

June 7, 2001

MEMORANDUM TO: J. E. Dyer, Regional Administrator

FROM: Geoffrey E. Grant, Chairman, D.C. Cook Restart Oversight Panel */RA/*

SUBJECT: RECOMMENDATION FOR CLOSURE OF NRC INSPECTION MANUAL
CHAPTER 0350 OVERSIGHT PANEL FOR D.C. COOK

On September 9, 1997, American Electric Power shut down both units of D.C. Cook after the licensee staff declared the emergency core cooling systems inoperable based on findings of an NRC Architect Engineering Inspection. On September 19, 1997, NRC issued a Confirmatory Action Letter (CAL) describing the licensee's commitment to take corrective action on nine technical issues and perform an assessment to determine if the engineering deficiencies described in the CAL affected system operability of other safety-related systems. On April 17, 1998, due to the identification of additional concerns regarding the ice condenser and fibrous material inside containment, and recognizing the necessary scope and depth of assessment and corrective actions, the NRC initiated focused and coordinated regulatory oversight of D.C. Cook. The NRC Region III and Office of Nuclear Reactor Regulation established an oversight panel in accordance with NRC Inspection Manual Chapter (IMC) 0350, "Staff Guidelines for Restart Approval," for D.C. Cook to ensure appropriate focus was provided and resources were allocated with regard to reviewing D.C. Cook improvement initiatives. The IMC 0350 Panel has been providing oversight of licensee actions throughout the shutdown and during subsequent operation of both Units at D.C. Cook.

Since its inception, the IMC 0350 Panel has been meeting regularly internally and externally to discuss the performance of D.C. Cook. The IMC 0350 Panel planned and coordinated all inspections at D.C. Cook, and played a key role in facilitating the communication of inspection results, both internally and externally. The IMC 0350 Panel developed restart readiness conclusions for each Unit and closely monitored the Unit 2 restart evolution in June 2000, and the Unit 1 restart in December of the same year. Recently, the IMC 0350 Panel has been focused on assessing the operational performance of both Units.

Regarding the restart readiness conclusions that were communicated to you on June 12, 2000, for Unit 2, and December 8, 2000, for Unit 1, these were developed based on our inspections of licensee corrective actions related to issues that were documented in each Unit's IMC 0350 Restart Action Matrix. The Unit 2 Restart Action Matrix consisted of 330 items which included Confirmatory Action Letter issues, as well as site programmatic items. The Unit 1 Restart Action Matrix consisted of 44 items, which predominately focused on technical issues related to the operability of systems.

As reflected in each respective Unit's Restart Action Matrix, there were several technical and programmatic issues that were focus areas of the IMC 0350 Panel during the shutdown and subsequent operation of the Units. These were associated with the expanded system readiness review process, the ice condenser, the containment structures, the corrective action program, and operational performance. In addition, the NRR technical staff focused on questions and concerns raised regarding the licensing basis of the plant.

The IMC 0350 Panel focused on the Expanded System Readiness Reviews (ESRRs) performed by the licensee. The licensee performed the ESRRs to provide reasonable assurance that plant systems are capable of meeting their safety and accident mitigation functions. The licensee initiated the ESRR program to identify all of the systems' safety or accident mitigation functions and then evaluate the systems' capabilities based on walkdowns and review of documentation. Based on the results of several focused team inspections to validate the effectiveness of the ESRR, the IMC 0350 Panel obtained reasonable assurance that the ESRR process would correctly evaluate the functionality of systems.

The NRC had previously identified issues related to surveillance testing, material condition, and the design and licensing bases of the ice condensers. These issues were documented in several NRC inspection reports following shutdown of the Units in 1997. Some of the specific issues involved inadequate ice condenser flow passage testing, ice weight testing, ice basket inspections, ice condenser door testing, and control of contractors. There were also issues with ice basket webbing damage, separated ice baskets, debris in the ice condenser, and modification and design control for ice condenser components. Prior to restart of both Units, the NRC conducted inspections and verified that the licensee took adequate corrective actions to address all of the issues, including the programmatic elements of the material condition issues and surveillance testing issues. Since restart there have been no new safety significant issues identified concerning the ice condensers.

