

## Kewaunee 3Q/2005 Plant Inspection Findings

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### Initiating Events

**G****Significance:** Jun 30, 2005

Identified By: NRC

Item Type: FIN Finding

**Inadequate controls for loose material in substation**

A finding of very low safety significance was identified by the inspectors for failure to control loose materials in the protected area and substation. No violation of NRC requirements occurred. Once identified, the licensee initiated a condition report (CAP) to develop a surveillance procedure to remove loose materials before summer months where potential adverse weather was apparent.

The issue was more than minor because, if left uncontrolled, the loose items adjacent to the auxiliary transformers and in the substation would become a more significant safety concern. The issue was of very low safety significance because the finding did not contribute to the likelihood of a primary or secondary system loss of coolant accident initiator; the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available; and the finding did not increase the likelihood of a fire or internal or external flooding. The issue was not considered a violation of regulatory requirements because it did not affect safety-related structures, systems, or components.

Inspection Report# : [2005008\(pdf\)](#)**G****Significance:** Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to manage risk during periods where the grid condition was defined as unstable.**

A finding of very low safety significance was identified by the inspectors for a Non-Cited Violation (NCV) of Title 10 CFR Part 50.65(a)(4). The licensee failed to adequately assess shutdown risk during degraded grid conditions. Once identified, the licensee initiated a CAP to modify shutdown safety assessment and operating procedures to include grid conditions in risk assessments. The finding was more than minor because the licensee's risk assessment had incorrect assumptions that had the potential to change the outcome of the assessment. The inspectors determined that the finding could not be evaluated using the Significance Determination Process because the finding was associated with an inadequate qualitative risk assessment. The inspectors determined that this issue was of very low safety significance which was verified by the regional branch chief.

Inspection Report# : [2005008\(pdf\)](#)**G****Significance:** Feb 18, 2005

Identified By: NRC

Item Type: FIN Finding

**Safety Buses Relay Sensitivity to External Electrical Disturbances**

The team identified a finding of very low safety significance for a failure to provide adequate relay setpoint calibration tolerances on safety buses 1-5 and 1-6 loss of voltage relays. The existing relay setting calibration tolerances would have allowed the loss of voltage relays to actuate spuriously during certain offsite electrical system disturbances and un-necessarily separate the safety buses from the offsite power system and result in a plant transient. The licensee implemented corrective actions to revise the appropriate loss of voltage relay surveillance procedures.

The finding was more than minor because the failure to provide adequate relay setting tolerances could result in an unnecessary separation of the safety buses from the electrical grid and an ensuing plant transient. The finding was of very low safety significance because the issue would not preclude the safety buses from being re-energized by the emergency power sources. The finding was a not a violation of regulatory requirements.

Inspection Report# : [2005002\(pdf\)](#)**G****Significance:** Feb 18, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

**Operator Actions Following Station Blackout - Lack of Procedure Guidance**

The team identified a Non-Cited Violation of 10 CFR 50.63, "Loss of All Alternating Current Power," for a failure to maintain procedural steps that minimized the likelihood and duration of a Station Blackout (SBO) event. The deleted procedural steps allowed for the cross-connection of the plant's two redundant safety buses should both the Reserve Auxiliary Transformer and the 1B Emergency Diesel Generator fail. These

procedural steps, as originally employed, served to lessen the likelihood of the SBO occurring, and/or reduce the time of the SBO. The licensee implemented corrective actions to revise the appropriate operations procedure.

This finding was more than minor, because it was associated with the likelihood of an initiating event and the reliability of a safety bus that responds to an initiating event. The finding was of very low safety significance, because multiple sources of both onsite and offsite power remained available to supply the two safety buses.

