

## Kewaunee 4Q/2003 Plant Inspection Findings

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### Initiating Events

**Significance:**  Jun 30, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

#### **Failure to Ensure Plant Conditions Appropriate for Tagout Results in Loss of Reactor Coolant System Inventory.**

A self-revealed, non-cited violation of 10 CFR 50, Appendix B, Criterion V, was identified for the licensee's failure to properly sequence a tagout in accordance with the licensee's tagout procedure. This resulted in an approximate 100-gallon loss of inventory from the reactor coolant system. A contributing cause of this finding was related to the cross-cutting area of Human Performance.

This finding is greater than minor because it affected the Initiating Events Cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding is of very low risk significance because none of the checklist attributes of Inspection Manual Chapter 0609, "Shutdown Operations Significance Determination Process," Appendix G, were affected.

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

**Significance:**  Jun 30, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

#### **Failure to Provide Appropriate Instructions in Refueling Procedure Results in Reactor Vessel Level Indication Perturbation**

A self-revealed, non-cited violation of 10 CFR 50, Appendix B, Criterion V, was identified for the licensee's failure to ensure that the procedure governing refueling operations and reactor head disassembly had appropriate instructions or cautions to ensure that the reactor head vent remained vented to containment atmosphere. This resulted in the reactor head vent not being vented and affecting the operation of the refueling cavity water level instrument which operators were using to control reactor vessel water level.

This finding is greater than minor because it is a configuration control issue which affected the Initiating Events Cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding is of very low risk significance because none of the checklist attributes of Inspection Manual Chapter 0609, "Shutdown Operations Significance Determination Process," Appendix G, were affected.

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

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### Mitigating Systems

**Significance:** SL-IV Dec 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Non-cited violation of 10 CFR 50.59, for the failure to perform a written evaluation, as required, for a modification to the component cooling water system**

The inspectors identified a finding of very low safety significance associated with a Non-Cited Violation of 10 CFR 50.59(d)(1) for the licensee's failure to perform a safety evaluation for changes made to the facility. Specifically, the licensee 'screened out' of the 10 CFR 50.59 process a modification that included the addition of a minimum flow recirculation line to the component cooling water pumps. This modification further cross-connected the suction and discharge piping of both component cooling water pump trains. Subsequently, the inspectors identified and the licensee concurred that a safety evaluation was required for this modification.

Because the Significance Determination Process is not designed to assess the significance of violations that potentially impact or impeded the regulatory process, this issue was dispositioned using the traditional enforcement process in accordance with Section IV of the NRC Enforcement Policy. However, the results of this violation were assessed using the Significance Determination Process. In this case, the licensee failed to perform a safety evaluation in accordance with 10 CFR 50.59 and had placed the new system in service for testing prior to the completion of the required safety evaluation.

The inspectors considered this issue to be of more than minor significance because, if left uncorrected, the issue could become a more significant safety concern. Specifically, the inspectors noted that the licensee's processes for permanent modifications failed to identify this issue at several review levels. The inspectors determined that the issue was of very low significance because the new system was placed in service for a short period of time for testing prior to the completion of the required safety evaluation. In addition, the final safety evaluation completed by the licensee in October 2003 determined that the modification did not require prior NRC approval. The inspectors determined this finding was a Severity Level IV Non-Cited Violation of 10 CFR 50.59. The inspectors also determined that the finding had, as a primary cause, a human performance deficiency which affected the cross-cutting area of Human Performance. Inspection Report# : [2003008\(pdf\)](#)



**Significance:** Dec 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**10 CFR 50, Appendix B, Criterion III, "Design Control," the failure to provide for the checking the adequacy of design for temporary mod which changed the CCW system pressure boundary**

The inspectors identified a finding of very low safety significance associated with a Non-Cited Violation of 10 CFR Part 50 Appendix B, Criterion III, "Design Control," for the licensee's failure to provide for checking of the adequacy of the design in Temporary Change TCR 03-036, in that, the design review failed to confirm the structural integrity of the new pressure boundary established for the studding outlet. Consequently, the licensee performed non-destructive examinations and additional flaw and engineering analyses to confirm the adequacy of the new design.

