transient and numerous annunciators including both steam generator feed pump low suction pressure alarms. The plant transient occurred when the Moisture Separator Re-heaters (MSRs) were placed in service at a higher power level than normal without adequate procedural guidance or management involvement.

This finding is greater than minor because a human error adversely affected the Initiating Events cornerstone objective of limiting the likelihood of events that upset plant stability during power operations. However, because a plant trip did not occur, nor were the operation of any mitigating systems affected, the finding was determined to be of very low safety significance. (Section 1R14)

Inspection Report# : [2003003\(pdf\)](#)G**Significance:** Jun 28, 2003

Identified By: Self Disclosing

Item Type: FIN Finding

Inadequate Corrective Action Resulted in a Plant Trip

A self-revealing finding was identified concerning inadequate corrective action to address starting problems with the two diesel driven instrument air compressors which resulted in a plant trip when the instrument air pressure degraded and the compressors failed to start and load. Numerous condition reports had been written over several years but adequate plant focus was not taken to correct the problem until after the plant trip occurred.

This finding is greater than minor since it affected the Initiating Events cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during power operations. This finding was reviewed using the Significance Determination Process and was determined to be of very low safety significance because several systems such as auxiliary feedwater, standby steam generator feed pumps, and manual realignment of the feedwater control valves were available. (Section 4OA2)

Inspection Report# : [2003003\(pdf\)](#)G**Significance:** Apr 05, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Corrective Action For A Failed CVCS Pipe Support

Green. Inadequate root cause determination and corrective action of a failed Chemical and Volume Control System (CVCS) pipe support led to an additional failure.

A Non-Cited violation of 10CFR50.55a(g)(4) and 10CFR50, Appendix B, Criterion XVI was identified in that measures taken to evaluate the suitability of replacement and to correct the cause for failure of CVCS pipe support H-4 in 1998 were not adequate and the same pipe support was found failed again in 2003. This finding was greater than minor because inadequate evaluation and corrective action to modify the pipe support and correct the cause for the 1998 failure could have challenged the ability of this line to supply reactor coolant pump seal cooling. The finding was of very low safety significance because the licensee determined that the loss of this support did not cause loss of function of the CVCS system. Specifically, the stress analysis showed that the pipe would not have been over stressed seismically or thermally with the loss of this hanger. (Section 1R08.1)

Inspection Report# : [2003002\(pdf\)](#)

Mitigating Systems

G**Significance:** Mar 27, 2004

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Operation With Two Charging Pumps Inoperable in Excess of Technical Specifications Allowable Limits

A self revealing non-cited violation of Technical Specification 3.1.2.3 was identified for failure to maintain at least two charging pumps operable. This condition occurred when Isolation Valve 3-280H for the 3C Charging Pump interlock pressure control switch PS-3-201C was mispositioned closed.

The 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. The finding was determined to be of very low safety significance in accordance with the Significance Determination Process (SDP) phase 2, since one charging pump remained operable and available to perform the safety function. (Section 40A3)

Inspection Report# : [2004002\(pdf\)](#)G**Significance:** Mar 26, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Identify and Implement Effective Corrective Actions to Prevent Recurring Charging Pump Functional Failures

The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, for the licensee's failure to identify and implement effective corrective actions to prevent recurring charging pump valve seat functional failures. These failures constituted repetitive significant conditions adverse to quality.

This finding is greater than minor because it affected the equipment performance attribute and impacted the Mitigating System cornerstone objective to ensure availability of systems that respond to initiating events to prevent undesirable consequences. The charging pump valve seat failures were determined to be of very low safety significance because the failures did not reduce the number of available pumps below that required for the system to perform its safety function. (40A2.a)

Inspection Report# : [2004006\(pdf\)](#)G**Significance:** Feb 13, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Install Full Area Wide 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\(pdf\)](#)G**Significance:** Dec 27, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Identify and Use an Appropriate Acceptance Criteria for the Main Oil Pump Internals Clearances and Main Oil Pump Suction Check Valve Leakage

A self revealing non-cited violation was identified for failure to comply with 10 CFR 50, Appendix B, Criterion III, "Design Control." The licensee failed to identify and specify in procedures the appropriate acceptance criteria for the main oil pump (MOP) internals clearances and the MOP suction check valve leakage, to ensure the operability of the 'B' Auxiliary Feedwater Pump (AFW). As a result, during surveillance testing, the 'B' AFW Pump experienced a lubrication failure which damaged the pump outboard thrust bearings.