Inspection Report# : [2005002\(pdf\)](#)

**G**

**Significance:** Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Inadequate Control Of Combustible Matrials**

A finding of very low safety significance was identified by the inspectors for a violation of a fire protection License Condition. The inspectors identified multiple examples of combustible materials either stored or in use without specific authorization. Specifically, the licensee stored and used lubricating oil in an emergency diesel generator room beyond that authorized by the Fire Protection Program Analysis, the licensee stored unauthorized combustible materials above the shelves in the working materials storage area and on top of cabinets nearby, and the licensee stored compressed flammable gas cylinders in the auxiliary building without authorization. Once these issues were identified, the licensee removed the unauthorized materials. This finding was related to the cross-cutting area of problem identification and resolution in that the NRC had previously identified issues relating to control of transient combustible materials above and near the working materials storage area but adequate corrective actions were not put in place to prevent recurrence of this issue.

The finding was more than minor because the failure to adequately control combustible materials, if left uncorrected, could become a more safety significant concern. The finding was of very low safety significance because the issue was a low degradation of fire prevention and administrative controls. The finding was a Non-Cited Violation of License Condition 2.C(3) which required specific authorization for the storage and use of combustibles in safety-related areas.

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

**G**

**Significance:** Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Inadequate Corrective Action to Preclude Storage of Oxygen Cylinders Next to Flammable Gas Cylinders**

A finding of very low safety significance was identified by the inspectors for a violation of a fire protection License Condition. The inspectors identified the storage of compressed oxygen cylinders near compressed flammable gas cylinders. Once this issue was identified, the licensee removed the stored compressed oxygen cylinders from the area.

The finding was more than minor because the inappropriate storage of compressed oxygen cylinders could result in greater severity of a fire affecting equipment important to safety. The finding was of very low safety significance because the issue was a low degradation of fire prevention and administrative controls. The finding was a Non-Cited Violation of License Condition 2.C(3) which required the bulk storage of compressed oxygen cylinders to be separated from compressed flammable gas cylinders and corrective action of conditions significantly adverse to quality to preclude recurrence.

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

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## **Mitigating Systems**

**Significance:** SL-IV Sep 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Report in a Timely Manner an Unanalyzed Condition Involving a Potential Runout Concern With the CCW Pumps**

The inspectors identified a Non-Cited Violation (NCV) when the licensee failed to make a written report, within 60 days, to the NRC in accordance with 10 CFR 50.73(a)(2)(ii)(B), when an unanalyzed condition that significantly degraded plant safety was identified. Specifically, the licensee did not recognize the significance of a previously identified condition involving a potential runout issue with the component cooling water (CCW) pumps, and did not report this condition until the inspectors identified the requirement. The concern related to the CCW pump capability to provide required flow under certain conditions. Specifically, during a loss of power, and with specific system configurations, the loss of power could lead to a CCW pump runout condition. The primary cause of this finding was related to the cross-cutting area of human performance.

Because this issue affects the NRC's ability to perform its regulatory function, it was evaluated using the traditional enforcement process. The inspectors determined that this violation is of very low safety significance and because the licensee entered the issue into their corrective action program (CAP026528), this violation is being treated as an NCV consistent with Section VI.A.1 of the NRC Enforcement Policy. The licensee has taken actions to revise plant procedures to address this issue.

Inspection Report# : [2005012\(pdf\)](#)

**W****Significance:** Jul 29, 2005

Identified By: NRC

Item Type: VIO Violation

**Potential Failure of Auxiliary Feedwater Pumps Due to Air Ingestion or During Runout Conditions**

The inspectors identified a finding that was preliminarily determined to be of low to moderate safety significance, because Kewaunee failed to provide adequate design control to ensure the AFW pumps would be protected from failure due to air ingestion during tornado or seismic events; as well as from failure during potential runout conditions. The finding is also an apparent violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for not effectively providing controls to check the adequacy of the design for protecting the AFW pumps during design and license basis events.

The finding was determined to be more than minor since it impacted Mitigating System cornerstone attributes of design control (initial design and plant modifications) and the cornerstone objective to ensure availability, reliability, and capability of the AFW system to respond to events to prevent core damage. A Significance Determination Process Phase 3 risk analysis determined that this finding was preliminarily of low to moderate safety significance. The licensee has taken significant corrective actions, including extensive modifications to the system.

