

## D.C. Cook 1 4Q/2003 Plant Inspection Findings

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### Initiating Events

**Significance:**  May 20, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

#### **Inadequate Procedure For Off-Normal Forebay Conditions**

A finding of very low safety significance was self-revealed during an event when the licensee failed to develop and implement adequate procedures associated with operator response to off-normal forebay conditions.

The finding was more than minor because it could be reasonably viewed as a precursor to a significant event. The finding was determined to be of low safety significance because all mitigating systems were available during the event. This issue was determined to be a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings."

Inspection Report# : [2003008\(pdf\)](#)

**Significance:**  May 20, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Inadequate Corrective Actions to Address 1996 Fish Intrusion Event**

A finding of very low safety significance was identified by the team regarding the ineffective implementation of a prior corrective action to develop and integrate into plant operations a rapid power reduction procedure for a 1996 fish intrusion event.

The finding was more than minor because it could be reasonably viewed as a precursor to a significant event. The finding was determined to be of low safety significance because all mitigating systems were available following the event. This issue was determined to be a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions."

Inspection Report# : [2003008\(pdf\)](#)

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### Mitigating Systems

**Significance:**  Dec 27, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Adequately Implement Requirements of the Unit 1 Lower Containment and Emergency Core Cooling System Recirculation Sumps Surveillance Test Procedure**

The inspectors identified a Non-Cited Violation of Technical Specification 6.8.1.a associated with the licensee's failure

to adequately implement the requirements of 12-MHP-4030-031-001, "Inspection of Lower Containment and Recirculation Sumps." Specifically, the licensee failed to adequately perform the following: (1) check the lower containment sump screen wire mesh for rips, tears, openings, or gaps that were large enough to allow particulate larger than 1/4 inch to pass through or around screens; (2) perform a visual examination of residual heat removal pump suction piping from the recirculation sump to the suction valve discs for debris greater than 1/4 inch in diameter; (3) check recirculation sump level instrumentation well lateral support bracket mounting nuts for evidence of abnormal deterioration; and (4) accurately identify and record the degradation of galvanized coatings on carbon steel fasteners for the recirculation sump level instrumentation well lateral support brackets. The licensee subsequently corrected these conditions prior to Unit 1 entering Mode 4.

The inspectors determined that a failure to correct these surveillance test procedure implementation inadequacies could become a more significant safety concern if left uncorrected and was therefore more than a minor concern. Specifically, the failure to adequately perform surveillance testing could result in the failure to identify degraded or inoperable safety-related equipment. The inspectors concluded that this finding was a licensee performance deficiency of very low safety significance because the recirculation sump was not required to be capable of performing a safety-related function immediately following the inadequate surveillance testing and the conditions were corrected prior to Unit 1 entering Mode 4.

Inspection Report# : [2003012\(pdf\)](#)



**Significance:** Sep 30, 2003

Identified By: Self Disclosing

Item Type: FIN Finding

#### **Inappropriate Procedure for Testing Switchyard Breaker**

A finding of very low safety significance was self-revealed when licensee personnel failed to accomplish testing of 345 kilovolt (kV) switchyard breaker "L" with an adequate procedure which resulted in the loss of the Class 1E reserve feed supply to Train "B" safety-related equipment for Unit 1 and Unit 2. The primary cause of this finding was related to the cross-cutting area of Human Performance. The licensee subsequently restored the switchyard Class 1E reserve feed supply and issued a standing order to control maintenance and testing in the switchyard.

The finding was more than minor because this finding was associated with the Procedure Quality 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 since the reliability of the offsite Class 1E reserve feed supply to safety-related equipment for both units was affected. This finding was of very low safety significance since it did not result in the actual loss of the safety function of any safety-related equipment. No violation of regulatory requirements occurred.

Inspection Report# : [2003010\(pdf\)](#)



**Significance:** Sep 30, 2003

Identified By: Self Disclosing

Item Type: FIN Finding

#### **Incorrect Sensing Line Configurations on Control Room Air Conditioning Units**

A finding of very low safety significance was self-revealed when licensee personnel failed to control the sensing line configuration on the Control Room Air Conditioning (CRAC) chiller units in accordance with design documentation which resulted in spurious tripping of an idle CRAC chiller unit upon initial start following an extended shutdown period. The primary cause of this finding was related to the cross-cutting area of Human Performance. The licensee subsequently corrected the sensing line configuration and successfully tested the operation of all four chiller units.

