

# Kewaunee

## 4Q/2008 Plant Inspection Findings

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### Initiating Events

**Significance:**  Dec 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Transfer Turbine Valve Testing Requirements into the USAR**

. A finding of very low safety significance and associated Severity Level IV NCV of 10 CFR 50.71, "Maintenance of records, making of reports," was identified by the inspectors for the licensee's failure to adequately update the Kewaunee Power Station Updated Safety Analysis Report (USAR). Specifically, the inspectors identified that the licensee had not updated the USAR completely when they relocated the turbine valve testing requirements from technical specifications to the USAR in License Amendment No. 121. Proposed corrective actions include performing an apparent cause evaluation and USAR changes as appropriate.

This finding was more than minor because it had a material impact on licensed activities in that the incorrect USAR allowed the licensee to schedule periodic testing of the reheat and interceptor valves at an interval beyond one year. The inspectors evaluated the finding using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 3b, for the Initiating Events Cornerstone, dated January 10, 2008. Using information provided by the licensee, the inspectors answered "no" to the transient initiator contributor questions in this cornerstone column; therefore, the finding was determined to be of very low safety significance (Green). Additionally, the inspectors determined that the finding has a cross-cutting aspect in the area of problem identification and resolution, corrective action program, because the licensee failed to accurately identify the issue when conducting corrective actions for Condition Report CR040457, "Discrepancy in Turbine Valve Testing Requirements and Acceptance Criteria," [P.1(a)].

Inspection Report# : [2008005](#) (*pdf*)

**Significance:**  Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Follow the Provisions of General Nuclear Procedure, GNP-12.06.01, "Hot and Cold Weather Operations"**

A finding of very low safety significance (Green) and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors following an inspection of licensee preparations for adverse weather protection. Specifically, the licensee failed to perform inspections for hot weather operations as required by plant procedure GNP-12.06.01, "Hot and Cold Weather Operations."

The finding was greater than minor in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated September 20, 2007, because if left uncorrected would become a more significant safety concern. Specifically, the licensee failed to implement the provisions of GNP 12.06.01, "Hot and Cold Weather Operations," which resulted in a failure to ensure pre-summer readiness of numerous safety-related and risk-significant systems. The inspectors evaluated the finding using Attachment 0609.04, of IMC 0609, "Significance Determination Process," dated January 10, 2008, and answered "no" to all of the questions in the Initiating Events column; therefore, the finding was determined to be of very low safety significance. The inspectors determined that the primary cause for this finding was related to the cross cutting area of human performance, work practices component, because personnel have been trained in the need for procedural use and adherence, but failed to follow applicable procedures. Specifically, the procedure which required the performance of plant inspections for hot weather operations, and the maintenance of QA documentation for these inspections, was not followed [H.4(b)]

## Mitigating Systems

**Significance:**  Dec 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

### **Emergency Diesel Generator Room Cooling Fan Testing Deficiencies**

. A finding of very low safety significance and an associated NCV of 10 CFR, Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors for the licensee's failure to verify the ventilation flow rate for the emergency diesel generator (EDG) rooms and for using an incorrect EDG heat load in the design basis calculation of record. As part of corrective actions, the licensee remeasured flow rates and duct dimensions and recalculated post-accident temperature values.

This finding was more than minor because a revision to the design calculation was necessary to demonstrate EDG cubicle temperatures would remain under the design basis 120 degrees Fahrenheit (°F) equipment qualification limit under any accident conditions. The finding was of very low safety significance (Green) based on a Phase 1 screening in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," dated January 10, 2008, because the revised calculation showed that the diesel generators had remained operable in all circumstances. There was no cross-cutting aspect associated with this finding.

Inspection Report# : [2008005](#) (pdf)

**Significance:**  Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

### **Operability Evaluation for Degraded Gauge Pedestals Failed to Adequately Evaluate Degraded Conditions Per Procedures**

A finding of very low safety significance and an associated NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors during a review of an operability evaluation for degraded concrete support pads under the discharge pressure gauge pedestals for safety-related service water pumps A1 and A2. Specifically, procedure OP AA 102, "Operability Determination," required that "when a potential degraded or nonconforming condition is identified, action must be taken to discover the facts and confirm the condition of the systems, structures, and components." The licensee's operability evaluation failed to adequately evaluate the degraded condition and failed to confirm that the compensatory actions used as a basis for operability for the pumps were effective. Corrective actions included the engineering department providing a more thorough evaluation of the potential for damage to the gauge isolation valve and associated piping from a falling gauge support including field measurements and piping configuration information.

The finding is greater than minor because the failure to perform an adequate operability evaluation, if left uncorrected, would become a more significant failure to comply with the technical specifications or the licensing basis. The significance of the finding was determined to be of very low safety significance because the inspectors answered "no" to all of the questions for the Mitigation Systems Cornerstone column of Attachment 0609.04, of IMC 0609, "Significance Determination Process." Additionally, the inspectors attributed this issue to the cross cutting area of problem identification, corrective action program, because the operability evaluation and associated problems were not thoroughly evaluated.