The IMC 0350 Panel's focus on containment structures arose from the licensee's determination, in May 2000, that a condition outside the design basis of the plant existed with some containment internal concrete subcompartment structural elements, specifically, certain walls and floors did not meet the design pressure load factor margin of 1.5 as described in the D.C. Cook UFSAR. In a public meeting with the licensee held on June 1, 2000, the licensee described its findings related to Unit 2 containment subcompartment walls to the IMC 0350 Panel and other NRC staff, including justification for operating the units while the structures were considered to be degraded. In a second public meeting held on September 27, 2000, the licensee provided the NRC Staff with a comprehensive description of the containment structural issues found in Units 1 and 2, an update on the status of these issues, including resolution strategies, and the corrective actions implemented and planned. In addition, the NRC staff conducted inspections to assess licensee actions.

The licensee is continuing to evaluate containment structural calculations to determine conformance with the design basis. All containment structures remain operable. The licensee stated during the most recent IMC 0350 public meeting on April 10, 2001, that more available margins have been recovered through the re-performance of calculations. The licensee is on schedule to complete their corrective actions.

The IMC 0350 Panel has continued to remain focused on the outcome of the licensee's corrective action program improvements. The licensee made substantial improvements to their program, which was examined prior to restart of the Units and was determined to be capable of resolving problems in a manner sufficient to support restart of both Units. The IMC 0350 Panel remained cognizant of the overall products and results of the corrective action program through inspection activities and concluded that the licensee is implementing the program in an acceptable manner. While managing the post-restart corrective action backlog is a challenge for the licensee, the licensee has established acceptable work down curves and is currently meeting established goals. The licensee continues to focus on achieving consistency in the quality of root cause evaluations and corrective actions.

Regarding the operational performance of the Units since restart, Unit 2 attained full power in early July 2000 and has since operated well as indicated by a lack of significant operational problems, significant operator errors, and procedure adherence problems. Except for a shutdown in late January 2001 to repair a loose connection in a rod control system cabinet, Unit 2 has been operating at or near full power. The licensee performed a successful restart of Unit 1 in December 2000 and Unit 1 attained full power in early January 2001. Unit 1 has operated well since reaching full power but has experienced some equipment problems including main feedwater condenser cooling water issues which necessitated plant power level changes to address those problems. The plant power changes resulted in the performance indicator for Unit 1 Unplanned Power Changes to cross from Green to White during the first quarter of 2001. The IMC 0350 Panel reviewed the licensee's actions in response to the emergent equipment problems through the inspection program and concluded that plant management used good operational focus and oversight in handling the equipment problems. Aside from the main feedwater condenser cooling water issues there have not been any significant operational problems, significant operator errors, or procedure adherence problems associated with either Unit since their respective restarts.

On May 9, 2001, during an internal meeting, the IMC 0350 Panel determined that D.C. Cook no longer warrants oversight through the IMC 0350 process. The IMC 0350 Panel's decision was based on the determination that the licensee has established an effective long-range improvement program, was sufficiently implementing their corrective action program, has demonstrated safe plant operation and overall improving performance, and has established an effective program to update and maintain the plant's design basis. The Panel's decision was based on resident and region-based inspection results, including a Problem Identification and Resolution Inspection, review of self-assessments, docketed correspondence, performance

improvement plan changes, long-term corrective actions not implemented before restart, and several public meetings with the licensee to discuss performance improvements.

The licensee's corrective action program is being effectively utilized to track the identification and resolution of problems as determined by the Problem Identification and Resolution inspection and other inspections. The licensee has demonstrated sustained, successful plant performance as demonstrated by a lack of significant operational problems, significant operator errors, and procedure adherence problems. There have been no safety significant issues involving the licensee's safety evaluation process, surveillance program, or design control process. Lastly, while D.C. Cook is still developing some performance indicators due to lack of sufficient data to calculate the performance indicator, all published performance indicators have been verified and there were no significant issues.

