

## Cooper 3Q/2004 Plant Inspection Findings

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### Initiating Events

**G****Significance:** Sep 23, 2004

Identified By: Self Disclosing

Item Type: FIN Finding

**Inadequate preventive maintenance on reactor feed pump limit switches.**

A self-revealing finding was identified for the failure to perform adequate maintenance on reactor feed pump limit switches. Inadequate maintenance on the Reactor Feed Pump B limit switch resulted in the Reactor Feed Pump B turbine speed decrease and an unplanned reduction in reactor power. The licensee failed to implement preventive maintenance requirements to ensure appropriate industry recommendations were incorporated in the preventive maintenance program.

This finding was more than minor since it affected the reactor safety initiating events cornerstone attribute of equipment performance. It was considered to be of very low safety significance since it did not contribute to the likelihood of a loss of coolant accident, did not contribute to the loss of mitigation equipment, and did not increase the likelihood of a fire or flooding event. This finding has cross-cutting aspects associated with problem identification and resolution based on the fact that corrective actions for a similar limit switch failure were never implemented.

Inspection Report# : [2004004\(pdf\)](#)**G****Significance:** Sep 23, 2004

Identified By: Self Disclosing

Item Type: FIN Finding

**Inadequate preventive maintenance on service aire Compressor A**

A self-revealing finding was identified associated with the licensee's failure to perform adequate maintenance on service air compressors. Inadequate maintenance on the motor resulted in damage to the motor windings and the compressor was declared inoperable. The licensee failed to implement preventive maintenance requirements that incorporated vendor recommendations for the motor windings.

This finding was more than minor since it affected the reactor safety initiating events cornerstone attribute of equipment performance. It was considered to be of very low safety significance since it did not contribute to the likelihood of a loss of coolant accident, did not contribute to the loss of mitigation equipment, and did not increase the likelihood of a fire or flooding event.

Inspection Report# : [2004004\(pdf\)](#)**G****Significance:** Jul 23, 2004

Identified By: NRC

Item Type: FIN Finding

**Inadequate PM Results in Plant Transient**

A self-revealing finding was identified associated with the licensee's failure to perform adequate maintenance on Reactor Recirculation Motor Generator A. Inadequate maintenance on the motor generator field brushes resulted in the loss of field voltage, an unexpected trip of the motor generator, and an unplanned reduction in reactor power. The licensee failed to change their preventive maintenance requirements to incorporate vendor recommendations following modification of the brushes. This finding was more than minor since it affected the Reactor Safety Initiating Events cornerstone attribute of design control and resulted in a plant transient. It was considered to be of very low safety significance since it did not contribute to the likelihood of a loss-of-coolant accident, did not contribute to the loss of mitigation equipment, and did not increase the likelihood of a fire or flooding event.

Inspection Report# : [2004003\(pdf\)](#)**G****Significance:** Mar 24, 2004

Identified By: NRC

Item Type: FIN Finding

**Failure to Evaluate an Operator Work-around Created by Compensatory Measures**

The inspectors identified a finding regarding the failure to evaluate an operator work-around created by compensatory measures for the loss of alarm functions on Reactor Feed Pump (RFP) A. The failure to perform this evaluation had a negative impact on operator performance since not all operating crews were informed of the compensatory measures. This finding was more than minor because it was associated with the configuration control of plant equipment but was considered to have very low safety significance since it did not contribute to the likelihood of a primary or secondary system LOCA, did not contribute to a loss of mitigation equipment, and did not increase the likelihood of a fire or internal/external flood.

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

**Significance:**  Mar 24, 2004

Identified By: NRC

Item Type: FIN Finding

**Failure to Appropriately Evaluate a Temporary Modification**

The inspectors identified a finding regarding the failure to evaluate a temporary modification to the RFP A control cabinet. Two supervisory alarms were disabled due to nuisance alarms caused by a programming error in the control system. A portable computer and remote camera were staged at the control cabinet to compensate for the loss of these alarms but adequate controls were not established in accordance with the licensee's temporary modification procedure. This finding was more than minor because it was associated with the configuration control of plant equipment but was considered to have very low safety significance since it did not contribute to the likelihood of a primary or secondary system LOCA, did not contribute to a loss of mitigation equipment, and did not increase the likelihood of a fire or internal/external flood.