This finding is greater than minor because it involved the design control attribute of the mitigating system cornerstone, which could affect the objective of ensuring that equipment is available and capable of responding to an event. The finding was of very low safety significance in accordance with the Significance Determination Process (SDP) Phase 1 worksheet, because it did not represent an actual loss of the safety

function of the AFW system and it did not represent an actual loss of safety function of a single train of AFW for greater than the Technical Specification allowed outage time. (Section 1R15)

Inspection Report# : [2003005\(pdf\)](#)



Significance: Sep 27, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Maintain Design Documentation to Prevent Inadvertent Loss of Both Trains of AFW Automatic Actuation Logic and Relays

A self-revealing finding was identified concerning a failure to comply with 10 CFR 50, Appendix B, Criterion V, "Instruction, Procedures, and Drawings." Licensee drawings and instructions used to research Clearance Zone 28-01 relay tagouts were not sufficient to assure that the design basis Engineering Safety Feature Actuation Signal (ESFAS) function of these components was protected. As a result, a plant configuration was established which rendered the automatic start of all AFW pumps on a Low-Low Steam Generator Level signal unavailable while U3 was in Operational Mode 3.

This finding is greater than minor since it affected the Mitigating System Cornerstone objective for Equipment Availability and had an actual safety impact of rendering the automatic start of all AFW pumps on a Low-Low Steam Generator Level signal unavailable while in Operational Mode 3. This finding was reviewed using the Significance Determination Process and was determined to be of very low safety significance because for the two applicable design basis accidents requiring this signal, alternative methods would have started the AFW pumps and the system would have been able to perform its safety function. (Section 40A3.1)

Inspection Report# : [2003004\(pdf\)](#)



Significance: Apr 21, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Update UFSAR with SBO Mitigation Information

Green. The licensee failed to update the Final Safety Analysis Report (FSAR) regarding their method of coping with potential reactor coolant system losses during a station blackout by reestablishing reactor coolant pump seal injection.

A non-cited violation of 10 CFR 50.71(e) was identified. This violation is subject to traditional enforcement since it had the potential for impacting the regulatory process. Specifically, the NRC relies on the licensees to update FSARs to reflect the latest information developed for the facility. This ensures that the NRC has an accurate description of the facility when conducting inspections and evaluating license amendments. The finding is of very low safety significance because not updating the FSAR did not have any actual safety consequences. (Section 40A5)

Inspection Report# : [2003007\(pdf\)](#)



Significance: Apr 21, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequacies in SBO Mitigation Procedures (Six Examples)

Green. Several emergency operating procedures developed by the licensee for mitigating a station blackout contained procedural inadequacies. These inadequacies included lack of appropriate acceptance criteria as well as improper use of and inadequate caution statements. Six examples were identified by the inspectors.

Six examples of a non-cited violation of Technical Specification 6.8.b, Procedures and Programs and licensee Administrative Procedure 0-ADM-101, Procedure Writer's Guide, were identified. This violation was more than minor because if left uncorrected, it could become a more significant safety concern. The finding is of very low safety significance because only one initiating event (loss of offsite power) was involved, three of four available emergency diesel generators (EDGs) would have to fail to get to this condition; the low probability that, given three EDGs fail, the fourth would operate properly; the possibility that offsite power would be restored prior to core damage; and there was a possibility that operators would be able to recover from the performance deficiency without overloading the EDG, due to operator training on the limitations of the EDGs. (Section 40A5)

Inspection Report# : [2003007\(pdf\)](#)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety



Significance: 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 to 10 CFR Part 50 design criteria. (Section 2PS1)

Inspection Report# : [2004002\(pdf\)](#)



Significance: 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 to 10 CFR Part 50 design criteria. (Section 2PS1)

Inspection Report# : [2004002\(pdf\)](#)

Physical Protection

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\(pdf\)](#)

**Significance:** Apr 05, 2003

Identified By: NRC

Item Type: FIN Finding

Inappropriate blanket overtime authorization

Green. Inappropriate blanket overtime authorization for operators, health physics personnel, and maintenance personnel was granted for the entire Unit 3 refueling outage.

This finding is greater than minor because inappropriate deviations from overtime limits can be a significant contributor to worker fatigue and potential for human errors which, if left uncorrected, could become a more significant safety concern. This finding is of very low safety significance because once this issue was presented to licensee management at the start of the outage, action was taken to prevent inappropriate deviations from the guidelines and no violation of regulatory requirements occurred. (Section 1R20)

Inspection Report# : [2003002\(pdf\)](#)**Significance:** Apr 05, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure To Report Main Steam Safety Relief Valve Test Results Outside TS Limits

Green. Main Steam Safety Relief Valve lift pressures were outside the $\pm 3\%$ Technical Specification (TS) requirements for the past several refueling outages and were not reported as required in Licensee Event Reports (LERs).

A non-cited violation of 10 CFR 50.73 (a)(2)(i)(B) was identified. This finding is greater than minor because failure to accurately report events could impact the NRC's ability to perform its regulatory function. This finding is of very low safety significance because the as-found main steam safety relief valve lift pressures of the affected valves were bounded by accident analyses. (Section 4OA2)

Inspection Report# : [2003002\(pdf\)](#)

Last modified : May 05, 2004