On September 16, 2005, a final significance determination letter was issued for a WHITE finding (IR 2005014).

Inspection Report# : [2005010\(pdf\)](#)Inspection Report# : [2005014\(pdf\)](#)**G****Significance:** Jul 29, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Evaluate the Effect of Modification on Turbine Driven AFW Pump Performance with Reduced Steam Pressure**

The inspectors identified a finding involving a Green Non-Cited Violation (NCV) of 10 CFR 50, Appendix B, Criterion III, "Design Control". The finding involved the revision of AFW pump discharge pressure trip setpoints. The licensee had not determined if the turbine driven AFW (TDAFW) pump was capable of providing the required flow under reduced steam pressure conditions prior to approving the modification. This issue could have affected the performance of the AFW system under post accident conditions.

This issue was greater than minor because it potentially affected the Mitigating System cornerstone objective of equipment capability. The issue screened as very low safety significance in Phase 1 of the SDP, because it was a design deficiency that was not found to result in a loss of function and the item was resolved prior to being in the plant conditions where the finding could have impacted the pump's performance. The licensee conducted post modification tests and revised permanent plant procedures to ensure the TDAFW pump was capable of providing the required flow under reduced steam pressure conditions.

Inspection Report# : [2005010\(pdf\)](#)**G****Significance:** Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to minimize prior identified and predictable explosive gas concentrations in the WGDTs**

A finding of very low safety significance was identified by the inspectors for a NCV of Title 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action." The licensee failed to consider the impact on plant fire protection when ineffective resolution of waste gas system issues repeatedly led to explosive mixtures in the Waste Gas Decay Tanks. The licensee entered these issues into their corrective action program. The primary cause of this violation was related to the cross-cutting area of Problem Identification and Resolution. The licensee repeatedly encountered explosive gas levels in the WGDTs and were aware of plant conditions that resulted in these levels but failed to take adequate corrective actions to prevent explosive gas mixtures from developing in the WGDTs. The issue is more than minor because uncontrolled explosive mixtures in the WGDTs could have led to a more significant safety concern. The issue was of very low safety significance because explosive mixtures were only present during plant shutdown conditions; an explosion would not have affected safe shutdown equipment (i.e. Residual Heat Removal System); the explosive mixture conditions were only present for short periods of time (<12 hours); and the tanks were isolated and vented per procedure when discovered.

Inspection Report# : [2005008\(pdf\)](#)**G****Significance:** Feb 18, 2005

Identified By: NRC

Item Type: FIN Finding

**Lack of 4160 Vac Bus 1-5 Ovevrcurrent and Loss of Voltage Relay Coordination**

The team identified a finding of very low safety significance for a failure to provide adequate electrical coordination of protective devices thereby ensuring that postulated electrical faults would be isolated upon detection. Specifically, the team identified that the lack of adequate electrical systems coordination between the undervoltage and overcurrent protection on 4160 Vac safety bus 1-5 would result in the loss of voltage relays actuating before the bus over-current relays. This design deficiency results in the failure to lock out safety bus 1- 5 upon postulated electrical faults and subjects the postulated faulted safety bus 1-5 to be re-energized via an alternate offsite source. This design introduced a challenge to the safety equipment availability and reliability. The licensee planned to develop changes to the affected relays.

The finding was more than minor because the failure to provide adequate electrical coordination of electrical devices provided an unnecessary challenge to safety-related equipment, and if left uncorrected, could become a more safety significant concern. The finding was of very low safety significance because it was a design deficiency that did not result in the loss of system function. The finding was a not a violation of regulatory requirements.