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

**Significance:**  Mar 24, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

**Ineffective Corrective Actions for Failure to Promptly Identify and Correct Conditions Adverse to Quality(Note: One of three examples. Other examples listed in Mitigating Systems 2004002-04)**

The inspectors identified a Green NCV of 10 CFR 50, Appendix B, Criterion XVI, Corrective Actions, for failure to take timely and effective corrective actions associated with the stratification of reactor coolant in the reactor vessel. In May 2003, following a reactor scram, stratification occurred which resulted in exceeding TS heat up and cooldown rates for the reactor vessel. Corrective actions for that event failed to prevent recurrence of the condition in November 2003. This finding was more than minor because it affected the initiating events cornerstone and was associated with the cornerstone attribute of equipment performance of Reactor Coolant System (RCS) barrier, but was of very low safety significance since it did not contribute to the likelihood of a primary or secondary system LOCA, did not contribute to a loss of mitigation equipment, and did not increase the likelihood of a fire or internal/external flood. In addition, it had crosscutting aspects associated with problem identification and resolution since the corrective actions did not prevent recurrence.

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

**Significance:**  Dec 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Inadequate procedure results in main turbine lube oil fire**

A noncited violation of Technical Specification 5.4.1(a) was identified for a failure to establish an adequate system operating procedure for the turbine oil purification and transfer system during main turbine lube oil reservoir vapor extractor maintenance. This caused an oil leak resulting in a fire. This finding was greater than minor since inadequate system operating procedures could be reasonably viewed a precursor to a significant event and, if left uncorrected, could become a more significant safety concern. This finding was not suitable for SDP evaluation but has been reviewed by NRC management and was determined to be of very low significance. In addition, it had crosscutting aspects associated with problem identification and resolution since a number of opportunities were missed to identify the procedure error and prevent the subsequent fire.

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

**Significance:**  Dec 31, 2003

Identified By: NRC

Item Type: FIN Finding

**Wooden Tower Cross Arm Fire**

A self-revealing finding was identified associated with the failure to evaluate and take corrective actions for a fire on the Booneville 345 kV transmission line in 1997. This led to a similar fire on a transmission tower between the main transformers and the main generator disconnect switches which induced a plant transient in October, 2003. This finding was more than minor since it induced a plant transient. Given the configuration of the switchyard, the fire did not pose a challenge to offsite power. Therefore, it was determined to have a very low safety significance since it did not contribute to the likelihood of a loss of coolant accident, it did not contribute to both the likelihood of a reactor trip and the loss of mitigation equipment, and it did not increase the likelihood of a fire or flooding event that would have adversely affected mitigating systems. In addition, it had crosscutting aspects associated with problem identification and resolution since the October, 2003 fire and transient could have been avoided had the 1997 fire been more thoroughly evaluated.

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

**Significance:**  Dec 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to follow procedure results in an inoperable station air compressor**

A noncited violation of Technical Specification 5.4.1(a) was identified regarding the failure to specify an adequate postmaintenance test following corrective maintenance on Station Air Compressor B. The air compressor was rendered inoperable by the maintenance and this fact was not discovered for 35 days. This finding was more than minor since it was associated with the increased likelihood of a loss on instrument air which is an initiating event but was determined to have very low safety significance since it did increase the likelihood of a LOCA, the likelihood of an initiating event and the loss of mitigating equipment, or the likelihood of a fire or internal flooding.

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

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## Mitigating Systems

**Significance:**  Sep 23, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to follow temporary shielding procedure.**

The inspectors identified Green noncited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to follow procedures for the installation of temporary shielding. During a plant tour, the inspectors identified that temporary shielding was in contact with residual heat removal system components resulting in residual heat removal shutdown cooling being declared inoperable.

This finding was more than minor since it affected the reactor safety mitigating systems cornerstone attribute of configuration control but it was considered to have very low safety significance since the condition did not involve any actual loss of function to the safety-related components and did not screen as risk significant due to seismic, fire, flooding or severe weather event. This finding has crosscutting aspect associated with problem identification and resolution based on the fact that the licensee missed several opportunities to identify and evaluate the shielding.

