

May 5, 2000

MEMORANDUM TO: William D. Travers, Executive Director for Operations

FROM: J. E. Dyer, Regional Administrator */RA/*

SUBJECT: COMMISSION STAFF REQUIREMENTS MEMORANDA (SRM)  
M000110B - D. C. COOK SIGNIFICANT EMERGENT SAFETY  
ISSUES

The attachment to this memorandum provides an update to the significant emergent safety issues at D. C. Cook. In the subject SRM, the Commission requested to be informed of these issues. The issues involving ice condenser concerns and the high energy line break unreviewed safety question that affected the auxiliary feedwater system have been resolved and will no longer be reported. Progress is also being made towards resolving the other issues. Changes to existing issues are provided in ***bold italics***.

Attachment: As stated  
(Contains 2.790 information)

cc w/att: F. Miraglia, OEDO  
S. Collins, NRR  
M. Satorius, NRR  
J. Zwolinski, NRR  
S. Bajwa, NRR  
C. Craig, NRR  
J. Stang, NRR  
A. Vogel, RIII  
G. Shear, RIII  
B. Bartlett, SRI D. C. Cook  
M. Holmberg, RIII

CONTACT: D. Passehl, DRP  
(630) 829-9872

**Not for Public Disclosure**

**Not for Public Disclosure**

MEMORANDUM TO: William D. Travers, Executive Director for Operations  
FROM: J. E. Dyer, Regional Administrator  
SUBJECT: COMMISSION STAFF REQUIREMENTS MEMORANDA (SRM)  
M000110B - D. C. COOK SIGNIFICANT EMERGENT SAFETY  
ISSUES

The attachment to this memorandum provides an update to the significant emergent safety issues at D. C. Cook. In the subject SRM, the Commission requested to be informed of these issues. The issues involving ice condenser concerns and the high energy line break unreviewed safety question that affected the auxiliary feedwater system have been resolved and will no longer be reported. Progress is also being made towards resolving the other issues. Changes to existing issues are provided in ***bold italics***.

Attachment: As stated  
(Contains 2.790 information)

cc w/att: F. Miraglia, OEDO  
S. Collins, NRR  
M. Satorius, NRR  
J. Zwolinski, NRR  
S. Bajwa, NRR  
C. Craig, NRR  
J. Stang, NRR  
A. Vogel, RIII  
G. Shear, RIII  
B. Bartlett, SRI D. C. Cook  
M. Holmberg, RIII

CONTACT: D. Passehl, DRP  
(630) 829-9872

DOCUMENT NAME: G:\Cook\05-01-00 SRM reply.wpd

To receive a copy of this document, indicate in the box: "C" = Copy without enclosure "E"= Copy with enclosure "N"= No copy

OFFICE	RIII	RIII	RIII	RIII
NAME	Vegel:djp	Grobe	Zwolinski	Dyer
DATE	05/04 /00	05/04 /00	05/03 /00	05/04/00

**OFFICIAL RECORD COPY**

**Not for Public Disclosure**

## Issue Is Resolved and Will No Longer Be Included in this Report Attachment

**Not for Public Disclosure**

**\*\*CONTAINS ALLEGATION INFORMATION\*\***

Current or Emerging Safety Issues

<b>Issue</b>	On January 27, 2000, Region III received an allegation regarding the form of ice in the Unit 2 ice condenser. Specifically, the UFSAR Appendix M Section 1.1 described the form of ice used to fill the ice baskets as 2 inch by 2 inch by 1/8 inch flake ice. Contrary to this description, the ice being used to fill the Unit 2 ice condenser has a granular and/or fine powder type consistency. <b><i>The change in ice form raised issues in three areas: ice sublimation rate during routine operation, heat transfer characteristics during a loss-of-coolant accident blowdown, and the stability of the ice during a seismic event.</i></b>
<b>Licensee Action</b>	<b><i>The licensee submitted their evaluation and response to this issue on April 7, 2000.</i></b>
<b>NRC Action</b>	<b><i>The Region has completed review of the licensee's response and concluded that no safety concerns exist that will affect Unit 2 restart. This conclusion is based on assessment of past experience in monitoring ice sublimation rate data and on Westinghouse data for heat transfer and seismic testing of ice.</i></b>
<b>Safety Significance</b>	<b><i>No safety significance for Unit 2 restart.</i></b>
<b>Impact on Schedule</b>	<b><i>None.</i></b>