The inspectors considered this issue of more than minor significance, because if left uncorrected, the issue could become a more significant safety concern. In addition, the inspectors concluded that the finding was greater than minor because the finding involved the design control attribute of the mitigating systems cornerstone and affected the mitigating systems objective of ensuring the capability of the component cooling water system in response to initiating events to prevent undesirable consequences. Specifically, the temporary design change relied on unsupported assumptions that could have impacted the structural integrity of the component cooling water suction line. The inspectors evaluated the finding using the Significance Determination Process Phase 1 screening and determined that the finding was a design or qualification deficiency confirmed not to result in loss of function per Generic Letter 91-18; therefore, the finding was determined to be of very low safety significance.

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

**Significance:**  Dec 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions," No appropriate immediate corrective actions for reliability issues associated with incorrect cranking cutout relay installed in the EDGs**

The inspectors identified a finding of very low safety significance associated with a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," for the licensee's failure to take adequate corrective actions in response to the installation of non-conforming cranking cutout relays which prevented energizing of the diesel generator engine start relay. The licensee's corrective actions for this condition adverse to quality addressed routine surveillance procedures, but did not consider the licensee's Emergency Operating Procedures to ensure the Emergency Diesel Generators would remain operable following Diesel Generator Shutdowns as directed by those procedures.

The inspectors considered this issue of more than minor significance, because if left uncorrected, the issue could become a more significant safety concern. In addition, the inspectors concluded that the finding was greater than minor because the finding involved the design control attribute of the mitigating systems cornerstone and affected the mitigating systems objective of ensuring the capability of the diesel generators in response to initiating events to prevent undesirable consequences. Specifically, in part, the licensee's corrective actions included revisions to normal operating procedures to verify continuity across the relay contacts following shutdown of the emergency diesel generators; however, the licensee did not similarly revise its Emergency Operating Procedures to verify continuity across the cranking cutout relay contacts following shutdown of the emergency diesel generators. The inspectors evaluated the finding using the Significance Determination Process Phase 1 screening and determined that the finding was a design or qualification deficiency confirmed not to result in loss of function per Generic Letter 91-18; therefore, the finding was determined to be of very low safety significance.

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

**Significance:**  Dec 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**10 CFR 50, Appendix B, Criterion III, "Design Control," failure to install the appropriate cranking cutout relay in the EDG system in 1998; this resulted in failure of 'B' EDG to start in Feb., 2003**

A finding of very low safety significance involving a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was self-revealing when the "B" emergency diesel generator failed to start on February 26, 2003, during a daily Technical Specification-required test, in response to the "A" emergency diesel generator being out of service for regularly scheduled 18-month periodic maintenance. The generator failed to start due to a pair of electrically open contacts on a cranking cutout relay which prevented energizing of the engine start relay. The cranking cutout relay had been installed during a design change completed in 1998, and the performance ratings of the new relay did not match original design specifications.

The inspectors considered this issue of more than minor significance, because if left uncorrected, the issue could become a more significant safety concern. In addition, the inspectors concluded that the finding was greater than minor because the finding involved the design control attribute of the mitigating systems cornerstone and affected the mitigating systems objective of ensuring the capability of the diesel generators in response to initiating events to prevent undesirable consequences. Specifically, the temporary design change failed to consider inductive electrical loads across the relay contacts, for which the relays were not rated. The inspectors evaluated the finding using the Significance Determination Process Phase 1 screening and determined that the finding was a design or qualification deficiency confirmed not to result in loss of function per Generic Letter 91-18; therefore, the finding was determined to be of very low safety significance.

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

**Significance:**  Dec 12, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**10 CFR 50, Appendix B, Criterion XVI NCV for ineffective corrective actions taken to address the implementation of the Boric Acid Leakage Inspection and Tracking Program**

The team identified a finding of very low significance associated with a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to assure that actions were promptly taken to correct deficiencies in the implementation of the boric acid leakage inspection and tracking program for boric acid residue on safety-related components, a condition adverse to quality. Since 2001, approximately 12 condition reports had been initiated concerning the adequacy of the implementation of the licensee's boric acid leakage inspection and tracking program. During the inspection, the team identified approximately 14 safety-related components with various degrees of boric acid, which the licensee had not identified and evaluated in accordance with the boric acid leakage inspection and tracking program.