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

**Significance:** TBD Jul 10, 2004

Identified By: NRC

Item Type: AV Apparent Violation

**Inadequate instructions for restoration of the SW system following maintenance**

A self-revealing apparent violation of 10 CFR Part 50, Appendix B, Criterion V, was identified for the failure to provide adequate instructions for restoring the service water system to an operable configuration following the completion of maintenance activities. This condition existed from January 21 through February 11, 2004, and resulted in Division 2 of the service water system as well as Emergency Diesel Generator 2 being inoperable for 21 days. The finding was greater than minor because it affected the reliability of the service water system, which is relied upon to mitigate the effects of an accident. The finding was determined to have a potential safety significance greater than very low significance (i.e., Greater than Green) because it caused an increase in the likelihood of an initiating event, namely, a loss of service water, as well as increasing the probability that the service water system would not be available to perform its mitigating systems function.

Inspection Report# : [2004014\(pdf\)](#)

**Significance:** N/A May 12, 2004

Identified By: NRC

Item Type: VIO Violation

**Failure to maintain a systems approach to training led to high failure rates on the biennial requalification examinations**

A violation of 10 CFR 55.59(c) was identified. Specifically, the licensee failed to adequately implement a systems approach to training for licensed operator requalification training during the February 25, 2002, through January 11, 2004, requalification training cycle. Reduction of training on plant systems and technical specifications, lack of periodic examinations to test training effectiveness, examination administration issues, and other failures to follow program guidance resulted in a high failure rate on requalification examinations administered in November and December 2003. The failure rate on the biennial written examination exceeded 25 percent. Immediate corrective actions implemented by the licensee included remedial training and retesting those operators who failed prior to returning operators to licensed duties. The licensee also conducted a root-cause analysis, identified several programmatic failures, and initiated corrective actions to address those programmatic issues.

Since this violation was associated with the previously issued White finding, described in Section 1R11 of NRC Inspection Report 05000298/2004-009, it is not being considered as a separate escalated enforcement action.

Inspection Report# : [2004011\(pdf\)](#)

**Significance:**  May 12, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

**Errors in written examination grading resulted in six operators passing who should have failed, three of which were returned to licensed duties.**

A noncited violation of 10 CFR 55.59(b) was identified. Specifically, due to errors in resolution of regrading the 2003 licensed operator

requalification biennial written examinations, three licensed operators were returned to licensed duties, but were later determined to have failed their requalification examinations. As a result, remedial training and re-examination was not completed before returning the affected operators to licensed duties.

The failure to accurately grade the requalification written examinations was a performance deficiency that was more than minor because the licensee did have an opportunity to identify and correct the grading errors prior to returning operators to licensed duties. If this performance deficiency was left uncorrected it could result in inadequately trained or incompetent operators performing licensed duties. The finding is of very low safety significance because it resulted in six operators passing the requalification examination who should have been evaluated as failed.

Inspection Report# : [2004011\(pdf\)](#)

**G**

**Significance:** May 12, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Take Corrective Actions for Safety-Related Relay Actuations**

The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the failure to correct a condition adverse to quality regarding inadvertent actuations of safety-related relays. In May 2004, an additional inadvertent relay actuation during a maintenance activity caused Service Water Pump B to trip.

This finding was more than minor since it affected the availability and reliability of an operating service water pump, but it was considered to have very low safety significance since it did not represent the loss of a safety function. This finding also had crosscutting aspects associated with problem identification and resolution based on the fact that the condition was entered into the corrective action program but no corrective actions were ever implemented.

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

**G**

**Significance:** Apr 23, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to ensure redundant safe shutdown systems located in the same fire area are free of fire damage.**

The team identified a noncited violation of Section III.G.2 of Appendix R to 10 CFR Part 50 for failure to ensure that redundant trains of safe shutdown systems in the same fire area were free of fire damage. For example, cables associated with the automatic depressurization system were not physically protected from fire damage, leaving them vulnerable to spurious operation. The licensee credited manual actions to mitigate the effects of fire damage in lieu of providing the physical protection required by 10 CFR Part 50, Appendix R, Section III.G.2.