**Not for Public Disclosure**

**\*\*CONTAINS ALLEGATION INFORMATION\*\***

**Issue Is Resolved and Will No Longer Be Included in this Report**

## Not for Public Disclosure

Attachment

**\*\*CONTAINS PRE-DECISIONAL ENFORCEMENT INFORMATION\*\***

## Current or Emerging Safety Issues

<b>Issue</b>	<p><u>Employment Discrimination Involving Cataract, Inc. (OI-3-1998-041)</u></p> <p>On November 16, 1998, the Office of Investigations opened a case file to determine whether discrimination occurred against a contract employee who was on site for approximately 1 week before being terminated. The individual claims discrimination because he was identified as a troublemaker at other plants by a licensee employee. The licensee contends that the individual was dismissed for legitimate business reasons. The Office of Investigations confirmed discrimination did occur (report issued November 23, 1999).</p>
<b>Licensee Action</b>	The licensee presented the results of their review of this issue during the predecisional enforcement conference.
<b>NRC Action</b>	A predecisional enforcement conference was held on February 24, 2000. The agency believes that the licensee violated the employee protection requirements and is preparing an escalated enforcement action against the licensee for violating 10 CFR 50.7 (predecisional information). <b><i>Office of General Counsel and Office of Enforcement comments on the proposed enforcement action are being resolved.</i></b>
<b>Safety Significance</b>	The affected individual did not raise any safety issues regarding the D. C. Cook plant.
<b>Impact on Schedule</b>	None Anticipated

## Not for Public Disclosure

**\*\*CONTAINS PRE-DECISIONAL ENFORCEMENT INFORMATION\*\***

## Issue Is Resolved and Will No Longer Be Included in this Report Attachment

### Current Emerging Safety Issues

<b>Issue</b>	Modifications to the auxiliary feed water (AFW) pump room ventilation systems in order to provide environmental protection to each of the AFW pumps from the effects of a postulated high energy line break event (HELB) do not meet 10 CFR 50.59(a)(2)(ii). Therefore, the modification is considered an unreviewed safety question (USQ).
<b>Licensee Action</b>	The licensee responded to the staff's Request for Additional Information (RAI) on March 31, 2000. The licensee is proceeding with the modifications.
<b>NRC Action</b>	<b><i>On April 25, 2000, the staff issued Amendments 244 for Unit 1 and 225 for Unit 2 resolving this issue. The installation of the modifications, still in progress, will be reviewed by the resident inspectors during their routine inspection.</i></b>
<b>Safety Significance</b>	Prior to the modifications, given a HELB, redundant AFW components would be affected and the function of AFW would be in question. Implementation of the modification introduces dependence on the essential service water system for room cooling, but redundant AFW trains are no longer vulnerable to single failure from a HELB.
<b>Impact on Schedule</b>	None.

**Issue Is Resolved and Will No Longer Be Included in this Report**

## Current Emerging Safety Issues

<b>Issue</b>	The current accident analysis for the essential service water (ESW) system requires each train of ESW to include a Unit 1 pump cross-connected with a Unit 2 pump. To facilitate concurrent operation of Unit 2 and work on Unit 1 that may impact the ESW system, the licensee is trying to demonstrate that the Unit 2 pumps alone can supply sufficient accident mitigation flow.
<b>Licensee Action</b>	The licensee has tested the Unit 2 ESW system with only one Unit 2 pump per loop. Although a single pump was capable of meeting the required accident flowrates during the test, the licensee has not fully evaluated potential non-conservatism associated with their test methodology and acceptance criteria. Additionally, the licensee has determined that the Unit 2 West ESW pump does not meet current minimum In-service Testing pump performance requirements. The licensee is continuing to evaluate ESW flow balance testing results and is developing an Engineering Action Plan to address ESW pump performance issues.
<b>NRC Action</b>	The Resident Inspectors will follow-up on licensee's testing and troubleshooting.
<b>Safety Significance</b>	If the licensee demonstrates that a single Unit 2 ESW pump can supply sufficient accident mitigation flow, there is no safety significance; however, safety margins would be reduced. If the Unit 2 ESW pumps are incapable of meeting the required accident flow rates, operation of Unit 2 would require the full operability of the Unit 1 ESW pumps. Requiring the operability of the Unit 1 ESW pumps would complicate restart preparations for Unit 1 during the concurrent operation of Unit 2.
<b>Impact on Schedule</b>	The ESW system is required to be operable prior to Mode 4. Schedule impact depends on the results of the licensee evaluation of pump performance.