Inspection Report# : [2005002\(pdf\)](#)

**G**

**Significance:** Feb 18, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Short Circuit Duty of Buses Exceeded - Impact on Safe Shutdown Analysis**

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion II, "Quality Assurance Program," for a failure to identify potentially adverse conditions to the plant's fire protection safe shutdown analysis caused by known overduty conditions on non-safety related buses 1-1, 1-2, 1-3, and 1-4. While the overduty condition was known to have existed at least since 1992, the licensee never entered the issue into the plant's corrective action program, where a proper evaluation should have addressed 10 CFR Part 50, Appendix R, safe shutdown related effects. The licensee planned to continue efforts to identify additional evaluations and corrective actions.

This finding was more than minor, because it was associated with the degradation of a fire protection feature. The finding was of very low safety significance because after extensive evaluation of the deficiency, the licensee was able to determine that the plant could still safely shut down the plant during a postulated fire event.

Inspection Report# : [2005002\(pdf\)](#)

**G**

**Significance:** Feb 18, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Battery Sizing Deficiencies**

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for failure to implement adequate design controls of documents, inputs, and assumptions in the design of the two safety-related batteries. Specifically, the licensee did not perform and control battery sizing calculations, including consideration of temperature effects, to ensure that the batteries maintained sufficient capacity to perform the intended design function. The team determined that the failure to appropriately evaluate effects of battery room and cell temperatures also affected the cross-cutting area of Problem Identification and Resolution because the subject of battery capacity versus battery temperature had been previously identified in a 1992 NRC inspection. The licensee planned to perform battery sizing calculations as part of an overall electrical systems analysis improvement project.

This finding was more than minor because it affected the mitigating systems cornerstone objective of ensuring the availability and reliability of the 125 Volts direct current battery system to respond to initiating events to prevent undesirable consequences. The finding is of very low safety significance because the battery remained operable. The licensee planned to develop formal battery sizing calculations.

Inspection Report# : [2005002\(pdf\)](#)

**Significance:** SL-IV Feb 18, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Inadequate Evaluation of Procedure Changes to Address AFW Design Deficiencies**

The team identified a finding involving a Non-Cited Violation of 10 CFR 50.59, "Changes, Tests, and Experiments." The finding involved a failure to perform an adequate review of operations procedure changes in accordance with 10 CFR 50.59 associated with the operation of motor-operated valves for the auxiliary feedwater suction source from the service water system. The team determined that the licensee's approval of changes to Procedure E-0-05, with the introduction of adverse effects, and a determination that 10 CFR 50.59 was not applicable was a violation of 10 CFR 50.59. The licensee subsequently performed additional evaluations of the procedure changes.

Because the issue affected the NRC's ability to perform its regulatory function, this finding was evaluated with the traditional enforcement process. The finding was determined to be of very low safety significance since the design basis safety-related function of the AFW system, to remove reactor decay heat following a loss of normal feedwater, was not adversely affected. This was determined to be a Severity Level IV NCV of 10 CFR 50.59.

Inspection Report# : [2005002\(pdf\)](#)

**G**

**Significance:** Feb 18, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Lack of Allowance for Manual Actions in Establishing Setpoint to Transfer AFW Pump Suction Source**

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for failure to establish the condensate storage tank (CST) level setpoint to transfer the auxiliary feedwater (AFW) pump suction supply from the CST to service water. The team determined that the calculation setpoint did not include an allowance for the manual operator actions required by emergency operations procedures. The licensee revised the plant procedure to perform the operator actions earlier in the procedure.

This finding was more than minor because it affected the mitigating systems cornerstone objective of equipment reliability, in that failure to align the AFW pump suction to service water prior to the CSTs being depleted could have resulted in damage to the AFW pumps. The finding was determined to be of very low safety significance because it was a design deficiency that did not result in a loss of function.

