

Arkansas Nuclear 2

3Q/2004 Plant Inspection Findings

Initiating Events

G**Significance:** Sep 23, 2004

Identified By: Self Disclosing

Item Type: FIN Finding

INADEQUATE MAINTENANCE PROCEDURE FOR THE MAIN GENERATOR REVERSE POWER RELAYS

A self-revealing finding associated with an inadequate maintenance procedure occurred when the Unit 2 main generator reverse power relays contributed to a turbine trip and a reactor trip. The licensee had not incorporated vendor recommended maintenance on the reverse power relays, and as a result, one of the reverse power relays actuated with no reverse power condition present. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program as Condition Report ANO-2-2002-2173.

The finding is more than minor because it was analogous to Example 4.b. in Appendix E, "Examples of Minor Issues," of Manual Chapter 0612, "Power Reactor Inspection Reports," because a procedural error contributed to a reactor trip. This finding affected the initiating events cornerstone. Using the Phase 1 worksheet in Manual Chapter 0609, "Significance Determination Process," the finding is of very low safety significance because, although it resulted in a reactor trip, all mitigating systems remained available.

Inspection Report# : [2004004\(pdf\)](#)**G****Significance:** Dec 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Operator Action Causes a Reactor Trip During CEA Postmaintenance Testing

A noncited violation of 10 CFR Part 50, Appendix B, Criterion V, revealed itself when a Unit 2 reactor operator did not follow the prescribed procedure for movement of an individual control element assembly during postmaintenance testing. The reactor operator positioned the control element drive mechanism control system mode selector switch to the "manual group" instead of the "manual individual" position, and began control element assembly insertion. This resulted in eight, instead of one, control element assemblies being inserted into the core and caused the core protection calculator to initiate an unplanned reactor protection system reactor trip.

This finding is greater than minor because it was analogous to Example 4.b in Appendix E of Manual Chapter 0612 because an operator error caused a reactor trip. This finding has very low safety significance because no other complicating events were caused by the error and all mitigating systems remained available to the operators.

Inspection Report# : [2003005\(pdf\)](#)**G****Significance:** Dec 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Promptly Correct a Faulty Power Supply Switch Leads to a Dropped CEA at Power

A noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, revealed itself when licensee personnel in Unit 2 did not take prompt corrective action to repair a faulty power switch in the power supply to Control Element Assembly 43. The power switch was determined to be the cause of two missing phases on different Control Element Assembly 43 coils and was not repaired for 3 months. The failure to repair it subsequently led to the dropping of Control Element Assembly 43 fully into the reactor core, initiating an unplanned downpower event.

This finding is greater than minor because it affected the initiating events cornerstone objective of limiting the likelihood of those events that upset plant stability during power operations, in that it led to an unplanned downpower. This finding has very low safety significance because Control Element Assembly 43 was able to perform its intended safety function.

Inspection Report# : [2003005\(pdf\)](#)**G****Significance:** Dec 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Procedure for MNSA Installation Leading to a Reactor Coolant System Leak

A noncited violation of 10 CFR Part 50, Appendix B, Criterion V, revealed itself when licensee personnel failed to prescribe an adequate procedure for inspecting the counterbore region of mechanical nozzle seal assemblies prior to their installation on the bottom of the Unit 2 pressurizer. This led to an inadequate counterbore in which material left in the counterbore area allowed leakage through an unanalyzed leak path, allowing boric acid to come into contact with the outside of the carbon steel pressurizer vessel.

This finding is greater than minor because it was analogous to Example 2.e in Appendix E of Manual Chapter 0612 because procedures

impacted the ability of seals to perform their function. This finding has very low safety significance because the amount of leakage was extremely small and no degradation to the pressurizer or mechanical nozzle seal assembly occurred due to boric acid corrosion.