This finding is of greater than minor safety significance because it impacted the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to external events (such as fire) to prevent undesirable consequences. The team found that the manual operator actions implemented to mitigate the effects of fire damage were reasonable (as defined in Enclosure 2 of NRC Inspection Procedure 71111.05, "Fire Protection"), and could be performed within the analyzed time limits. Therefore, in accordance with Enclosure 2 of NRC Inspection Procedure 71111.05, the finding was determined to be of very low safety significance (green), and the significance determination process was not entered.

Inspection Report# : [2004008\(pdf\)](#)

**G**

**Significance:** Apr 23, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

**Three examples of a noncited violation of Technical Specification 5.4.1.d for failure to provide adequate instructions in Emergency Procedure 5.4 Fire-S/D, "Fire Induced Shutdown From Outside Control."**

The team identified three examples of a noncited violation of Technical Specification 5.4.1.d for failure to provide adequate instructions in Emergency Procedure 5.4 Fire-S/D, "Fire Induced Shutdown From Outside Control Room," Revision 3. In the first example, the licensee failed to provide adequate instructions to operators to assure that high pressure coolant injection flow would be secured within analyzed times in order to prevent reactor vessel overfill and subsequent damage to safety relief valves. In the second example, the licensee failed to provide adequate instructions to operators to ensure the main steam isolation valves were closed in order to prevent feedwater from overfilling the reactor vessel and damaging safety relief valves. In the third example, the licensee failed to provide adequate instructions to ensure operators would correctly position 14 motor-operated valves (required for achieving and maintaining safe shutdown) from motor-control centers. Operating motor-operated valves in this manner bypasses the valves' protective features, leaving them vulnerable to damage by over-thrust. This finding has cross-cutting aspects in the area of human performance.

This finding is of greater than minor safety significance because it impacted the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to external events (such as fire) to prevent undesirable consequences. The team leader and the senior reactor analyst, performed a Phase 3 risk assessment for each of these examples using INEEL/EXT-02-10307, "SPAR-H Human Reliability Method," dated May 2004, and determined that the significance of each of these findings was very low (green). This very low significance can be attributed to a low initiating event frequency and low probability of circuit failures which would cause spurious operation.

Inspection Report# : [2004008\(pdf\)](#)

**G****Significance:** Mar 24, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Follow Procedures for HPCI Operation and Operability Determinations**

Two examples of an NCV of TS 5.4.1 were identified associated with the failure to implement station procedures. The two examples include the following: A NCV of TS 5.4.1(a) was identified regarding the failure to follow station procedures during recovery from a reactor scram. Operators secured the high pressure coolant injection (HPCI) system by an incorrect method not allowed by the procedure in use at the time. This incorrect method rendered the system inoperable. This finding is more than minor since it involved human performance errors during a transient. This finding is of very low safety significance since it did not represent an actual loss of safety function. In addition, it also has cross-cutting aspects associated with human performance since the operators failed to use the correct step in the procedure for two similar transients. The inspectors identified a NCV of TS 5.4.1(a) regarding the failure to correctly implement the operability determination procedure. The licensee failed to meet timeliness goals and documentation requirements when evaluating the operability of multiple safety related level transmitters.

This finding was more than minor because the failure to follow procedures when assessing operability of safety related equipment could become a more safety significant safety concern if left uncorrected. The finding was of very low safety significance since the licensee was ultimately able to demonstrate operability of all the affected instruments. This finding had cross-cutting aspects associated with human performance since a significant amount of training had been conducted regarding operability determinations over the past year and station procedures reflected current guidance regarding operability determinations, yet personnel still failed to follow the procedure.

Inspection Report# : [2004002\(pdf\)](#)**G****Significance:** Mar 24, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Maintain Adequate Procedures for Control of Offsite Power Sources**

The inspectors identified two examples of a NCV of TS 5.4.1(a) regarding the failure to maintain procedures for control over the offsite power circuits. This violation was identified during a closure of an unresolved item dealing with multiple historic design issues with the main switchyard and secondary offsite power circuit.

This finding was more than minor since it was associated with configuration control. The finding was of very low safety significance since no instances were identified where the emergency AC power safety function was unavailable.

