# D.C. Cook 1
# 1Q/2008 Plant Inspection Findings

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## Initiating Events

**Significance:** G Dec 31, 2007
Identified By: Self-Revealing
Item Type: FIN Finding
**Inadequate Design Review of the Unit 1 Main Feedwater Pump Digital controls system**
The inspectors identified a finding of very low safety significance associated with a self-revealed event that resulted in a Unit 1 reactor trip. The licensee failed to correctly evaluate and incorporate the cooling needs of electrical equipment inside the Unit 1 main feedwater pump digital controls system cabinets into the design, which led to the loss of the east main feedwater pump due to overheated power supplies. Immediate corrective actions included replacement of affected power supplies and restoration of cooling to the cabinets. No violation of regulatory requirements was identified.

The finding was of more than minor significance because this issue was associated with the Equipment Performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during power operations. Specifically, inadequate design consideration for equipment temperature limitations and cooling needs led to the main feedwater pump failure that caused the reactor trip. The finding was of very low safety significance because the finding: (1) did not contribute to the likelihood of a primary or secondary system loss-of-coolant-accident initiator, (2) did not contribute to both the likelihood of a reactor trip AND the likelihood that mitigation equipment or functions would not be available, and (3) did not increase the likelihood of a fire or internal/external flooding event. The inspectors did not identify a cross-cutting area component related to this finding.
Inspection Report# : 2007006 *(pdf)*

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## Mitigating Systems

**Significance: SL-IV** Dec 31, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
**Lack of Safety Evaluation for Ice Condenser Operation with Insufficient Ice Fusion time**
The inspectors identified a Non-Cited Violation of 10 CFR 50.59(d)(1) associated with the licensee's failure to perform a 10 CFR 50.59 evaluation for operation of the plant with less than the design basis time allotted for ice condenser ice basket fusion. Specifically, the licensee failed to properly interpret design and licensing basis requirements associated with protection against external events (i.e., seismic) and as a result did not perform a 10 CFR 50.59 evaluation for plant operation with ice baskets that had less than the design basis time allotted for ice fusion. The licensee performed an evaluation of past operability and determined that the ice condenser would have continued to perform its pressure suppression function even with additional ice fall from the potentially unfused ice baskets.

Because this issue affected the NRC's ability to perform its regulatory function, the violation was reviewed under the traditional enforcement process; however, the underlying technical issue was evaluated using the Significance Determination Process. The violation was determined to be of more than minor significance because the inspectors could not reasonably determine that a 10 CFR 50.59 evaluation would not have ultimately required NRC prior approval. The inspectors reviewed the "Seismic, Flooding, and Severe Weather Screening Criteria" screening questions in Inspection Manual Chapter 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations" and determined that Question No. 3 was applicable. The violation was of very low safety significance because the finding did not involve the total loss of a safety function identified by the licensee through Probabilistic Risk Assessment, Individual Plant Examination of External Events or similar analysis, that contributes to external event initiated core damage accident sequences. The inspectors did not identify a cross-cutting area component related to this finding.

Inspection Report# : 2007006 *(pdf)*

**Significance:** G Jun 29, 2007
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
**Use of Incorrectly Configured Test Leads Rendered Two EDGs Inoperable**
A finding of very low safety significance with an associated Non-Cited Violation of Technical Specification (TS) 5.4.1.a was self-revealed. On two separate occasions, a maintenance craftsman performed procedure steps to connect a multi-meter to an emergency diesel generator (EDG) kilowatt meter using incorrectly configured test leads, which caused a short-circuit and subsequent failure of a fuse in the EDG metering circuit when the engine was started during surveillance testing. This adversely affected the operability and availability of both the Unit 1 AB and CD EDGs. Corrective actions included replacing the fuses, coaching the maintenance craftsman involved with the incidents, and temporary suspension of his qualifications.

This finding was of more than minor significance because it is related to the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the use of incorrectly configured test leads rendered the EDGs inoperable and unavailable to perform their safety function. The finding was of very low safety significance because it did not represent a design or qualification deficiency, loss of safety function for a single train for greater than its TS allowed outage time, and was not risk-significant due to external event initiators. The primary cause of this finding was related to the cross-cutting area of human performance because the licensee's human error prevention techniques were not used commensurate with the risk of the task being performed. Specifically, the maintenance craftsman failed to appropriately control the test leads and to use self-verification techniques to ensure that correctly configured test leads were used during EDG testing. (IMC 0305 H.4(a))
Inspection Report# : 2007004 *(pdf)*

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# Barrier Integrity

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# Emergency Preparedness

**Significance: SL-IV** Feb 22, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
**Failur to properly report data associated with the Alert and Notification System (ANS) performance indicator (PI) for the second quarter of 2004 and subsequently failed to inform the NRC of the incorr**
The inspectors identified an NCV of 10 CFR 50.9, “Completeness and Accuracy of Information,” when licensee personnel failed to properly report data associated with the Alert and Notification System (ANS) performance indicator (PI) for the second quarter of 2004 and subsequently failed to inform the NRC of the incorrect information after it was identified during a root cause evaluation for a similar event in 2007.

The inspectors determined the finding was more than minor in accordance with IMC 0612 and the Enforcement Manual. Specifically, had the licensee properly submitted the ANS data, the PI would have been categorized as White for the second quarter of 2004; therefore the data was inaccurate in a material respect. As part of the licensee’s immediate corrective actions, this issue was entered into the corrective action program. In addition, the inspectors determined that the finding had a cross-cutting aspect in the area of Human Performance since the licensee failed to evaluate and report the erroneous data due to non-conservative decision-making (H.1(b)).
(Section 02.06)

Inspection Report# : 2008502 *(pdf)*

**Significance:** G Feb 22, 2008

Identified By: NRC
Item Type: FIN Finding
**Between 1984 and 2007, the licensee made significant changes to the ANS without obtaining required Federal Emergency Management Agency (FEMA) approval for the changes as required by 44 CFR 350**
The inspectors identified that between 1984 and 2007, the licensee made significant changes to the ANS without obtaining required Federal Emergency Management Agency (FEMA) approval for the changes as required by 44 CFR 350, "Review and Approval of State and Local Radiological Emergency Plans and Preparedness."

The inspectors concluded that the finding was more than minor because the finding was associated with the Procedure Quality attribute of the Emergency Preparedness cornerstone and adversely impacted the cornerstone objective of ensuring the licensee was capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency since the licensee failed to obtain FEMA approval of significant changes to the ANS. The inspectors determined that the finding affected a Risk Significant Planning Standard (RSPS) since the finding was associated with the FEMA-approved ANS Design Report and supporting FEMA approval letter. However, because the finding did not result in the loss or significant degradation of the ANS, the finding was of very low safety significance (Green). As part of their immediate corrective actions, the licensee obtained FEMA approval for a Final ANS Design Report that addressed all of the modifications that had been made to the ANS. Due to the age of the performance deficiency, the inspectors concluded that no cross-cutting aspect was associated with the finding. No violation of NRC requirements occurred.
(Section 02.06)

Inspection Report# : 2008502 *(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

Last modified : June 05, 2008