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

Mitigating Systems

Significance: TBD Sep 23, 2004

Identified By: NRC

Item Type: AV Apparent Violation

FAILURE TO IDENTIFY AND CORRECT A LOOSE CIRCUIT CONNECTION IN CONTAINMENT SPRAY PUMP CIRCUITRY

The inspectors identified an apparent violation of 10 CFR Part 50, Appendix B, Criterion XV, "Nonconforming Materials, Parts, or Components," for the failure to establish controls to prevent a circuit breaker with a loose connection from being installed in Unit 2. A loose connection in the Containment Spray Pump 2P-35A breaker was not identified prior to installation in the plant even though there were several undocumented instances where similar loose connections were discovered during receipt inspections of other breakers in its group. This issue involved problem identification and resolution crosscutting aspects associated with maintenance technicians not identifying the cause of the breaker failure and not documenting nonconformances. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program as Condition Report ANO-2-2004-1712.

This finding is being considered an apparent violation pending completion of its significance determination. The finding is more than minor because it affected the mitigating systems cornerstone objective of ensuring the reliability of systems that respond to initiating events to prevent undesirable consequences. Using Appendix A, "Technical Basis For At Power Significance Determination Process," of Manual Chapter 0609, "Significance Determination Process," and the Phase 2 worksheets from "Risk-informed Inspection Notebook for Arkansas Nuclear One - Unit 2," the finding was determined to potentially have greater than very low safety significance because the loose connection could have resulted in an actual loss of the safety function of the Unit 2 Train A containment spray pump during small break loss of coolant accident or stuck open relief valve events.

Inspection Report# : [2004004\(pdf\)](#)

G

Significance: Sep 23, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PERFORM REQUIRED HYDROSTATIC TESTING OF PRESSURIZED FIRE EXTINGUISHERS

The inspectors identified a noncited violation of Unit 2 operating license Condition 2.C.(3)(b), "Fire Protection," for the failure to perform hydrostatic testing on approximately 80 to 90 percent of the carbon dioxide fire extinguishers. The licensee failed to implement a plan to ensure carbon dioxide fire extinguishers would not exceed their hydrostatic retest expiration dates in response to NRC Information Notice 2001-004, "Neglected Fire Extinguisher Maintenance Causes Fatality." This issue involved problem identification and resolution crosscutting aspects associated with fire protection technicians failing to correct adverse conditions in a timely manner. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program as Condition Report ANO-1-2004-1544.

This finding is more than minor because, if left uncorrected, it would become a more significant safety concern in that internal degradation of the fire extinguishers could continue without any means of detection until the extinguishers were unable to perform their intended functions. Using Appendix F, "Determining Potential Risk Significance of Fire Protection and Post-Fire Safe Shutdown Inspection Findings," of Manual Chapter 0609, "Significance Determination Process," the inspectors determined the issue is of very low safety significance because the fire protection element's performance and reliability was minimally impacted.

Inspection Report# : [2004004\(pdf\)](#)

G

Significance: Sep 23, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ADEQUATELY ASSESS RISK DUE TO EXTERNAL CONDITIONS OR HELB DOORS REMOVED

The inspectors identified two examples of a noncited violation of 10 CFR 50.65(a)(4) for the failure to consider the external risk from changing weather conditions (tornado warning) while a Unit 2 emergency diesel generator was out of service for maintenance and the failure to perform an adequate risk assessment of the removal of a high energy line break barrier between the turbine building and the Unit 1 South switchgear room. This finding involved problem identification and resolution crosscutting aspects associated with operations and engineering personnel not implementing corrective actions to address the extent of condition from a previous noncited violation documented in NRC Inspection Report 05000313/2004003. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program as Condition Reports ANO-C-2004-1279 and ANO-C-2004-1402.