The team concluded that the licensee's failure to correct previous issues associated with the implementation of the boric acid leak log on safety-related components was greater than minor because if left uncorrected, the issue could become a more significant safety concern. The team evaluated the finding utilizing Inspection Manual Chapter 0609, "Significance Determination Process," Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," Phase 1 screening and determined the finding was of very low significance.

Inspection Report# : [2003010\(pdf\)](#)

**Significance:**  Oct 21, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO PERFORM TWO REQUIRED MEDICAL TESTS IN ACCORDANCE WITH 10 CFR 55.21 AND 55.23.**

Green. The inspector identified a Non-Cited Violation of 10 CFR 55.21, "Medical Examination," and 10 CFR 55.23, "Certification." The inspector identified that the facility licensee failed to conduct all the medical testing required by American Nuclear Standards Institute/American Nuclear Society (ANSI/ANS) 3.4-1983, "Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants," as committed to by the facility licensee. Specifically, the facility licensee was not testing its operators for nose sensitivity (i.e., ability to detect odor of products of combustion and of tracer or market gases) Section 5.4.2, "Nose," and neurological testing, (i.e., normal central and peripheral nervous system function), including tactile discrimination (Stereognosis) sufficient to distinguish among various shapes of control knobs and handles by touch, Section 5.4.14, "Neurological."

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

**Significance: SL-IV** Oct 21, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO PROVIDE ACCURATE INFORMATION TO THE NRC CONCERNING LICENSED OPERATOR MEDICAL REQUIREMENTS PER NRC FORM 396.**

Severity Level IV. The inspector identified a Level IV Non-Cited Violation of 10 CFR 50.9, "Completeness and Accuracy of Information." The inspector identified that the facility licensee, between January 2, 2000, through August 26, 2002, submitted to the NRC, NRC Forms 396 for 13 individuals applying for an initial operator's license and 18 licensed operators applying for renewal of their operator licenses, that were not accurate in all material respects. Specifically, the NRC Forms 396 certified that each applicant and licensed operator met the medical requirements of ANSI/ANS 3.4-1983. In fact, all the applicants and licensed operators were not adequately examined for all medical tests as required to meet the minimum standards of ANSI/ANS 3.4-1983.

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

**Significance:**  Oct 21, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO CONDUCT SIMULATOR PERFORMANCE TESTING THROUGHOUT THE LIFE OF THE SIMULATOR.**

Green. The inspector identified a Non-Cited Violation of 10 CFR 55.46, "Simulation Facility." The inspector identified that the facility licensee failed to adequately conduct simulator performance testing throughout the life of the simulator. In addition, the facility licensee failed to correct modeling and hardware discrepancies and discrepancies identified from scenario validation and from performance testing. In addition, the facility licensee was committed to follow ANSI/ANS 3.5-1985, "Nuclear Power Plant Simulators for Use in Operator Training," as the way they would meet 10 CFR 55.46. Specifically, the licensee failed to conduct performance testing, with regard to normal evolutions core performance tests for Cycle 25, the most recent core load in the actual reactor. The licensee could only provide Cycle 7 normal evolutions core performance tests. No core performance tests had ever been conducted for Cycles 8 through 25, a period of 17 cycles.

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

**Significance:** SL-IV Oct 21, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO PROVIDE ACCURATE INFORMATION TO THE NRC CONCERNING ELIGIBILITY REQUIREMENTS FOR OPERATOR LICENSE APPLICATION PER NRC FORM 398.**

Severity Level IV. The inspector identified a Level IV Non-Cited Violation of 10 CFR 50.9, "Completeness and Accuracy of Information." The inspector identified that on or about August 13, 2002, a senior facility licensee representative submitted to the NRC, NRC Forms 398 for three individuals, each applying for an initial operator's license, that were not accurate in all material respects. The facility licensee provided inaccurate information by certifying on the NRC Form 398 that the initial operator license applications for three individuals had appropriately met the minimum training requirements for reactivity manipulations on the referenced facility simulator in accordance with 10 CFR 55.31(a)(5) and 10 CFR 55.46(c)(2).