The finding was more than minor because this finding was associated with the Design Control and Equipment

Performance attributes 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 because the reliability of the CRAC chiller units was impacted. This finding was of very low safety significance because the design deficiency did not result in a loss of function of the CRAC chiller units per Generic Letter 91-18. No violation of regulatory requirements occurred.

Inspection Report# : [2003010\(pdf\)](#)

**Significance:**  Jul 11, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Untimely Corrective Action For Diesel Fuel Oil Day Tank Level Issue**

A finding of very low safety significance was identified involving a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Actions, for the failure to timely resolve Technical Specification interpretation inconsistencies associated with the total required volume in the emergency diesel generator fuel oil day tanks. These inconsistencies were identified by the licensee in August 2000, however, as of July 11, 2003, this issue remains unresolved.

This finding is greater than minor because the licensee corrective actions have not been timely in resolving this issue. This issue affected the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. This finding is of very low safety significance because there was not a loss of function as each fuel oil system contains redundant, safety-related fuel oil transfer pumps that would start prior to reaching the unusable volume in the day tank; and that these pumps have shown good reliability.

Inspection Report# : [2003007\(pdf\)](#)

**Significance:**  May 20, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

#### **Inadequate Strainer Material Review**

A finding of very low safety significance was self-revealed during an event when the licensee failed to adequately assess the suitability of a vendor's substitution of lighter weight stainless steel mesh in the construction of replacement safety-related essential service water discharge strainers.

The finding was more than minor because it could be reasonably viewed as a precursor to a significant event. The finding was determined to be of low safety significance because all mitigating systems were available following the event. This issue was determined to be a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion III, "Design Control."

Inspection Report# : [2003008\(pdf\)](#)

**Significance:**  Apr 11, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Provide Adequate Emergency Lighting**

A finding of very low safety significance was identified by the inspectors in that the licensee had failed to ensure that there was adequate emergency lighting (i.e., in the shift manager's office) for required safe shutdown actions (i.e., the retrieval of safe shutdown emergency procedures and equipment). The cause of this finding was related to the cross-

cutting area of Problem Identification and Resolution. Despite previously identifying this issue, the licensee failed to properly address this issue in that they mistakenly believed that the shift manager's office was not a safe shutdown pathway.

This finding was more than minor because the lack of emergency lighting could result in delay of accomplishing safe shutdown actions. The finding was of very low safety significance because of the availability of portable head lamps. This issue was a violation of 10 CFR 50.48 and 10 CFR Part 50, Appendix R, Section III.J which required that emergency lighting units with at least an 8-hour battery power supply be provided in all areas needed for operation of safe shutdown equipment and in access and egress routes thereto.

Inspection Report# : [2003005\(pdf\)](#)

**Significance:**  Apr 11, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Inadequate Carbon Dioxide Concentrations**

A finding of very low safety significance was identified by the inspectors in that the licensee had failed to ensure that minimum required carbon dioxide (CO<sub>2</sub>) system concentrations would be achieved for two fire zones. The cause of this finding was related to the cross-cutting area of Problem Identification and Resolution. Despite previously identifying this issue, the licensee failed to properly address this issue because they failed to address non-compliance with the applicable National Fire Protection Association (NFPA) code.

This finding was more than minor because a fire protection feature (i.e., a fixed suppression system) was adversely affected. The finding was of very low safety significance because of remaining available mitigation capability. This issue was a violation of a license condition which, by reference, invoked the applicable NFPA code which required a minimum CO<sub>2</sub> concentration.

Inspection Report# : [2003005\(pdf\)](#)

**Significance:**  Apr 11, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Ensure Alternative Shutdown Capability Could Accommodate Post-Fire Conditions Where Off-Site Power is Not Available**

A finding of very low safety significance was identified by the inspectors in that the licensee failed to ensure that alternative shutdown capability for a fire area could accommodate post-fire conditions where offsite power would not be available. Specifically, for a postulated fire in fire zone 41, onsite power (i.e., emergency diesel generators) may not be available due to fire damage.