The inspectors determined that these issues are more than minor because, if left uncorrected, they would become a more significant safety concern in that actions to manage increases in risk may not be implemented. This finding affected the mitigating systems cornerstone. Using

the Phase 1 worksheet in Manual Chapter 0609, "Significance Determination Process," the example involving changing weather conditions was determined to have very low safety significance because the finding did not result in a loss of function per Generic Letter 91-18, Revision 1, "Information to Licensee's Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions." Next, using Appendix A, "Technical Basis For At Power Significance Determination Process," of Manual Chapter 0609, "Significance Determination Process," and the Phase 2 worksheets from "Risk-informed Inspection Notebook for Arkansas Nuclear One - Unit 1," the finding involving the high energy line break barrier was determined to be of very low safety significance because the only affected initiator was a main steam line break and a redundant train of safety related switchgear always remained available during the short exposure time for the condition.

Inspection Report# : [2004004\(pdf\)](#)

G

Significance: Jun 23, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

UNTIMELY CORRECTIVE ACTIONS TO CLEAN DISCOLORED BORIC ACID DEPOSITS

The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the failure to take timely corrective action to correct indications of material wastage on Unit 2 Containment Spray Pump B. Specifically, the licensee did not implement actions to remove discolored boric acid deposits from the containment spray pump for approximately 9 months. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. This issue involved problem identification and resolution cross-cutting aspects associated with the timely implementation of corrective actions for conditions adverse to quality.

The inspectors determined that this issue is more than minor because if left uncorrected it could become a more significant safety concern in that continued wastage of the pump could impact operability. Using the Phase 1 worksheets in Manual Chapter 0609, "Significance Determination Process," the finding was determined to have very low safety significance because the actual wastage of the pump studs, nuts, and washers did not affect the safety function of the containment spray pump.

Inspection Report# : [2004003\(pdf\)](#)

G

Significance: Jun 23, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CORRECT INACCURATE HPSI AND LPSI VALVE POSITION INDICATIONS

The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the failure to correct inaccurate main control room valve position indicators on the Unit 2 high and low pressure safety injection system motor-operated valves. The valve position indicators were not calibrated for approximately 8 years yet were relied upon for indication in station procedures, including the loss of shutdown cooling procedure. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. This issue involved problem identification and resolution cross-cutting aspects associated with operations personnel not identifying conditions adverse to quality.

The finding is greater than minor because it affected the mitigating systems cornerstone objective of ensuring the reliability of systems that respond to initiating events to prevent undesirable consequences. Using the Phase 1 worksheets in Manual Chapter 0609, "Significance Determination Process," the finding was determined to have very low safety significance because the safety function of the valves was not affected and other indications were available to monitor system performance.

Inspection Report# : [2004003\(pdf\)](#)

G

Significance: Jun 23, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO PROVIDE ADEQUATE COMPENSATORY MEASURES FOR A LOSS OF FIRE WATER TO THE INTAKE STRUCTURE

The inspectors identified a noncited violation of Unit 1 Technical Specification 5.4.1.c and Unit 2 Technical Specification 6.8.1.f when the licensee provided inadequate manual suppression firefighting equipment upon a loss of automatic and manual suppression to the intake structures and service water pump areas. The equipment staged by the licensee would have required numerous actions by the fire brigade to ready a fire hose for manual fire suppression. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. This issue involved human performance cross-cutting aspects associated with operations personnel not implementing appropriate compensatory measures.

The finding is greater than minor because it affected the mitigating systems cornerstone objective of ensuring the availability of systems that respond to initiating events to prevent undesirable consequences. Using Appendix F, "Determining Potential Risk Significance of Fire Protection and Post-Fire Safe Shutdown Inspection Findings," of Manual Chapter 0609, "Significance Determination Process," the finding was determined to have very low safety significance because all remaining mitigating systems needed to respond to a loss of service water on either unit were available.

Inspection Report# : [2004003\(pdf\)](#)

G**Significance:** Jun 23, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ADEQUATELY ASSESS RISK DUE TO EXTERNAL CONDITIONS

The inspectors identified a noncited violation of 10 CFR 50.65(a)(4) for the failure to perform adequate risk assessments on Units 1 and 2. The licensee failed to update a prior risk assessment due to changing external events (declaration of a tornado watch) that could have had an impact on the existing assessment (increased likelihood of grid instability). In addition, the licensee did not include the added external risk from fire and its impact on safe shutdown equipment in aggregate risk assessments for the plant. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program.