Inspection Report# : [2004002\(pdf\)](#)**G****Significance:** Mar 24, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

**Ineffective Corrective Actions for Failure to Promptly Identify and Correct Conditions Adverse to Quality**

Three examples of an NCV of 10 CFR 50, Appendix B, Criterion XVI, were identified associated with the failure to identify and correct conditions adverse to quality. An additional example listed in Initiating Events Cornerstone. The inspectors identified two examples of a NCV of 10 CFR 50, Appendix B, Criterion XVI regarding the failure to take timely and effective corrective actions to revise HPCI procedures following the May 2003 reactor scram; and failure to promptly identify and enter HPCI procedure violations into CAP following the November 2003 reactor scram. This finding was more than minor since it was associated with the mitigating system cornerstone attribute of human performance, but was of very low safety significance since it did not represent the actual loss of a safety function. In addition, it had crosscutting aspects associated with problem identification and resolution since the corrective actions that were identified were not implemented in a timely manner.

Inspection Report# : [2004002\(pdf\)](#)**G****Significance:** Mar 23, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Follow Operability Determination Procedure**

The inspectors identified a noncited violation of Technical Specification 5.4.1(a) for the failure to follow the operability determination procedure. Operators placed the diesel fuel oil system in an abnormal configuration as a compensatory measure for a degraded condition on the fuel oil storage tank cross-connect valves. This configuration was not evaluated as required by the operability determination procedure. This finding was more than minor since it was associated with the operability of mitigating equipment and could become more significant if left uncorrected. It was considered to have very low safety significance because it did not represent the loss of a safety function. It also had cross-cutting aspects associated with problem identification and resolution since the degraded condition was well-documented in the corrective action program but did not receive the appropriate evaluations

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

**G****Significance:** Mar 23, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Take Corrective Actions on Diesel Fuel Oil System**

The inspector identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the failure to take adequate corrective actions for degraded conditions on the diesel fuel oil transfer system. On March 23, 2004, the inlet strainer on Fuel Oil Day Tank 1 became clogged with corrosion debris, rendering Emergency Diesel Generator 1 inoperable. This was the third occurrence of this event in 13 months. This finding was more than minor since it affected the operability, availability, and reliability of a mitigating system. It was considered to have very low safety significance based on the results of a Significance Determination Process, Phase 3, evaluation. This finding also had crosscutting aspects associated with problem identification and resolution based on the recurring nature of the failure and the fact that the licensee's corrective actions only addressed symptoms of the failure and not the root cause.

Inspection Report# : [2004003\(pdf\)](#)**W****Significance:** Feb 05, 2004

Identified By: NRC

Item Type: FIN Finding

**Failure to demonstrate satisfactory licensed operator requalification program performance.**

The licensee failed to demonstrate satisfactory licensed operator requalification program performance as described in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 8, Supplement 1, Examination Standard 601, Section E.3.a(1). Examination Standard 601 E.3.a(1) specifies, in part, that for a requalification program to maintain satisfactory performance, 75 percent or greater of the participants must pass all portions of the biennial examinations. Failures during the biennial cycle included a 36 percent failure rate on the biennial written examination. Immediate corrective actions implemented by the licensee included remedial training and retesting prior to returning operators to shift.

The finding was more than minor because it was associated with the reactor safety cornerstone attributes concerning the licensee requalification program. High operator failure rates in the biennial requalification program may be indicative of programmatic issues with the operator license requalification program. The finding was determined to be of low to moderate significance (White) because the licensee failed to meet the criteria for maintaining satisfactory performance.

Inspection Report# : [2004009\(pdf\)](#)**G****Significance:** Dec 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Inadequate corrective actions result in degraded emergency diesel generator**

A noncited violation of 10 CFR 50, Appendix B, Criterion XVI was identified regarding the failure to take adequate corrective actions for degraded conditions on the diesel fuel oil transfer system. In February, 2003, corrosion products from the fuel oil storage tank clogged the fuel oil strainer supplying Emergency Diesel Generator 1. Corrective actions for that event failed to preclude recurrence of the condition in November, 2003. This finding was more than minor since it was associated with the operability, availability, and reliability of a mitigating system but was of very low safety significance since it did not represent the actual loss of a safety function. In addition, it had crosscutting aspects associated with problem identification and resolution since the corrective action only addressed symptoms of the problem and not the root cause which was corrosion of the fuel oil storage tank.