Inspection Report# : [2008004](#) (pdf)

**Significance:**  Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Perform a 10 CFR Part 50.59 Screening for Alteration During Maintenance that Existed for More Than 90 Days**

A finding of very low safety significance and an associated Severity Level IV, Non-Cited Violation of 10 CFR 50.59 was identified by the inspectors for a failure to perform a 50.59 screening for an alteration during maintenance that existed for more than 90 days. Specifically, the licensee failed to perform a 50.59 screening when spare breakers were removed from safety-related motor control centers (MCCs) and the cubicle were left in an altered state for more than 90 days. Proposed corrective actions include changes to the station housekeeping and work control/planning procedures to better evaluate job site and environmental conditions.

The finding is greater than minor because, if left uncorrected, the failure to perform a 10 CFR 50.59 screening on an alteration/change to the facility would become more significant. The inspectors determined the finding could be evaluated using the Significance Determination Process in accordance with Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 2 for the Mitigation Systems Cornerstone. Using information provided by the licensee relative to the affected MCCs, the inspectors answered "no" to all of the questions in this cornerstone column; therefore, the finding was determined to be of very low safety significance. Additionally, the inspectors determined that the finding has a cross-cutting aspect in the area of human performance, work control because the licensee failed to appropriately plan work activities by incorporating risk insights gained from operating experience and factor in environmental conditions during planning contingencies for systems, structures, and components anticipated to be in a maintenance condition for extensive periods of time.

Inspection Report# : [2008004](#) (*pdf*)

**Significance:**  Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

### **Scaffolding in Close Proximity to Multiple Safety-Related Systems Affects Operability**

A finding of very low safety significance (Green) and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the licensee's failure to install scaffolding in accordance with station procedures. Specifically, more than ten examples where scaffolding was built within 2-inches of safety-related systems without an engineering evaluation, and six examples where non-seismic scaffolding was built in safety-related areas were identified. The licensee suspended all scaffold building pending the completion of their corrective actions. The corrective actions included training scaffold builders on proper scaffold building techniques and how to identify operational and seismic concerns, revising procedures for scaffold building to address operations and engineering involvement in the scaffold building process, and a complete plant walkdown of all scaffolding by engineering or operations.

This finding was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the improperly installed scaffolding could have impeded or prevented proper operation of the safety-related components. Using Attachment 4 of Inspection Manual Chapter 0609, the inspectors answered "no" to all the screening questions in the Significance Determination Process Phase 1 Screening Worksheet in the Mitigating Systems column; therefore, this finding is of very low safety significance (Green). The inspectors determined that this finding had a cross cutting aspect in the area of problem identification and resolution, corrective action program, because the licensee did not take appropriate corrective actions to address safety issues and adverse trends in a timely manner.

Inspection Report# : [2008002](#) (*pdf*)

**Significance:** SL-IV Jun 30, 2007

Identified By: NRC

Item Type: VIO Violation

### **Failure to Perform a 10 CFR 50.59 Evaluation for Compensatory Measures Associated with a Procedure**

## Change

The inspectors identified a finding having very low safety significance and an associated Severity Level IV, Cited Violation of 10 CFR 50.59 while reviewing unresolved items URI 05000305/2006003-04, "Adequacy of Compensatory Actions for Potential Turbine Missile Strike of Control Room Ventilation Cooling"; and URI 05000305/2006016-01, "Adequacy of 10 CFR 50.59 Screening for Procedure Change." Specifically, the licensee failed to properly interpret design and licensing basis requirements associated with protection against external events and as a result did not perform a 10 CFR 50.59 evaluation. The cause of this finding is related to the cross-cutting area of problem identification and resolution because the licensee had similar prior problems that, if effectively evaluated and resolved, could have prevented this issue. (P.1(c))

This finding was determined to be more than minor because the inspectors determined that the procedure change would have ultimately required NRC approval. The procedure changes, in the form of compensatory operator actions, adversely impacted the operation of control room recirculation system following a tornado. A Phase 1 significance determination of this finding using IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," using the Severe Weather Screening Criteria questions was completed. Since the loss of the control room recirculation system would not result in an initiating event or degrade two or more trains of a multi-train safety system, the issue screened as Green.

Inspection Report# : [2007003](#) (*pdf*)

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## Barrier Integrity

**G**

**Significance:** Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

### **Inadequate Procedure Results in Unplanned Control Rod Motion**

A finding of very low safety significance and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed when control rods automatically stepped inward unexpectedly. Ultimately, it was determined that procedures for operation of the power range nuclear instrument were found to be inadequate for the circumstances. Specifically, procedures for bypassing nuclear instrument N 43 did not contain steps to place control rods in manual when placing a failed instrument in bypass. Corrective actions were taken to replace the inappropriately deleted steps from the associated procedures.