The inspectors determined that these issues are more than minor because, if left uncorrected, they would become a more significant safety concern in that future risk assessments could result in failures to properly manage increases in risk. Using the Phase 1 worksheets in Manual Chapter 0609, "Significance Determination Process," the finding was determined to have very low safety significance because mitigating systems were available and it did not affect the likelihood of external initiating events.

Inspection Report# : [2004003\(pdf\)](#)**G****Significance:** Dec 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Properly Install a HPSI System Flow Transmitter

A noncited violation of 10 CFR Part 50, Appendix B, Criterion III, revealed itself when licensee personnel in Unit 2 did not correctly translate the designed configuration of the Unit 2 high pressure safety injection system cold leg flow transmitters into the component database and the work instructions to replace the transmitters. The flow transmitter for the C-Leg 2FI-5054 was subsequently installed with its high and low pressure taps reversed, rendering the indicator inoperable for nearly 1 year, until discovered during a surveillance test.

This finding is greater than minor because it was analogous to Example 5.b in Appendix E of Manual Chapter 0612, because it involved returning a system to service after improper installation of a plant component. The improper installation of the high pressure safety injection C-Leg flow transmitter would have provided confusing indications to operators under accident conditions. This finding has very low safety significance because no other anomalous conditions were found which would have complicated operation of the high pressure safety injection system and the system would have performed its safety function with proper operator diagnosis.

Inspection Report# : [2003005\(pdf\)](#)**G****Significance:** Dec 19, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Evaluate Test Requirements

Inspectors previously identified an unresolved item (URI 50-368/2003-04-01) associated with service water heat exchanger performance testing. Based upon further review and interviews conducted during this inspection, the inspectors determined the issue was a non-cited violation of 10 CFR 50, Appendix B, Criterion XI, for failure to adequately evaluate that test requirements were satisfied. The installation and accuracy of the licensee's test instrumentation failed to meet guidelines established by the licensee's procedures and Electric Power Research Institute guidance, which the licensee had adopted. Due to the inaccuracy of the test equipment, engineers stated that recalculation of margins were required for all heat exchangers cooled by service water and tested using the low-accuracy ultrasonic instruments. The engineers also stated that design margins were exceeded for three heat exchangers and required re-analysis, for consideration of operability, with present conditions rather than design. These heat exchangers were the Unit 2 low pressure safety injection pump seal cooler, the red train Unit 2 Emergency Diesel Generator (EDG) Heat Exchanger 2E-20A and the green train Unit 2 EDG Heat Exchanger 2E-20B. This finding was determined to have cross-cutting aspects of problem identification and resolution.

The finding was considered more than minor because it affected the mitigating systems cornerstone objective in ensuring reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. It was also considered more than minor because the method of testing, if allowed to continue, could have masked inoperable heat exchanger conditions, presenting a more serious condition. The finding is of very low safety significance because the licensee changed their surveillance tests and reperformed testing with appropriate test equipment that adequately demonstrated operability of all service water cooled heat exchangers.

Inspection Report# : [2003008\(pdf\)](#)

Barrier Integrity

G**Significance:** Mar 24, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

INEFFECTIVE CORRECTIVE ACTIONS TO PREVENT RECURRENCE OF PWSCC OF ALLOY 600 MATERIAL

Green. The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to implement effective corrective actions to prevent recurrences of pressure boundary leakage due to primary water stress corrosion cracking of Alloy 600 reactor coolant system nozzles associated with pressurizer heater sleeves.

This finding was greater than minor because it affected the reactor safety barrier integrity cornerstone objective for providing reasonable assurance that the physical design barriers protect the public from radionuclide releases caused by accidents or events. Using NRC Manual Chapter 0609 Significance Determination Process Phase 1 Screening Worksheet, this performance deficiency affected the reactor coolant system barrier function. The finding was determined to be of very low safety significance because no actual leakage from the remaining pressurizer heater sleeves has occurred.