Inspection Report# : [2005002\(pdf\)](#)

**G**

**Significance:** Feb 18, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Ensure that Calculation Assumption was Based on Valid Times for Manual Operator Actions**

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." The finding involved the condensate storage tank (CST) level setpoint to transfer the auxiliary feedwater (AFW) pump suction from the CSTs to service water. A calculation assumption stated that a flow would drain from the CSTs to the condenser for 10 minutes until the operators isolated the flow by closing manual valve MU-2A. The team determined that the actions could not be completed in the time assumed by the calculation. The licensee initiated corrective actions to revise the appropriate operations procedure and calculation.

This finding was greater than minor because it affected the mitigating system cornerstone objective of equipment reliability, in that failure to align the AFW pump suction to service water prior to the CSTs being depleted could have resulted in damage to the AFW pumps. The finding was determined to be of very low safety significance because it was a design deficiency that was not found to result in a loss of function. The team concluded that it was unlikely that the operators would allow the CST level to reach the EOP setpoint without attempting to refill the tanks from other sources, and that the operators would be aware of the CST levels.

Inspection Report# : [2005002\(pdf\)](#)

**G**

**Significance:** Feb 18, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

**TSC DG Target Reliability Methodology Inadequate**

The team identified a Non-Cited Violation of 10 CFR 50.63, "Loss of All Alternating Current Power." The finding involved the failure to establish a target reliability for the plant's alternate power source consistent with the reliability approved by the NRC staff in the licensee's Station Blackout submittal for 10 CFR 50.63. The non-conservative target reliability employed by the licensee resulted in the failure of the licensee to increase efforts to restore the Technical Support Center (TSC) Diesel Generator (DG) to its approved target reliability at an earlier date. The licensee subsequently initiated a corrective action to change the TSC DG reliability methodology.

This finding was more than minor, because it affected the reliability of a support system required for the mitigation of an Station Blackout event. The finding was of very low safety significance, because the finding did not directly affect the immediate operability of the TSC DG.

Inspection Report# : [2005002\(pdf\)](#)

**G**

**Significance:** Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

**Scaffolding Erected too Close to Safety-Related Equipment Required to be Operable**

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings." The finding was associated with the licensee's failure to adequately implement scaffold control requirements contained in Procedure GMP-127, "Requirements and Guidelines for Scaffold Construction and Inspection," which required that scaffolding be no closer than 2 inches from any safety-related equipment unless otherwise evaluated and approved by Engineering. Specifically, scaffolding was erected within 2 inches of safety-related piping for the Service Water outlet from the jacket water heat exchangers for Diesel Generator B, the piping for the Emergency Borate MOV (CVC-440), and Safety Injection Pump A, without engineering evaluation and approval. Upon discovery of this condition, the licensee took immediate action to bring all noted scaffolding problems into compliance with licensee procedures and initiated a CAP document for the issue.

The finding was more than minor because, if left uncorrected, the issue may have resulted in a more significant safety concern. Specifically, the failure of scaffolding having adequate spacing in the vicinity of safety-related equipment during a seismic event could result in damage to mitigating equipment. The finding was of very low safety significance because it did not result in the actual loss of the safety function of the train or system. The finding was a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings."

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

**G**

**Significance:** Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Identify Inadequate Pre-Fire Strategies**

A finding of very low safety significance was identified by the inspectors for a violation of a fire protection License Condition. The inspectors identified that the licensee failed to identify pertinent information, such as the presence of compressed flammable gas cylinders, on a fire area

strategy for fire brigade personnel. Once this issue was identified, the licensee revised the fire area strategy for the affected area.

The finding was more than minor because the failure to provide adequate warnings and guidance relating to hazards associated with compressed flammable gas cylinders in fire strategies could adversely impact fire fighting strategies used by the fire brigade in fighting a fire. The finding was of very low safety significance due to extensive training provided to fire brigade members to deal with unexpected contingencies. The finding was a Non-Cited Violation of License Condition 2.C(3) which required that fire area strategies provide pertinent information to help the fire brigade to be better prepared for fire fighting within that area.