## Current Emerging Safety Issues

<b>Issue</b>	The licensee identified multiple examples where large-bore piping supports were not installed according to the design and licensing basis. Systems affected include Unit 2 Residual Heat Removal, Containment Spray, and Safety Injection, along with multiple nonsafety-systems.
<b>Licensee Action</b>	The licensee has issued a design change package to repair, replace, or install approximately seventy piping supports in the affected safety related systems. Physical work on the piping supports has started. Also, the licensee has identified the need to repair, replace, or install several hundred additional supports in other systems. Supports needing work on systems necessary to support fuel load have been completed.
<b>NRC Action</b>	Resident Inspectors continue to perform follow up inspection of related piping support modifications. Pipe support modifications needed for fuel load were confirmed to be completed.
<b>Safety Significance</b>	The affected piping systems may not have been adequately designed to sustain a seismic event.
<b>Impact on Schedule</b>	None anticipated. <b><i>The licensee is on schedule to repair, replace, or install the three remaining supports prior to Mode 4.</i></b>

## Current Emerging Safety Issues

<b>Issue</b>	A postulated worst case offsite degraded grid voltage during a design basis accident may result in terminal voltages at some safety related electrical equipment being below that required for the equipment to function.
<b>Licensee Action</b>	The licensee plans to implement several modifications to improve terminal voltage prior to Unit 2 restart. These include installing a breaker to split electrical load between two 34.5 kV transformers, changing transformer tap settings, installing voltage regulating transformers, and replacing undersized motor cables on some equipment. The licensee also plans to establish administrative controls with the American Electric Power System Operations group to monitor grid voltages. The licensee is evaluating the installation of automatic load tap changing transformers for the long term and plans to re-review their responses to applicable Generic Letters within one year of restart of Unit 1 and initiate any required licensing actions. The licensee plans to submit a letter describing the short term actions and long term commitments to ensure operability of the electrical distribution system.
<b>NRC Action</b>	The NRC conducted a public meeting with the licensee to discuss this issue on April 17, 2000. NRC will review the licensee's commitment letter when it is received.
<b>Safety Significance</b>	Safety related equipment needed to mitigate the effects of a design basis accident may not function.
<b>Impact on Schedule</b>	None anticipated. The licensee plans to implement the Unit 2 restart modifications prior to entry into Mode 4 (Hot Shutdown).

## Current Emerging Safety Issues

<b>Issue</b>	On November 22, 1999, the licensee identified a concrete wall in containment where segments of concrete and several reinforcing bars had been removed from the upper portion of the wall during initial construction. This wall forms part of the boundary between upper and lower containment which is designed to force the steam blowdown during a loss of coolant accident (LOCA) or a main steam line break (MSLB) through the ice condenser to reduce containment pressure buildup. The missing concrete and reinforcing bars may affect the ability of containment to perform its function.
<b>Licensee Action</b>	The licensee evaluated the condition of the wall and determined that the wall does not meet specified design margins. The licensee determined that replacement of the missing concrete with grout would restore the wall to an operable but degraded condition. The licensee initiated a design change package to add grout to the wall and completed calculations on April 14, 2000, concluding that the wall would not fail under the worst case postulated loading. <b><i>The licensee has prepared an operability evaluation of this condition.</i></b>
<b>NRC Action</b>	Region III is in the process of reviewing the design change package and supporting calculations for this issue. The Region is evaluating the reduction in design margin for this degraded wall under the postulated accident conditions. <b><i>A public technical meeting will be held on May 4, 2000, in Region III, to discuss the results of the licensee's evaluation of this issue and planned corrective actions.</i></b>
<b>Safety Significance</b>	Failure of this wall during a LOCA or MSLB would create a steam bypass of the ice condenser resulting in over-pressurization of the containment and potential containment breach.
<b>Impact on Schedule</b>	Unknown at this time.