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

Emergency Preparedness

Occupational Radiation Safety

Significance:  Jun 23, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO CONTROL A HIGH RADIATION AREA

The inspector identified an event in which the licensee failed to control a high radiation area in violation of Unit 2 Technical Specification 6.13.1 after workers received abnormal dosimeter readings on October 14, 2003. The licensee performed dose measurements and found an uncontrolled high radiation area in the Unit 2 sample cooler room. The licensee should have been alerted to the potential for a high radiation area in this room when reactor coolant system radioactivity levels increased and high radiation areas were identified in adjoining areas on October 12, 2003. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. The issue involved human performance cross-cutting aspects associated with the thoroughness of radiation surveys by radiation protection personnel.

The failure to control a high radiation area is a performance deficiency. This finding is greater than minor because it was associated with one of the cornerstone attributes and affected the cornerstone objective, in that, inadequate exposure controls of a high radiation area affected the licensee's ability to ensure adequate protection of worker health and safety from exposure to radiation. Because the finding involved the potential for workers to receive significant, unplanned, unintended dose as a result of conditions contrary to Technical Specification requirements, the inspector used the occupational radiation safety significance determination process described in Manual Chapter 0609, "Significance Determination Process," Appendix C, "Occupational Radiation Safety Significance Determination Process," to analyze the significance of the finding. The inspector determined that the finding was of very low safety significance because it did not involve (1) ALARA planning and controls, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess dose.

Inspection Report# : [2004003\(pdf\)](#)

Significance:  Mar 24, 2004

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

FAILURE TO PERFORM A RADIOLOGICAL SURVEY

Green. A self-revealing noncited violation of 10 CFR 20.1501(a) was identified for the failure to perform a radiological survey. On September 25, 2003, while performing a resin efficiency comparison test, a chemistry specialist received an electronic dosimeter dose rate alarm. A physical survey by radiation protection indicated 500 millirem/hour on contact and approximately 80 millirem/hour at 30 centimeters. Radiation protection performed an evaluation before the test. The calculated dose rates were expected to be 41 millirem/hour on contact and approximately 2 millirem/hour at 30 centimeters. The actual dose rate differed from the calculated dose rates because of a miscommunication of the actual sample activity between radiation protection and chemistry personnel.

The failure to perform a radiological survey associated with the use of a resin testing apparatus is a performance deficiency. This finding is greater than minor as it is associated with the Occupational Radiation Safety Program and Process attribute and affected the cornerstone objective to ensure adequate protection of the worker's health and safety from exposure to radiation. Since this occurrence involves workers unplanned, unintended dose or potential of such a dose which could have been significantly greater as a result of a single minor, reasonable alteration of circumstances, this finding was evaluated using the Occupational Radiation Safety Significance Determination Process. The finding was determined to be of very low safety significance because it was not associated with ALARA planning or work controls, there was no overexposure or a substantial Significance Determination Process potential for an overexposure, and the ability to assess dose was not compromised.

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

G**Significance:** Dec 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Three Examples of Failure to Perform Radiological Surveys

The inspector reviewed three examples of a self-revealing, noncited violation of 10 CFR 20.1501(a), because the licensee failed to perform required radiation surveys to evaluate radiological conditions in rooms affected by radiation streaming from a stuck fuel assembly in the fuel transfer carriage and to ensure compliance with 10 CFR 20.1902(a) and (b). Specifically, on October 1, 2003, two examples involved the licensee's failure to survey and evaluate the radiological conditions in the Unit 2 penetration emergency exhaust ventilation room and the upper north piping penetration area located inside the controlled access area. Subsequent radiation surveys of these two areas identified general area radiation dose rates greater than 100 millirems per hour, requiring the areas to be posted as high radiation areas. The third example involved the licensee's failure to survey and evaluate radiological conditions in the Unit 2 lower north electrical penetration area located outside the controlled access area. Radiation surveys of this area indicated the highest general area dose rate of 80 millirems per hour, requiring the area to be posted as a radiation area. These findings are in the licensee's corrective action program as Condition Report ANO-2-2003-1405.