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

**Significance:** Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Non-conforming Condition on the Safety-Related Containment Sump**

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions." The original licensing and design basis of the containment sump screens was to prevent any particles greater than 1/8 inch from entering the sump. The inspectors determined that the screen size was 1/8-inch by 15/32-inch which allowed particles greater than 1/8-inch to enter the sump. The inspectors subsequently determined that this issue had been identified and entered into the licensee's corrective action program in 1997. However, adequate corrective actions were not taken to correct this condition adverse to quality. Once this issue was identified, the licensee conducted an operability determination and concluded that there were no immediate operability issues with the containment sump. The licensee determined that the sump screens were nonconforming in accordance with Generic Letter 91-18, and planned long term corrective actions to be developed in conjunction with the resolution of Generic Safety Issue 191 and NRC Generic Letter 2004-02. The inspectors concluded that the primary cause of this finding was related to the performance characteristic of corrective actions in the cross-cutting area of problem identification and resolution.

This finding was more than minor because the issue affected the Mitigating System cornerstone attribute of design control for initial design and equipment performance reliability and affected the associated cornerstone objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was of very low safety significance because it was not a design or qualification deficiency that has been confirmed to result in a loss of function per Generic Letter 91-18. This finding was a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions."

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

**Significance:** Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Inadequate Instructions and Procedures for Inspections and Cleaning of the Safety-Related Containment Sump**

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, And Drawings," regarding licensee instructions and procedures for containment sump inspections. Specifically, the inspectors identified that current licensee procedures did not require inspection or cleaning when boric acid or small debris may be present in the containment sump. The licensee's procedures for containment coatings did not require inspection of the coating located inside the containment sump which had not been inspected since initial application; and the licensee's procedure for containment sump gap inspections did not specify acceptance criteria to ensure this activity was satisfactorily accomplished. The licensee subsequently initiated several corrective actions to address these issues which included, but are not limited to: immediate inspection and cleaning of the safety-related containment sump; immediate inspection and assessment of the safety-related sump concrete coating; revision of preventive maintenance activities to require inspection and cleaning of the safety-related containment sump every refueling outage; revision of procedures to include inspection of the safety-related containment sump concrete coating every refueling outage; and revision of procedures to include appropriate acceptance criteria for determining that important activities were satisfactorily accomplished.

This finding was more than minor because if left uncorrected the finding could become a more significant safety concern and the issue affected the Mitigating System cornerstone attributes of equipment performance reliability and procedure quality and affected the associated cornerstone objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was of very low safety significance because it was not a design or qualification deficiency that has been confirmed to result in a loss of function per Generic Letter 91-18. This finding was a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings."

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

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## **Barrier Integrity**

**Significance:** Mar 31, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

**Reactor Operation Above Licensed Power Limit**

A finding of very low safety significance associated with a Non-Cited Violation of the plant operating license was self-revealed during normal plant operations. The Kewaunee Nuclear Power Plant Facility Operating License, as amended stated, "The Nuclear Management Company (NMC) is authorized to operate the facility at steady-state reactor core power levels not in excess of 1772 megawatts (thermal)." Contrary to this, on January 31, 2005, the 8-hour average thermal power peaked at 1772.07 MWt before being restored to below 1772 MWt. Reactor power was allowed to rise above 1772 MWt because the 8-hr average reactor thermal power indicator on the plant process computer system was not reliable, and the site operating philosophy allowed the 1-minute average and the 15-minute average reactor thermal power indications to exceed 1772 MWt. Once the 8-hour average was discovered to be in excess of that allowed in the Operating License, operators immediately lowered power to within the licensed limit and entered this issue into the corrective action program. This violation of the plant operating license was considered greater than minor, because it could affect the barrier integrity cornerstone objective of protecting the integrity of the fuel cladding and was associated with the barrier integrity cornerstone attributes of thermal limits and reactivity control. The finding also involved the crosscutting area of human performance. In accordance with Inspection Manual Chapter (IMC) 0609, Appendix A, Phase 1, the finding was of very low safety significance.

