

# D.C. Cook 1

## 4Q/2010 Plant Inspection Findings

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### Initiating Events

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### Mitigating Systems

**Significance:**  Oct 21, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Inadequate As-Found Heat Exchanger Inspection Guidance and Acceptance Criteria**

The inspectors identified a finding having very low safety-significance and an NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to establish inspection procedures that were appropriate for the circumstances. Specifically, the licensee's heat exchanger inspection guidance and acceptance criteria could potentially result in the design basis tube plugging limit being exceeded due to the accumulation of macro fouling and as a result the heat exchanger would not be able to meet the design basis heat removal capability. This finding was entered into the licensee's corrective action program and a review of the heat exchanger tube plugging analysis identified additional margin to remain within its design basis heat removal capability.

The finding was more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern. This finding was of very low safety-significance (Green) because the licensee was able to demonstrate adequate margin and therefore there was not a design or qualification deficiency, did not represent a loss of system safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding had a cross-cutting aspect in the area of human performance because the licensee did not use conservative assumptions in decision making when developing the inspection guidance and acceptance criteria.

Inspection Report# : [2010006](#) (*pdf*)

**Significance:**  Jun 30, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

#### **Failure to Positively Identify Power Cable that was to be Removed and Replaced**

A finding of very low safety significance (Green) with an associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was self revealed. Specifically, licensee personnel failed to positively identify a power cable for Unit 1 AB emergency diesel generator fuel oil transfer pump 1 AB 2 while implementing a work order to remove and replace the power cable. Consequently, on April 5, 2010, the power cable for fuel oil transfer pump 1 AB 1 was cut instead of the power cable for pump 1 AB 2, which unknowingly rendered the Unit 1 AB emergency diesel generator inoperable and unavailable. Corrective actions included replacing the power cables for both fuel oil transfer pumps and correcting the labeling on the conduit. Additional planned corrective actions included revising drawings 1 1407 and 1 1407DR, and determining and implementing robust barriers to positively identify cables in the field before cutting or replacing them during planned maintenance activities. This issue was entered into the licensee's corrective action program as Action Request 2010 3656.

The inspectors determined that the performance deficiency was more than minor because it was associated with the human performance attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability of systems that respond to initiating events to prevent core damage. Specifically, the emergency diesel generator was unknowingly rendered inoperable and unavailable. This finding was of very low safety significance because a detailed Phase 3 Significance Determination Process analysis, assuming a 21 day exposure time, estimated the change in core damage frequency to be  $4.6E-8$ , reflecting a finding of very low safety significance (Green). The dominant cut sets involved station blackout scenarios: loss of offsite power, failure of

emergency power, and failure to recover either offsite or emergency power. The inspectors concluded that this finding has a cross-cutting aspect in the work practices component of the human performance cross cutting area. (H.4(a))  
Inspection Report# : [2010003](#) (*pdf*)

**Significance:**  Mar 31, 2010

Identified By: Self-Revealing

Item Type: FIN Finding

#### **Failure to Implement Plant Procedures for Using a Mobile Crane**

A finding of very low safety significance was self-revealed for the failure to implement procedures for using mobile cranes and the failure to use human error prevention tools. Consequently, a mobile crane boom contacted and severed the middle phase of an overhead 12 kilovolt line in the owner controlled area ‘W’ yard. This caused a loss of power to the fire pump house, which rendered the electric fire pump inoperable. This finding was entered into the licensee’s corrective action program as Action Request 00860140. No violation of NRC requirements occurred.

This finding was more than minor because it was related to the external factors attribute (fire) of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability of systems that respond to initiating events. Specifically, the electric fire pump was rendered inoperable and unavailable when power was lost to the fire pump house, which degraded the fire protection defense-in-depth strategies. The finding was of very low safety significance because the fire protection system performance was not affected in that both diesel-driven fire pumps were operable. (H.4(c))

Inspection Report# : [2010002](#) (*pdf*)

**Significance:**  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Implement Corrective Actions in a timely and Effective Manner**

The inspectors identified one finding of very low safety significance with an associated Non Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action.” Specifically, licensee personnel failed to implement corrective actions for water intrusion into vaults below motor control centers containing safety related cabling in a timely and effective manner. Consequently, safety-related cabling was exposed to a water environment that if left uncorrected could result in subsequent cable degradation. For corrective action, the licensee performed an inspection of all cable vaults throughout the plant. Also, licensee personnel initiated a root cause evaluation to focus on the leadership and organizational failures associated with the response to the wetted cables in the 1-ABD-A cable vault and the thoroughness of the extent of condition evaluation. This issue was entered into the licensee’s corrective action program as CR AR 2010-2558.

This finding affected the Mitigating Events cornerstone and was more than minor because the issue could become a more significant safety concern if left uncorrected. Specifically, failure to implement corrective actions for water intrusion into cable vaults could result in subsequent degradation of safety-related cabling. This finding was of very low safety significance because the finding does not constitute a design or qualification deficiency, did not result in a loss of system safety function, and did not meet the seismic, flooding, and severe weather screening criteria. This finding was associated with a cross cutting aspect in the area of problem identification and resolution – corrective action program (P.1(c)).

Inspection Report# : [2010002](#) (*pdf*)

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## **Barrier Integrity**

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## **Emergency Preparedness**

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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 : March 03, 2011