The finding is greater than minor because it was associated with one of the occupational radiation safety cornerstone attributes (exposure/contamination control) and the finding affected the associated cornerstone objective to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material. The inspector processed the finding through the occupational radiation protection significance determination process because the occurrence involved unplanned or unintended doses (resulting from actions or conditions contrary to licensee procedures) which could have been significantly greater as a result of a single minor, reasonable alteration of the circumstances. However, because the finding was not an as low as is reasonably achievable planning and control issue, there was no overexposure or substantial potential for personnel overexposure, and the finding did not compromise the licensee's ability to assess dose, the finding had no more than very low safety significance.

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

Public Radiation Safety

G**Significance:** Jun 23, 2004

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

IMPROPERLY INSTALLED REACTOR COOLANT SAMPLE SINK MODIFICATION

A self revealing noncited violation of Unit 2 Technical Specification 6.8.1.a was reviewed for the failure to follow written procedures associated with the modification of the reactor coolant sample sink. Specifically, the licensee improperly connected the discharge of the reactor coolant sample sink into a secondary drain header which ultimately drained into the main condenser. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program.

This finding is more than minor because it was analogous to Example 3.a in Appendix E, "Examples of Minor Issues," of Manual Chapter 0612, "Power Reactor Inspection Reports," because the modification required rework to correctly address design concerns. Using Appendix D, "Public Radiation Safety Significance Determination Process," of Manual Chapter 0609, "Significance Determination Process," the finding was determined to have very low safety significance because the licensee was able to assess the amount and curie content of the reactor coolant introduced into the secondary plant and there was no dose impact to the public.

Inspection Report# : [2004003\(pdf\)](#)**G****Significance:** Jun 18, 2004

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

RADIOACTIVE SHIPMENT PACKAGE EXCEEDED 10 CFR 71.47 RADIATION LIMITS

The team reviewed a self-revealing, non-cited violation of 10 CFR 71.47 resulting from the licensee's failure to correctly prepare a radioactive shipment so that dose rates did not exceed regulatory limits. Specifically, on March 24, 2003, the licensee was notified by a shipment recipient that the contact radiation dose rate of a package exceeded 200 millirem per hour. A contact radiation dose rate of 380 millirem per hour was identified on the bottom of the package. However, the accessible radiation levels to the public from underneath the flatbed trailer were only 70 millirem per hour. The finding was placed into the licensee's corrective action program.

The finding was greater than minor because it is associated with the Public Radiation Safety Cornerstone attribute of Program and Process and affected the associated cornerstone objective (to ensure adequate protection of public health and safety from exposure to radioactive materials). The finding had very low safety significance because: (1) it involved radioactive material control, (2) it was a transportation issue, (3) external radiation levels were exceeded, (4) dose rates in excess of regulatory limits were not accessible to the public, and (5) the radiation levels did not exceed two times the federal limits. This finding also had crosscutting aspects associated with human performance

Inspection Report# : [2004009\(pdf\)](#)

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Significance:  Dec 19, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Correct Multiple Conditions Adverse to Quality