Inspection Report# : [2003007\(pdf\)](#)**G****Significance:** Nov 04, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Agastat Relay replaced with Relay Beyond Service Life**

The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI. The licensee staff failed to identify and correct a condition where a safety-related Agastat relay in the residual heat removal system was replaced with a relay that was determined to be beyond its accepted service life. Because of a lack of effective controls of replacement relays, a relay was issued and installed that was the same age as the original relay. The purpose of replacing the original relay was that it was beyond its accepted service life. This finding is greater than minor because if left uncorrected it would become a more significant safety concern. This finding is of very low safety significance because it did not result in an actual loss of a safety function or the actual loss of one train of the residual heat removal system for greater than its Technical Specification allowed outage time. Also, the finding was not risk-significant from a fire, seismic, flooding, or severe weather initiating event standpoint

Inspection Report# : [2003002\(pdf\)](#)**G****Significance:** Nov 04, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### Licensee Failed to Follow Preventive Maintenance Procedural Requirements When Replacing Safety-Related Agastat Relays

The team identified a noncited violation of Technical Specification 5.4.1a. Since February 2003, there were 17 examples where the licensee staff failed to follow preventive maintenance procedural requirements when replacing safety-related Agastat relays. The preventive maintenance program required safety-related Agastat relays to be replaced within 10 years from the date of manufacture. The team found that the requirement to adjust the start date for the next scheduled replacement activity in the preventive maintenance program was not followed. This finding is greater than minor because if left uncorrected it would become a more significant safety concern. This finding is of very low safety significance since the deficiency was confirmed to have not resulted in a loss of safety function

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

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Significance: Nov 04, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### Two Examples of Failure to Perform Operability Determinations

The team identified a noncited violation of Technical Specification 5.4.1a. because the licensee staff failed to assess operability of instrument air accumulator check valves and the Feedwater Check Valve RF-CV-15CV as required by Procedure 0.5.OPS, "Operability Review of Notifications/Operability Determination," Revision 18. This finding is more than minor because the components were degraded and operability of those components was impacted. The finding was determined to be of very low safety significance since it did not result in the actual loss of a safety function or of one train of a safety function for greater than the Technical Specification allowed outage time. Also the finding was not risk-significant from a fire, seismic, flooding, or severe weather initiating event standpoint (instrument air accumulator check valves) nor did it represent a degradation of the barrier function of the control room or an actual open pathway of reactor containment or a reduction of the atmospheric pressure control function of reactor containment (Feedwater Check Valve RF-CV-15CV)

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

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Significance: Nov 04, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### Loss of Design Control for the Service Water Zurn Strainers

A self-revealing noncited violation was identified for inadequate design control of the service water Zurn strainer control panels, in accordance with 10 CFR Part 50, Appendix B, Criterion III. This failure resulted in the placement of nonessential components and loss of configuration control for a relay and motor starter in the strainer control panels. This finding is more than minor because the licensee staff failed to implement appropriate design control measures for the service water Zurn strainer control panels, resulting in errors significant enough to require an operability determination and a design change to resolve the concerns. The finding is of very low safety significance because it did not result in an actual loss of a safety function or the actual loss of one train of the service water system for greater than its Technical Specification allowed outage time. Also, the finding was not risk-significant from a fire, seismic, flooding, or severe weather initiating event standpoint

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

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## Barrier Integrity

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Significance: Mar 09, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

### Failure to Follow Tagout Procedure Results in Partial Containment Isolation

A self-revealing violation of Technical Specification 5.4.1(a) occurred when personnel failed to implement a tagout correctly and opened the wrong breaker, resulting in an inadvertent partial isolation of containment.

This finding was more than minor since it was similar to Example 4.b in Manual Chapter 0612, Appendix E. It was considered to have very low safety significance since it did not represent an actual barrier degradation or an open path in the reactor containment. This finding also had crosscutting aspects associated with human performance since personnel did not use the appropriate error prevention tools while implementing the tagout

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

G

Significance: Dec 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### Inadequate procedure results in unintentional transfer of reactor coolant to condensate storage tank

A noncited violation of Technical Specification 5.4.1(a) was identified regarding the failure to establish an adequate procedure for operation of the residual heat removal system. Within the guidance of the existing procedure, operators inadvertently established a flow path between the

reactor vessel and the condensate storage tank which resulted in draining 300 gallons of reactor coolant to the condensate storage tank. This finding was more than minor since it was associated with the cornerstone attribute of procedure quality but was determined to have very low safety significance since the drain down rate was small and decay heat removal capabilities were not challenged. In addition, it had crosscutting aspects of problem identification and resolution since operators did not recognize this as a significant event and accepted changes in vessel level during this evolution as expected system response.