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

**Significance:**  Sep 30, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Prescribe Instructions or Procedures Appropriate to the Circumstances for the Seismic Storage of Equipment Near the 'A' Auxiliary Feedwater Piping**

The inspectors identified a Green finding associated with a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," for the failure to prescribe instructions or procedures appropriate to the circumstances for the seismic control of equipment stored near the vicinity of the 'A' Auxiliary Feedwater (AFW) piping to the 'A' Steam Generator, an activity affecting quality. The inspectors identified during plant walkdowns that following the 2003 Refueling Outage, portable plant equipment, including two portable 2.5-ton cranes, were stored in close proximity to the AFW piping, without the use of seismic restraints.

Inspection Report# : [2003006\(pdf\)](#)

**Significance:**  Sep 30, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Prescribe Instructions or Procedures Appropriate to the Circumstances for the Installation of the Refueling Cavity Drain Standpipe Following Refueling Activities**

A Green finding associated with a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was self-revealed when the licensee, in preparing and verifying the response to NRC Bulletin 2003-01, "Potential Impact of Debris Blockage on Emergency Sump Recirculation at Pressurized Water Reactors," dated June 9, 2003, determined that the containment refueling cavity standpipe had not been installed after the Spring 2003 Refueling Outage. A procedure revision, issued prior to the 2003 Outage, had removed prescribed instructions to install the refueling cavity drain standpipe following reactor vessel refueling activities. The inspectors also concluded that this finding had, as a primary cause, a human performance deficiency.

Inspection Report# : [2003006\(pdf\)](#)

**Significance:**  Jun 30, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

**Failure to Ensure Material of Installed Pipe Plug in RHR System is in Accordance with Design Requirements**

A self-revealed non-cited violation 10 CFR 50, Appendix B, Criterion V, was identified for the licensee's failure to ensure that the residual heat removal pump recirculation piping material was in accordance with a facility drawing and engineering specifications. This resulted in the corrosion of three pipe plugs, one of which was corroded to the point of leaking. The pipe plugs were installed on each residual heat removal's recirculation pipe pressure breakdown orifice. The three pipe plugs were made of carbon steel while the residual heat removal system piping, which contained borated water, was required to be made of stainless steel.

This finding was greater than minor because it affected the Mitigating System Cornerstone objective of equipment reliability and availability, in that the failure to ensure that the residual heat removal piping materials are in accordance with plant engineering specifications and drawings could result in system leakage significant enough to require taking the system out-of-service. The finding is of very low risk significance because this finding was not a design or qualification deficiency which resulted in a loss of function per Generic Letter 91-18.

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

**Significance:**  Apr 04, 2002

Identified By: NRC

Item Type: VIO Violation

**Failure to Provide Fixed Suppression System in Fire Area TU-95B**

During performance of follow-up activities in response to a USNRC inspection, the licensee identified that fire area TU-95B had been misclassified in that it should have been classified as required to meet the requirements of Section III.G.3 of 10 CFR Part 50, Appendix R. An apparent violation of 10 CFR Part 50, Appendix R, Section III.G.3 was identified for the failure to provide fire area TU-95B with a fixed fire suppression system.

This issue has been preliminarily determined to have low to moderate safety significance (White). As a result of failing to have a fixed fire suppression system, there was a greater likelihood that a fire in fire area TU-95B would not be suppressed and redundant trains of cables and equipment required for safe shutdown could be damaged. The corresponding damage could require a shutdown of the plant from outside the control room, significantly increasing the complexity of manual actions required to achieve safe shutdown.

Due to the licensee failing to conduct a timely root cause evaluation a develop adequate corrective actions, this finding is being held open greater than four quarters until the licensee's root cause evaluation is complete and a supplemental inspection is conducted.