• Green. The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, with four examples, for failing to correct conditions adverse to quality. a) The team identified that on June 21, 2002, after the licensee noted a large number of foreign material exclusion (FME) problems with the Unit 1 and 2 spent fuel pools, a root cause analysis was initiated and corrective actions were developed to prevent recurrence. The inspectors concluded the root cause was narrowly focused, and that subsequent spent fuel pool FME problems in 2003 demonstrated that corrective actions did not correct the condition adverse to quality; b) The inspectors closed URI 2003-04-02, for inadequate corrective actions associated with the use of ultrasonic flow instruments in service water heat exchanger performance testing; c) The inspectors identified that on October 11, 2003, the licensee performed an equalizing charge of the Unit 2 battery 2D11, as corrective action, after five cell specific gravities were found below procedural maintenance limits, and after cell #41 was found below Technical Specification minimum voltage on October 9, 2003. While the licensee monitored 2D11 cell #41 several times during the charge, and observed its voltage increased above Technical Specification limits, the licensee failed to perform a post maintenance test of the battery to confirm that corrective actions were effective; and d) The inspectors identified that during a period from 2001 through 2003, the licensee entered numerous problems into their corrective action program that appeared to represent violations of NRC requirements. However, the inspectors determined, based upon a sampling of 12 such issues, the licensee did not consider the majority of these to be conditions adverse to quality and closed them administratively. The inspectors found that several of the conditions did violate NRC requirements, but were closed in the licensee's corrective action program without corrective actions being taken. This finding was determined to have cross-cutting aspects of problem identification and resolution.

The finding was considered more than minor because, if left uncorrected, they would pose a more significant safety concern. The finding is of very low safety significance because: a) the licensee evaluated the subsequent FME issues and determined that each was of very low safety significance ; b) the licensee changed the heat exchanger performance test to use adequate test equipment and subsequently performed satisfactory tests on each heat exchanger; c) the licensee conducted a surveillance of the 2D11 battery, which demonstrated no Technical Specifications were exceeded, and d) the inspectors determined the licensee subsequently corrected all identified violations of NRC requirements. The inspectors verified the licensee entered the issues into their corrective action program as condition reports CR-C-ANO-2003-1080. (Section 40A2.c).

Inspection Report# : [2003008\(pdf\)](#)

Significance:  Dec 19, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Identify Multiple Conditions Adverse to Quality

The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, with three examples, for failing to identify conditions adverse to quality and enter them into the corrective action program. a) On February 15, 2002, an inadequate implementation of a modification for a Unit 1 Integrated Control System (ICS) module caused reactor power to increase to 101.3 percent. The licensee missed prior opportunities, from 1999 to 2002, to identify and enter a condition adverse to quality into their corrective action system, associated with the module, which lead to this self-revealing excursion; b) The inspectors further reviewed the conditions of an unresolved item (URI 05000368/2003003-01). From April to June of 2003, inspectors identified numerous physical and electrical conditions which could adversely affect the quality of Unit 2 battery 2D12. The inspectors noted that although several of these conditions were previously known to the licensee, they failed to enter the conditions adverse to quality into the corrective action system; and c) On October 11, 2002, workers inspected the Unit 1 emergency feedwater system turbine driven pump steam admission bypass valve, SV-2663. Although clearly identified in the maintenance document as being environmentally qualified, and referencing a previous degraded condition due to excessive temperature effects, the workers identified heat damage on the inspection form but failed to enter the condition adverse to quality into the corrective action program. This finding was determined to have cross-cutting aspects of problem identification and resolution.

The finding was considered more than minor because, if left uncorrected, they would pose a more significant safety concern. The finding is of very low safety significance because: a) Operators took prompt immediate actions to take manual control of the ICS and terminate the transient. Subsequent corrective actions eliminated the problem with the module. b) The 2D12 battery passed Technical Specification surveillance tests for the remainder of the operating cycle and was subsequently replaced; and c) the licensee repaired SV-2663 prior to evaluated end of qualified life. The licensee entered the issues, including the failures to enter adverse conditions into their corrective action program, as condition reports CR-1-ANO-2002-00201 for the ICS issue, CR-2-ANO-2003-00457, CR-2-ANO-2003-00646, CR-2-ANO-2003-00703, and CR-2-ANO-2003-00871 for the 2D12 battery, and CR-1-ANO-2003-00346 for SV-2663. (Section 40A2.a).

Inspection Report# : [2003008\(pdf\)](#)

