

D.C. Cook 2

1Q/2010 Plant Inspection Findings

Initiating Events

Significance:  Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to maintain safety related cables in underground manholes from becoming repeatedly submerged.

The inspectors identified a finding of very low safety significance with an associated Non Cited Violation of 10 CFR Part 50 Appendix B, Criterion III, "Design Control," for failing to maintain safety related cables in an environment for which they were designed. Specifically, frequently submerged safety-related cables in manholes MH1PA, MH1PB, MH1PC, and MH1PD were designed to be moisture resistant and not completely submerged in water. For corrective actions, the frequency for conducting preventive maintenance to inspect the manholes for water and pump out the water, as needed, was reduced from monthly to weekly for manhole MH1PA and to biweekly for manholes MH1PB, MH1PC, and MH1PD. In addition, engineering personnel were evaluating permanent solutions to prevent the manholes from filling with water, which would eliminate the need for manual pumping. This finding was entered into the licensee's corrective action program as AR 00859564.

This finding affected the Initiating Events cornerstone and was more than minor because the issue could become a more significant safety concern if left uncorrected. Specifically, allowing safety related cables to be repeatedly submerged in water in underground manholes could degrade the cable insulation and result in cable failure. The finding was of very low safety significance because the finding does not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment or functions would be lost. This finding was associated with a cross cutting aspect in the area of problem identification and resolution in corrective action program – corrective actions. (P.1.d)

Inspection Report# : [2009005](#) (pdf)

Mitigating Systems

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.

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.

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

Significance:  Dec 31, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Installation of non conforming parts on the safety related emergency diesel generators.

One self revealed finding of very low safety significance with an associated Non Cited Violation of 10 CFR Part 50, Appendix B, Criterion XV, "Non conforming Materials, Parts, or Components," was identified for installing non conforming parts on the safety related emergency diesel generators. Specifically, the licensee installed several Delivery Valve Holder (DVH) assemblies that were fabricated using material previously identified as being prone to cracking, non conforming, on all four safety related Emergency Diesel Generators (EDG). Consequently, on June 10, 2009, during an operability run for the Unit 2 CD EDG, a DVH cracked, which resulted in a fuel oil leak on the 6F fuel injector line. For corrective actions, the licensee replaced all non conforming DVHs with new DVHs that were fabricated using materials that were not prone to cracking. Additional corrective actions included revising several procedures associated with the dedication plan and receipt inspection program. This issue was entered into the licensee's corrective action program as condition report AR 00852905.

This finding affected the Mitigating Systems cornerstone and was more than minor because the issue could become a more significant safety concern if left uncorrected. Specifically, installing non conforming parts on safety related equipment under certain circumstances could result in the subsequent degradation or loss of equipment required for safe shut down of the plant. This finding was of very low safety significance because the finding is a qualification deficiency that did not result in the loss of operability or functionality of the EDGs. This finding was associated with a cross cutting aspect in the area of human performance – resources. (H.2.c)

Inspection Report# : [2009005](#) (*pdf*)

Significance:  Jun 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Gap in Remote Strainer Waterway

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, the inspectors identified a gap in the remote strainer waterway for the emergency core cooling recirculation sump that was greater than the gap size allowed by the surveillance test acceptance criteria. Consequently, debris larger than the allowed particle size could enter the emergency core cooling recirculation sump. For corrective actions, the gap in the remote strainer waterway

was repaired prior to Unit 2 entering Mode 4, Hot Shutdown, which required the recirculation sump to be operable. Licensee personnel also completed a past operability determination, which concluded that while the gap in the waterway was a nonconforming condition, there was reasonable assurance that the recirculation sump was operable and that the nonconformance would have had an insignificant impact on the recirculation sump function of providing a filtered supply of water during the recirculation phase of a loss of coolant accident. This issue was entered into the licensee's corrective action program as condition report AR 00850005.

This finding was more than minor because it was related to the design control attribute of the mitigation 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 gap in the remote strainer waterway could result in larger than allowed debris entering the emergency core cooling recirculation sump, which could impact the reliability and capability of long term decay heat removal cooling systems. This finding was of very low safety significance because no loss of safety function actually occurred and the finding was not potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding was associated with a cross cutting aspect in the area of human performance regarding work control—work planning (H.3.a).

Inspection Report# : [2009003](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

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.

Miscellaneous

Significance:  Jun 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain an Accurate Abnormal Operating Procedure for Loss of Spent Fuel Pit Cooling

The inspectors identified a finding of very low safety significance with an associated Non Cited Violation of Technical Specification 5.4.1 for the failure to adequately maintain a complete and accurate abnormal operating procedure (AOP) in accordance with Regulatory Guide 1.33 regarding the required actions for a loss of spent fuel pit

(SFP) cooling. Specifically, a valve specified by the AOP as a method to add water to the SFP had been removed by a plant modification. Consequently, the AOP contained inaccurate guidance that under certain circumstances, such as a loss of the other methods specified in the AOP to add water to the SFP, could hinder an operator's ability to mitigate a loss of SFP cooling. This issue was entered into the licensee's corrective action program as AR 00849705.

The inspectors concluded that this issue could become a more significant safety concern if left uncorrected and was therefore more than a minor concern. This finding was of very low safety significance because it did not result in an actual loss of SFP cooling or inventory. This finding was associated with a cross cutting aspect in the area of problem identification and resolution regarding the corrective action program—low threshold for identifying issues (P.1.a)
Inspection Report# : [2009003](#) (*pdf*)

Significance:  Jun 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Maintenance Rule On-line Risk Assessment Inaccurate

The inspectors identified one finding of very low safety significance with an associated Non Cited Violation of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," during planned maintenance on the 69 kilovolt emergency power system on June 2, 2009. Specifically, the on line maintenance risk assessment for the planned maintenance failed to include the risk significant supplemental emergency diesel generators. Consequently, the increase in risk for the planned work was underestimated. As an immediate corrective action licensee personnel re performed the risk assessment to verify that the risk status remained green; that no risk management actions were required; and that a condition of significant risk was not missed due to the error. Other corrective actions included sending a generic communication to operations and work control personnel to make them aware of the issue and to ensure that they understood how the supplemental diesel generators were represented in the on line risk program so that plant risk would be appropriately assessed during future emergency power system maintenance. This issue was entered into the licensee's corrective action program as condition report AR 00852616.

This finding was more than minor because the licensees' on line risk assessment for the 69 kilovolt emergency power system planned maintenance failed to include the risk significant supplemental diesel generators, which were unavailable during the maintenance. This finding was of very low safety significance because the incremental core damage probability and the incremental large early release probability risk deficit values were less than 1.0E 6 after the risk assessment was recalculated to include the supplemental diesel generators. This finding was associated with a cross cutting aspect in the area of human performance regarding work practices—human error prevention techniques (H.4.a)

Inspection Report# : [2009003](#) (*pdf*)

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