Inspection Report# : [2005003\(pdf\)](#)

**W**

**Significance:** Dec 31, 2004

Identified By: NRC

Item Type: VIO Violation

**Inability to Close Containment Equipment Hatch**

The inspectors identified an apparent violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, And Drawings," having potential safety significance greater than green. The finding was associated with the licensee's inability to close the containment equipment hatch in an expeditious manner while the plant was in the refueling shutdown mode, fuel was in the reactor vessel, the time to boil was estimated to be less than 30 minutes, and the reactor coolant system was open to the containment atmosphere. The inability to close the containment equipment hatch was caused by a design error in a large steel rail system installed inside the containment which was to be used to bring heavy equipment into the containment. This large steel rail system obstructed closure of the containment equipment hatch. The inability to close the hatch in an expeditious manner violated the licensee's procedure requirements to do so.

This finding was more than minor because it affected the Barrier Integrity Cornerstone objective and was associated with the Barrier Integrity Cornerstone attribute of containment boundary preservation. Since this finding was determined to be potentially greater than Green using the SDP Phase 2 Process, this finding is of a to-be-determined (TBD) safety significance pending review by the NRC Significance Determination Process/Enforcement Review Panel (SERP).

On May 5, 2005, a final significance determination letter was issued for a WHITE finding (IR 2005009).

On September 20, 2005, supplemental inspection 95001 was completed. The licensee conducted an adequate root cause analysis and this issue is closed.

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

Inspection Report# : [2005009\(pdf\)](#)

Inspection Report# : [2005015\(pdf\)](#)

**G**

**Significance:** Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

**Reactor Building Ventilation Isolation Function Not Available When Required**

A finding of very low safety significance associated with Technical Specification 3.8 a.1.b., "Refueling Operations - Containment Closure," was self-revealed during required daily surveillance testing of reactor building ventilation system isolation. During the surveillance test, plant operators discovered that radiation monitors would not cause a Reactor Building Ventilation System Isolation to occur as designed. The cause of this failure was that other engineered safeguards testing was in progress that disabled the Reactor Building Ventilation System Isolation function, which was required to be operable at the time. Once this issue was identified, the licensee restored the Reactor Building Ventilation System and entered this issue into the corrective action program.

This finding was more than minor, because it represented a degradation of the Barrier Integrity Cornerstone objective and was associated with Barrier Integrity cornerstone attribute of safety system and component performance. The finding was of very low safety significance because it did not result in the actual release of radioactive material. This finding was a Non-Cited Violation of Plant Technical Specification 3.8.a.1.b., "Refueling Operations-Containment Closure."


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

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## Emergency Preparedness

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## Occupational Radiation Safety

**Significance:**  Sep 30, 2005  
Identified By: NRC  
Item Type: NCV NonCited Violation

### **Failure to Post and Control Access Into a Locked High Radiation Area During Radiographic Activities**

A self-revealed finding of very low safety significance and an associated Non-Cited Violation of NRC requirements were identified when a high radiation area boundary was breached by two workers during radiography. An unnecessary radiation exposure could have been received by the workers had they not been stopped by radiography personnel as they moved toward the exposed radiographic source.


The issue was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation. The issue represents a finding of very low safety significance because there was no overexposure or substantial potential for an overexposure given the actual radiological conditions in the area coupled with the duration of the radiographic operation and the presence of radiography personnel who provided surveillance of the area, nor was the licensee's ability to assess worker dose compromised. A Non-Cited Violation of Technical Specification 6.13(a) and 10 CFR 20.1601(b) was identified for the failure to comply with the RP requirements that govern the control of access into high radiation areas. Corrective actions taken by the licensee included enhanced administrative measures by revising the radiography procedure and counseling of involved staff. Since the cause of the problem included corrective action deficiencies from previous similar radiography boundary control events, the finding also relates to the cross-cutting area of problem identification and resolution.  
Inspection Report# : [2005012\(pdf\)](#)