Inspection Report# : [2002006\(pdf\)](#)

Inspection Report# : [2003003\(pdf\)](#)

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## Barrier Integrity

**Significance:**  Mar 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Log Axial Flux Difference in Accordance with Technical Specifications**

The inspectors identified a finding of very low risk significance for the licensee's failure to monitor and log axial flux difference after disabling the power range axial flux monitor and computer alarm.

The finding was of greater than minor risk significance because the operators failure to log and assess axial flux difference with the alarm disabled as required by Technical Specifications inhibited the operators' ability to trend changing core flux conditions. This failure to log and assess axial flux difference could affect fuel cladding performance which is an attribute of the Barrier Integrity Cornerstone. The finding was of very low risk significance because although the finding impacted the Barrier Integrity Cornerstone, it affected the fuel barrier and not the reactor coolant system barrier and no actual abnormal axial flux difference existed during the time that the axial flux monitor alarm was disabled. The finding also affected the cross-cutting area of Human Performance because during the course of establishing a fixed signal in the Process Computer, operators were conducting activities beyond the bounds of approved procedural guidance. This finding was determined to be a Non-Cited Violation of Technical Specification 3.10.b.13.

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

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## Emergency Preparedness

**Significance:**  Dec 12, 2003

Identified By: NRC

Item Type: FIN Finding

### **Failure to take timely corrective actions to prevent recurrence for a 2001 white finding associated with Emergency Response Organization Augmentation**

The team identified a Green finding for the failure to take timely corrective actions to prevent recurrence for a White Finding initially identified in September 2000, associated with Emergency Response Organization Augmentation. While the team determined that corrective actions to date have been effective, as evidenced by only one augmentation drill failure since 2001, three of the eight corrective actions had not been completed.

The team determined that this issue was more than minor because if left uncorrected, the issue could become a more significant safety concern. In addition, the team concluded that the issue affected the emergency preparedness cornerstone performance attribute associated with the emergency response organization augmentation system and emergency response augmentation testing and the objective of implementing adequate measures to protect the health

and safety of the public in the event of a radiological emergency. The team evaluated the finding utilizing Inspection Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," Section 5.0, "Corrective Actions," dated March 6, 2003, and determined the finding was of very low significance.  
Inspection Report# : [2003010\(pdf\)](#)

**Significance:**  Dec 12, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**10 CFR50.54 and emergency plan NCV for ineffective corrective actions in 2002 which resulted in the failure to make timely notifications for an actual unusual event in February 2003**

The team identified a finding of very low significance associated with a Non-Cited Violation of 10 CFR Part 50.54(q) and the licensee's Emergency Plan for the failure to notify the state and local governmental agencies within 15 minutes after the declaration of an actual Unusual Event on February 26, 2003. The team concluded this failure was caused by the licensee's ineffective corrective actions for previously identified weaknesses and problems in the area of Emergency Preparedness.

The team determined that this issue was more than minor because this was an actual event implementation problem and affected the emergency preparedness cornerstone objective of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. The team evaluated the finding utilizing Inspection Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," Emergency Preparedness Significance Determination Process Sheet 2, dated March 6, 2003, and determined the finding was of very low significance.

Inspection Report# : [2003010\(pdf\)](#)

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## Occupational Radiation Safety

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## Public Radiation Safety

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## Physical Protection

**Significance:**  Jun 30, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Report a Significant Fitness-for-Duty Event in a Timely Manner.**

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR Part 26 Fitness-for-Duty (FFD) reporting requirements. The licensee failed to notify the NRC Operation Center within 24 hours of discovery of an illegal drug found within the licensee's protected area. The licensee failed to report the event because they did not realize this type of event was required to be reported.

The finding was determined to be of very low significance because it was a vulnerability in the licensee's Safeguards

plan, was not a malevolent act, and similar findings had not occurred in the last four calendar quarters. The finding was determined to be more than minor because illegal drugs located within a licensee's protected area are required to be reported to the NRC in accordance with 10 CFR 26.73(a) requirements.

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

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## Miscellaneous

Last modified : March 02, 2004