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

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## Emergency Preparedness

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## Occupational Radiation Safety

**Significance:**  Sep 16, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to perform an adequate survey.**

The inspector identified a non-cited violation of 10 CFR 20.1501(a) for failure to perform an adequate survey that resulted in a radiation area not being posted as required by regulations. On March 31, 2004, the licensee identified an unposted radiation area on the inside of the rain ring of the "B" Condensate Storage Tank. The survey discovered a spot near the base of the tank that read 160 millirem per hour on contact and 8 millirem per hour at 30 centimeters. The inspector determined that the radiation area had not been identified for approximately one year.

The finding is more than minor because it affected the cornerstone attribute (exposure control) and affected the associated cornerstone objective because it resulted in a radiation area not being posted. The finding was evaluated using the Occupational Radiation Safety Cornerstone because the finding involved the potential for unplanned or unintended dose which could have been significantly greater as a result of a single minor alteration of the circumstances. When processed through the Occupational Radiation Safety Significance Determination Process, the finding was found to have very low safety significance because it was not an ALARA finding, there was no overexposure or substantial potential for an overexposure and the ability to assess dose was not compromised. This finding also had crosscutting aspects associated with human performance.

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

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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 Jun 26, 2004

Identified By: NRC

Item Type: FIN Finding

### **6th Quarterly CAL Inspection**

In the area of emergency preparedness, the licensee's performance indicators, NRC performance indicators, and baseline inspection results indicated a satisfactory level of performance. Also in the area of engineering programs, improvements are in place and an improving trend has been noted in licensee performance indicators and no significant findings have been identified during NRC baseline inspections. In the area of human performance, baseline inspection findings continue to be identified in which personnel errors have contributed to plant performance issues. TIP action steps implemented and ongoing have provided some improvement as evidenced by two of four licensee performance indicators performing satisfactorily and the other two requiring further improvement but trending in a positive direction.

In the three remaining Confirmatory Action Letter areas, the team concluded, by reviewing licensee performance indicators, NRC performance

indicators, licensee self-assessments, and NRC baseline inspection results, that a number of positive actions have been implemented but they have not yet resulted in sustained improved performance. Specifically, in the area of material condition and equipment reliability, actions completed to date have provided the necessary processes for improvement, and numerous equipment improvements have been recently completed. However, a number of the licensee's performance indicators did not meet their performance goals. In the area of plant modifications and configuration control, progress in operability determination screening and lesson learned training was noted and provides potential for enhancing the licensee's ability to prioritize and perform operability determinations by emphasizing knowledge based tools. This conclusion was reinforced through interviews with operations and engineering personnel. Lastly, in the area of corrective action, a new "take action now" philosophy has also been implemented to increase manager ownership of corrective action performance indicators, through presentations of performance indicator status to senior management on a regular basis. The early trending information or the effectiveness of the "take action now" philosophy has shown a marked improvement in timely corrective actions.

Inspection Report# : [2004007\(pdf\)](#)