To account for incomplete performance indicators in the Reactor Safety strategic performance area, the IMC 0350 Panel recommends continuation of augmented baseline inspection in the Mitigating Systems and Emergency Preparedness cornerstones. The performance indicators in the Radiation Safety strategic performance area and the Safeguards strategic performance area are considered valid; therefore, the IMC 0350 Panel recommends continuation of baseline inspections in these areas. Regarding the Unit 1 PI for Unplanned Power Changes per 7000 Critical Hours crossing from Green to White during the first Quarter of 2001, the IMC 0350 Panel recommends conducting Inspection Procedure 95001, "Inspection for One or Two White Inputs in a Strategic Performance Area," to assess the adequacy of the licensee's root cause evaluation and related corrective actions.

In summary, the IMC 0350 Panel concluded that D.C. Cook no longer warrants oversight through the IMC 0350 process and recommends three actions. First, termination of the IMC 0350 process at D.C. Cook and disbandment of the IMC 0350 Panel. Second, continue with augmented inspections in areas where performance indicators are still under development. Third, perform a supplemental inspection for the Unit 1 White performance indicator for Unplanned Power Changes.

Should you concur with this recommendation, a letter will be forwarded to the licensee and the actions contained in the attached Communications Plan will be implemented.

/RA/
J. E. Dyer
Regional Administrator

Approve/Disapprove

June 7, 2001
Date

Attachment: Communications Plan

DOCUMENT NAME: G:\cook\memopane.wpd

***See previous concurrence**

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Communications Plan

Termination of MC 0350 Process at DC Cook

PURPOSE: Communications strategy, sequence, and responsibilities for the internal and external dissemination of information related to the termination of the NRC Inspection Manual Chapter (MC) 0350 process at D.C. Cook.

STRATEGY: The Manual Chapter 0350 Panel will coordinate and facilitate the internal and external communication of Manual Chapter 0350 termination at D.C. Cook. This will be accomplished through internal MC 0350 meetings, internal memorandums, letters to the licensee, and public meetings. Following the public meeting, which will also be the reactor oversight process End-of Cycle Public meeting, a media availability will be held to allow local news organizations and members of the public to ask questions regarding termination of the MC 0350 panel and implementation of the reactor oversight process at D.C. Cook.

DETAILS: The following lists the actions and responsibilities for implementing this communication plan.

A. Internal Communications

1. MC 0350 Panel Recommendation for Termination to Regional Administrator

Communication Methods:

- Memorandum from MC 0350 Chairman to Regional Administrator (Internal MC 0350 Meetings/Minutes form basis)

Responsibility:

- MC 0350 panel (Lead-Reactor Projects Branch 6)

2. Regional Administrator Coordination of Termination with EDO/NRR

Communication Methods:

- Consultation with Director NRR and EDO (Telephone or Meeting)

Responsibility:

- Lead-Reactor Projects Branch 6

3. Notify Commission of MC 0350 Termination at D.C. Cook

Communication Methods:

- Commissioner TA Notifications

Responsibility:

- EDO Staff

B. External Stakeholder Communications

1. Communicate NRC Assessment of D.C. Cook Performance

Communication Methods:

- Inspection Reports/Exit Meetings
- Internal MC 0350 Meetings/Minutes
- External MC 0350 Meetings/Minutes
- Annual Assessment Letter for D.C. Cook

Responsibility:

- MC 0350 panel (Lead-Reactor Projects Branch 6)

2. Notify Office of Congressional Affairs

Communication Method:

- Telephone Notification and E-mail

Responsibility:

- NRR Project Manager

3. Present Basis for Termination of 0350 Process to Licensee and Public

Communication Method:

- Letter from Regional Administrator to Licensee (Put on Web)
- Public Meeting/Minutes (In conjunction with the EOC Public Meeting)
- Regional Administrator and MC 0350 Chairman Media Availability
- News Release
- Notify Headquarters Public Affairs Office

Responsibility:

- MC 0350 Chairman and Regional Administrator
- RIII Public Affairs Staff

4. Notify State and Local Officials

Communication Method:

- Telephone Notification
- Public Meeting/Minutes

Responsibility:

- RIII State Liaison Officer