The finding is greater than minor in accordance with Inspection Manual Chapter 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated September 20, 2007, because the finding affected the procedure quality attribute of the Barrier Integrity Cornerstone of Reactor Safety. Specifically, the failure to either leave the step for placing rods in manual in multiple alarm response procedures, or transferring the step to the common procedure OP KW AOP MISC 001, resulted in a preventable condition which resulted in an unexpected reactivity transient. The inspectors evaluated the finding using the Significance Determination Process in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 2 for the Barriers Cornerstone. The inspectors answered "no" to all of the questions in this cornerstone column; therefore, the finding was determined to be of very low safety significance. The inspectors concluded that the finding had a cross-cutting aspect in the area of human performance, decision-making, because interdisciplinary reviews performed by station personnel, including the on site safety review committee, failed to make changes to the various procedures using a systematic process. Additionally, the inspectors reviewed the licensee evaluation of the cause of the issue and found that it agreed with their understanding of the issue.

Inspection Report# : [2008004](#) (*pdf*)

**G**

**Significance:** Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Follow the Provisions of Corrective Action Procedure PI-KW-200 Following Surveillance Testing of Containment Isolation Valve LOCA-31**

A finding of very low safety significance (Green) and an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors following surveillance testing of containment isolation valve LOCA 3A in accordance with plant procedure SP 55 167 4B, "Post LOCA Valves Timing Test (IST) from Local Panel-Train B." Specifically, the licensee failed to initiate a condition report in accordance with procedure PI-KW-200, "Corrective Action," following a review of the test results by the inservice testing program engineer who subsequently identified a potential condition which called into question the operability of LOCA-3A.

The finding was more than minor in accordance with Inspection Manual Chapter 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated September 20, 2007, because the finding was associated with the structure, system and component (SSC) and barrier performance attribute of the Barrier Integrity Cornerstone and affected the cornerstone objective to provide reasonable assurance that the physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radionuclide releases caused by accidents or events. Specifically, the licensee failed to implement the provisions of Corrective Action Procedure, PI-KW-200, which resulted in a failure to ensure operability of containment isolation valve LOCA-3A. The inspectors also determined that the primary cause for this finding was related to the cross cutting area of human performance, work practices, because personnel have been trained in need for procedural use and adherence but did not follow applicable procedures.

Inspection Report# : [2008002](#) (*pdf*)

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## Emergency Preparedness

**Significance:** <sup>W</sup> Aug 29, 2008

Identified By: NRC

Item Type: VIO Violation

### Failure to Maintain a Standard EAL Scheme

An apparent violation was identified by the inspector for failure to follow and maintain in effect emergency plans which use a standard emergency classification and action level scheme. Specifically, the licensee's emergency plan Alert emergency action levels (EALs) RA1.1 and RA1.2 specified instrument setpoints that were beyond the limits of the effluent radiation monitors capabilities.

This finding was considered more than minor because the licensee is required to be capable to implement adequate measures to protect public health and safety in the event of a radiological emergency. Regulations require a standard emergency classification and action level scheme, the bases which included facility system and effluent parameters, in use by the licensee and State and local response plans call for reliance on information provided by the licensee for determination of minimum initial offsite response measures. As a result of having Alert EAL threshold values that were beyond the range of the associated effluent radiation monitors, Kewaunee personnel would not have been able to classify an emergency based upon an effluent radioactive material release in a timely manner. Emergency response actions directed by the State and local emergency response plans, which rely on information provided by the licensee, could have potentially been delayed.

The cause of the finding is related to the human performance cross-cutting element of H.2(c) for ensuring that personnel, equipment, and procedures are available and adequate to assure nuclear safety. Specifically, those necessary for complete, accurate, and up-to-date design documentation, procedures, and work packages.

Final significance determination letter was issued on October 29, 2008, and no response was required to the white violation.

Inspection Report# : [2008503](#) (*pdf*)

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## Occupational Radiation Safety

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# Public Radiation Safety

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## Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

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## Miscellaneous

**Significance:** N/A Jun 06, 2008

Identified By: NRC

Item Type: FIN Finding

### PI&R Inspection Report Summary

On the basis of the sample selected for review, the team concluded that implementation of the corrective action program (CAP) at Kewaunee Power Station was generally good. The licensee had a low threshold for identifying problems and entering them in the CAP. Items entered into the CAP were screened and prioritized in a timely manner using established criteria; were properly evaluated commensurate with their safety significance; and corrective actions were generally implemented in a timely manner, commensurate with the safety significance. The team noted that the licensee reviewed Operating Experience (OE) for applicability to station activities. Audits and self-assessments were determined to be performed at an appropriate level to identify deficiencies. In interviews conducted during the inspection, workers at the site expressed freedom to enter safety concerns into the CAP.

Inspection Report# : [2008007](#) (*pdf*)

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