**Significance:** N/A May 12, 2004

Identified By: NRC

Item Type: FIN Finding

#### **5th Quarterly CAL Inspection**

In the area of emergency preparedness, the licensee's performance indicators, NRC performance indicators, and baseline inspection results indicated a satisfactory level of performance. Also, in the area of engineering programs improvements are in place and an improving trend has been noted in licensee performance indicators and no significant findings have been identified during NRC baseline inspections. Engineering programs have been effectively developed and the implementation process is ongoing. In the area of human performance, TIP action steps implemented and ongoing have provided continued improvement as evidenced by an improving trend in human performance data over the last 6 months. Despite these improvements, baseline inspection findings continue to be identified in which personnel errors have contributed to plant performance issues. In the three remaining Confirmatory Action Letter areas, the team concluded, by reviewing licensee performance indicators, NRC performance indicators, licensee self-assessments, and baseline inspection results, that actions implemented have not resulted in sustained improved performance. Specifically, in the area of material condition and equipment reliability, actions completed to date have provided the necessary processes for improvement, and numerous equipment improvements have been recently completed. However, a number of the licensee's performance indicators did not meet their performance goals. Implementation issues have continued to be identified in the areas of operability determinations, problem evaluation, and effectiveness of corrective actions. While the NRC acknowledges that some implementation issues are not unexpected, the types of recent problems within these areas, some of which have been repetitive, should have been prevented.

Inspection Report# : [2004006\(pdf\)](#)

**Significance:** N/A Jan 22, 2004

Identified By: NRC

Item Type: FIN Finding

#### **4th Quarterly CAL Inspection**

In the area of emergency preparedness, the licensee's performance indicators, NRC performance indicators, and baseline inspection results indicated a satisfactory level of performance. In the area of human performance, efforts to improve performance have been less effective. Nevertheless, some improvements have been noted. In the four remaining Confirmatory Action Letter areas, the team concluded, by reviewing licensee performance indicators, NRC performance indicators, licensee self-assessments, and baseline inspection results that actions implemented have not resulted in sustained improved performance. Specifically, in the area of material condition and equipment reliability, actions completed to date have provided the necessary processes for improvement, and numerous equipment improvements have been recently completed. However, many of the licensee's performance indicators did not meet their performance goals, and the licensee continued to experience equipment reliability problems resulting in forced shutdowns or power reductions. Implementation issues have continued to be identified in the areas of operability determinations, problem evaluation, and effectiveness of corrective actions. Lastly, engineering program improvements are in place, but more time is needed to implement the programs and evaluate effectiveness.

Inspection Report# : [2003011\(pdf\)](#)

**Significance:** N/A Nov 04, 2003

Identified By: NRC

Item Type: FIN Finding

#### **3rd Quarter 2003 CAL Inspection**

In the area of emergency preparedness, the licensee performance indicators, NRC performance indicators, and baseline inspection results indicated a satisfactory level of performance. In the area of human performance, efforts to improve performance have been less effective. Nevertheless, some improvements have been noted. In the four remaining Confirmatory Action Letter areas, the team concluded, by reviewing licensee performance indicators, NRC performance indicators, licensee self-assessments and baseline inspection results, that actions implemented have not resulted in sustained improved performance. Specifically, in the area of material condition and equipment reliability, actions completed to date have provided the necessary processes for improvement as demonstrated by the numerous equipment improvements recently completed. However, many of the licensee's performance indicators did not meet their performance goals, and the licensee continued to experience equipment reliability problems resulting in forced shutdowns or power reductions. Also problems have continued in the areas of configuration control, operability determinations, and with the evaluation of issues identified and the effectiveness of corrective actions. Lastly, engineering program improvements are in place, but more time is needed to implement the programs and evaluate effectiveness.

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

G**Significance:** Nov 04, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Ineffective Corrective Actions Taken for Operability Determination Concerns**

The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI. The licensee staff failed to correct a previously identified problem with conducting operability determinations. The NRC identification and resolution of problems inspections (NRC Inspection Reports 05000298/2000010 and 2001010), conducted August 2000 and September 2001, both identified multiple examples of failure to perform operability determinations as required by Procedure 0.5.OPS, "Operability Review of Notifications/Operability Determination." Previous Inspection Reports 05000298/2001008 and 2002004 each had one example of a noncited violation associated with the failure to perform an operability determination. These noncited violations combined with the two additional examples of failure to perform operability determinations, for the instrument air accumulator check valves and Feedwater Check Valve RF-CV-15CV, reflect inadequate corrective actions taken to address the repeated failure of site personnel to recognize degraded or nonconforming conditions. This issue is more than minor because it involved a credible impact on safety in that the failure to recognize when degraded structures, systems, or components require an operability determination or evaluation could have resulted in continued operation of the facility with systems, structures, and components not capable of performing their intended safety function. This finding is of very low risk significance because the unevaluated degraded conditions of the affected systems did not affect operability.

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

Last modified : December 29, 2004