This finding was more than minor because alternative shutdown capability was not assured for when off-site power would not be available. The finding was of very low safety significance because off-site power would not be affected by a fire in fire zone 41. This issue was a violation of 10 CFR 50.48 and 10 CFR Part 50, Appendix R, Section III.L.3 which required alternative shutdown capability to accommodate power-fire conditions where off-site power is available and where off-site power is not available for 72 hours.

Inspection Report# : [2003005\(pdf\)](#)

**Significance:**  Apr 11, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Ensure Control Room Ventilation Would be Free of Fire Damage**

A finding of very low safety significance was identified by the inspectors in that the control room heating, ventilation, and air conditioning (HVAC) system would be damaged for a postulated fire in fire zone 41. The cause of this finding was related to the cross-cutting area of Problem Identification and Resolution. Despite previously identifying the issue, the licensee failed to properly address this issue in that they mistakenly believed that performing a repair to the control room HVAC system in the event of a fire would meet regulatory requirements.

This finding was more than minor because one train of systems (i.e., control room HVAC) necessary to achieve and maintain hot shutdown conditions would not be free of fire damage for a postulated fire. The finding was of very low safety significance because actions to repair the control room HVAC system were proceduralized and provisions for providing temporary ventilation existed. This issue was a violation of 10 CFR 50.48 and 10 CFR Part 50, Appendix R, Section III.G.1 which required that one train of systems necessary to achieve and maintain hot shutdown conditions be free of fire damage.

Inspection Report# : [2003005\(pdf\)](#)

**Significance:**  Mar 03, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Take Corrective Action to Ensure That Only Turbine Trip Throttle Valve Latch Hooks with the Correct Geometry Would be Installed in the Turbine-Driven Auxiliary Feedwater Pumps**

The licensee failed to take corrective action to ensure that only turbine trip throttle valve latch hooks with the correct geometry would be installed in the turbine-driven auxiliary feedwater pumps after determining that the incorrect part had been supplied by the manufacturer.

This finding was determined to be a Non-Cited Violation of 10 CFR 50 Appendix B Criterion XVI, "Corrective Action". This finding was of very low safety significance because failure to take corrective action did not result in parts of incorrect geometry being installed in the auxiliary feedwater system and therefore did not affect the operability or availability of the system.

Inspection Report# : [2003004\(pdf\)](#)

**Significance:**  Mar 03, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Take Adequate Corrective Action to Revise Procedure 12-MHP-5021-056-007**

The licensee failed to take adequate corrective action to revise procedure 12-MHP-5021-056-007, "Turbine-driven Auxiliary Feedwater Pump Trip and Throttle Valve Linkage Adjustment" to include the manufacturer's recommendations regarding the set-up of the turbine trip throttle valve.

This finding was determined to be a Non-Cited Violation of 10 CFR 50 Appendix B Criterion XVI, "Corrective Action". This finding was of very low safety significance because the inadequate corrective action in revising the procedure did not affect the operability or availability of the auxiliary feedwater system

Inspection Report# : [2003004\(pdf\)](#)

## Barrier Integrity

**Significance:**  Dec 27, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **Non-Code Calibration Block Used For Examination of Vessel-to-Flange Welds**

The inspector identified a Non-Cited Violation of 10 CFR 50.55a(g)(4) associated with use of a non-Code calibration block for calibration of equipment used in ultrasonic examinations of the reactor vessel-to-flange welds for Unit 1 and Unit 2. Specifically, the calibration block exceeded the American Society of Mechanical Engineers (ASME) Code specified thickness, did not have reflectors (side drilled holes) located at the required locations and did not contain square notch type reflectors.

This finding was more than minor because it could have become a more significant safety concern if not corrected. Specifically, the licensee had scheduled an ultrasonic examination of the vessel-to-flange weld during the current outage and intended to use the non-Code calibration block. Had this issue not been identified, it would have resulted in a non-Code examination, which could have resulted in undetected weld flaws remaining in-service (e.g., a degraded reactor coolant system boundary). The finding was of very low safety significance because other examinations of the reactor vessel-to-flange welds had been conducted in accordance with the Code. To address this issue, the licensee planned to generate procedures to better control the process for these types of inspections.