**Significance:**  Sep 30, 2005  
Identified By: NRC  
Item Type: NCV NonCited Violation

### **Failure to Control Access Into a High Radiation Area During Radiographic Activities**

A self-revealed finding of very low safety significance and an associated Non-Cited Violation of NRC requirements were identified for an unposted/uncontrolled locked high radiation area in the turbine building during radiography activities. A radiography source created radiation levels such that a major portion of the whole body could have received in one hour a dose in excess of 1000 mrem in accessible areas of the turbine building, which were not posted or controlled in accordance with regulatory requirements. The areas with elevated dose rates were not positively controlled by locked door/gate, use of a barrier and flashing light, or maintained under continuous visual or electronic surveillance.

The issue was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation. The issue represents a finding of very low safety significance because there was no overexposure or substantial potential for an overexposure given the actual radiological conditions in the uncontrolled areas coupled with the duration of the radiographic shot. A Non-Cited Violation of Technical Specification 6.13(b) and 10 CFR 20.1601(b) was identified for the failure to comply with the RP requirements that govern the control of access into locked high radiation areas. Corrective actions taken by the licensee included enhanced administrative measures by revising the radiography procedure, and counseling and training of RP staff.  
Inspection Report# : [2005012\(pdf\)](#)

**Significance:**  Sep 30, 2005  
Identified By: NRC  
Item Type: NCV NonCited Violation

### **Failure to Control Access Into a High Radiation Area While Moving a Radioactive Filter**

A self-revealed finding of very low safety significance and two associated Non-Cited Violations of regulatory requirements were identified for an unposted and uncontrolled high radiation area in an auxiliary building elevator during the transfer of a radioactive seal water injection filter. As a result of this failure, workers could have unknowingly entered a high radiation area in the elevator without knowledge of the radiological conditions.

The issue was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation. The issue represents a finding of very low safety significance because there was no overexposure or substantial potential for an overexposure given the circumstances and the actual radiological conditions in the area, nor was the licensee's ability to assess worker dose compromised. A Non-Cited Violation of Technical Specification 6.13(a) and 10 CFR 20.1601(b) was identified for the failure to comply with the RP requirements that govern the control of access into high radiation areas. This issue also represents a Non-Cited Violation of 10 CFR 20.1902(b)/20.1903 for failure to post a high radiation area. Corrective actions taken by the licensee included enhanced administrative measures (RP Job Guide) for change-out and transport of all radioactive filters.  
Inspection Report# : [2005012\(pdf\)](#)

**Significance:**  Sep 30, 2005  
Identified By: NRC



Item Type: NCV NonCited Violation

### **Failure to Post a High Radiation Area While Moving a Radioactive Filter**

A self-revealed finding of very low safety significance and two associated Non-Cited Violations of regulatory requirements were identified for an unposted and uncontrolled high radiation area in an auxiliary building elevator during the transfer of a radioactive seal water injection filter. As a result of this failure, workers could have unknowingly entered a high radiation area in the elevator without knowledge of the radiological conditions.

The issue was more than minor because it was associated with the Program/Process attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation. The issue represents a finding of very low safety significance because there was no overexposure or substantial potential for an overexposure given the circumstances and the actual radiological conditions in the area, nor was the licensee's ability to assess worker dose compromised. A Non-Cited Violation of Technical Specification 6.13(a) and 10 CFR 20.1601(b) was identified for the failure to comply with the RP requirements that govern the control of access into high radiation areas. This issue also represents a Non-Cited Violation of 10 CFR 20.1902(b)/20.1903 for failure to post a high radiation area. Corrective actions taken by the licensee included enhanced administrative measures (RP Job Guide) for change-out and transport of all radioactive filters.

Inspection Report# : [2005012\(pdf\)](#)

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## **Public Radiation Safety**

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### **Physical Protection**

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

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## **Miscellaneous**

Last modified : November 30, 2005