Inspection Report# : [2003012\(pdf\)](#)

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## Emergency Preparedness

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## Occupational Radiation Safety

**Significance:**  Dec 05, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

### **Failure to Follow the Radiation Work Permit and the Procedure Governing Radiation Worker Practices During Reactor Coolant Filter Change-Out Work**

A self-revealed finding of very low safety significance and an associated Non-Cited Violation (NCV) were identified when an individual continued to work through both accumulated dose and dose rate electronic dosimetry (ED) alarms, and failed to fully utilize intended radiation shielding while changing-out the Unit 2 reactor coolant filter. As a result, the worker received unintended dose for the work activity.

The finding was more than minor because the failure to stop work upon receiving ED dose and dose rate alarms, the failure to adequately use time, distance and shielding fundamentals in the execution of the filter change-out work coupled with inadequate radiation protection technician job coverage were associated with the "Human Performance" attribute of the Occupational Radiation Safety Cornerstone. The finding affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. The finding was of very low safety significance because the worker's radiation exposure was low relative to regulatory limits, and because there was not a substantial potential for a worker overexposure; nor was the licensee's ability to assess worker dose compromised. To



address this issue, the licensee implemented several corrective actions to ensure improved in-field oversight of work in high radiological risk areas, and to ensure workers better understand their responsibilities as radiation workers.

Inspection Report# : [2003016\(pdf\)](#)

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## Public Radiation Safety

**Significance:**  Oct 28, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Conduct an Adequate Radiological Survey**

A finding of very low safety significance was self-revealed when a second survey of a valve that was previously surveyed and unconditionally released from the radiologically controlled area identified that the valve was contaminated. The primary cause of this finding was related to the cross-cutting area of Human Performance.

The finding was more than minor because this finding was associated with the Human Performance and Program and Process attributes of the Public Radiation Safety cornerstone and adversely impacted the cornerstone objective of ensuring adequate protection of the public health and safety from exposure to radioactive materials released or potentially released into the public domain. The finding was of very low safety significance because the public radiation exposure resulting from the problem was low and the finding was not repetitive. To address this issue, the licensee performed a thorough extent of condition evaluation to ensure that contaminated residue was identified which included radiation surveys in offsite areas and of personal items located outside the radiologically controlled area. One Non-Cited Violation of Technical Specification 6.8.1 regarding licensee procedures that govern the unconditional release of radioactive material was identified.

Inspection Report# : [2003010\(pdf\)](#)

**Significance:** TBD Oct 08, 2003

Identified By: Self Disclosing

Item Type: AV Apparent Violation

### **Failure to Prepare a Shipment of Radioactive Waste to Satisfy Department of Transportation External Package Radiation Level Limits**

A self-revealed finding preliminarily assessed to be greater than Green and an associated apparent violation (AV) were identified for the failure to prepare a package of radioactive material for shipment, so that under conditions normally incident to transportation, the radiation level does not exceed 200 millirem/hour at any point on the external surface of the package. Package surface radiation levels in excess of 200 millirem/hour were identified by a waste processing contractor upon receipt of the shipment from the licensee.

The finding was more than minor because it was associated with the "Program and Process" attribute of the Public Radiation Safety Cornerstone, and affected the cornerstone objective of ensuring adequate protection of public health and safety from exposure to radioactive materials released into the public domain. Also, the issue involved an occurrence in the licensee's radioactive material transportation program that was contrary to NRC and Department of Transportation (DOT) regulations. The finding was determined preliminarily to be of low to moderate safety significance because the transportation problem involved an external package radiation level that exceeded limits by 25 percent and because the area of elevated radiation on the package was determined to be accessible to a member of the public during conditions normally incident to transportation. To address this issue, the licensee planned to revise procedures to require load plans and to specify which survey instrumentation is to be used for package surveys, and to provide training to its staff involved in radioactive material shipments.

Inspection Report# : [2003016\(pdf\)](#)

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## Physical Protection

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## Miscellaneous

Last modified : March 02, 2004