



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION III  
801 WARRENVILLE ROAD  
LISLE, ILLINOIS 60532-4351

December 12, 2000

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

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

SUBJECT: READINESS FOR RESTART OF THE DONALD C. COOK  
(D.C. COOK) NUCLEAR PLANT - UNIT 1

This memorandum provides information relative to the closure of NRC inspection and assessment activities pertaining to the restart of the Donald C. Cook Nuclear Plant (D.C. Cook) - Unit 1. The NRC staff has completed its inspection and assessment activities for Unit 1 and has evaluated the effectiveness of the licensee's actions to address the issues that resulted in the plant shutdown. The NRC Restart Oversight Panel concluded that D.C. Cook's performance improvement initiatives have been sufficiently effective to support restart of D.C. Cook Unit 1, and has therefore closed the Inspection Manual Chapter 0350 Restart Action Matrix for Unit 1. Attached is the memorandum from the Restart Oversight Panel Chairman recommending restart approval for D.C. Cook, Unit 1. After consultation with the Director, NRR, and you, I determined that the NRC had no further concern with D.C. Cook, Unit 1, restart and notified the licensee in a letter dated December 12, 2000 (attached).

As you are aware, on December 4, 2000, a Region III inspector submitted a Differing Professional Opinion (DPO) to you that expressed dissatisfaction with the disposition of his earlier Differing Professional View (DPV) regarding the staff's resolution of concerns with degraded containment structures on both units. As described in my memo to you dated December 6, 2000, I concluded that no new technical or programmatic issues were raised in the DPO that the Restart Oversight Panel needed to consider as part of their restart deliberations. Therefore, I recommend normal processing of the DPO in accordance with MD 10.159 separate from the restart oversight process.

The NRC Restart Oversight Panel will continue to provide oversight of D.C. Cook through restart of Unit 1 and until sufficient operating experience has accumulated such that augmented NRC oversight through a Restart Oversight Panel is no longer necessary. The Region will continue to monitor licensee startup activities through resident and region-based inspections, including a period of continuous observation during restart of the plant. As with Unit 2, Unit 1 will fully transition to the new reactor oversight process as plant performance indicator data is developed.

I would be glad to discuss any questions you have regarding this matter.

Attachment: As stated

See Attached Distribution

A/28

W. Travers

-2-

cc w/att:

F. Miraglia, OEDO  
M. Satorius, OEDO  
S. Collins, NRR  
G. Grant, RIII



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION III  
801 WARRENVILLE ROAD  
LISLE, ILLINOIS 60532-4351

December 12, 2000

Mr. R. P. Powers  
Senior Vice President  
Nuclear Generation Group  
American Electric Power Company  
500 Circle Drive  
Buchanan, MI 49107-1395

SUBJECT: CLOSURE OF NRC INSPECTION MANUAL CHAPTER 0350 RESTART  
ACTION MATRIX FOR RESTART OF THE DONALD C. COOK (D. C. COOK)  
NUCLEAR PLANT - UNIT 1

Dear Mr. Powers:

This letter documents the completion of NRC actions necessary prior to restart of D. C. Cook - Unit 1 and the NRC review of specific corrective actions that your staff committed to complete prior to restarting Unit 1. Previously, the NRC completed its inspection and assessment activities pertaining to Unit 2 restart, which was described in a letter to you dated June 13, 2000. Unit 2 successfully started up and attained full power in early July 2000. The NRC began the transition towards implementation of the revised reactor oversight process and the revised assessment process at D. C. Cook upon restart of Unit 2.

In early August 2000, the NRC Restart Oversight Panel approved a revised charter implementing the revised Inspection Manual Chapter 0350. The Panel approved a Restart Action Matrix for Unit 1, which included verifying operability of safety systems and containment, assessing operational readiness of your staff, and verifying that licensing issues necessary for restart would be addressed.

The NRC staff has completed its inspection and assessment activities for Unit 1 and has evaluated the effectiveness of your staff's actions to address the issues that resulted in the plant shutdown. The NRC Restart Oversight Panel's assessment of your corrective actions was based on resident and region-based inspector observations and a number of special inspection efforts, including the Biennial Permanent Modifications and Annual 10 CFR 50.59 Inspection, and a Unit 1 Restart Readiness Assessment Team Inspection.

In addition, there have been frequent public meetings between your staff and the NRC Restart Oversight Panel, and frequent internal meetings of the NRC Restart Oversight Panel. The results of these meetings were documented in public meeting summaries and internal NRC Restart Oversight Panel meeting minutes, all of which have been or will be placed in the NRC Public Electronic Reading Room.

The NRC has concluded that your staff's performance improvement initiatives have been sufficiently effective to support restart of D. C. Cook Unit 1. After consultation with the Executive Director for Operations and the Director, Office of Nuclear Reactor Regulation, I have determined that we have no further concerns regarding restart of D. C. Cook Unit 1.

Therefore, the Inspection Manual Chapter 0350 Restart Action Matrix for D. C. Cook Unit 1 is closed for all items necessary for restart. The Restart Action Matrix, which documented the actions initiated by the NRC per the Inspection Manual Chapter 0350 process, is enclosed.

The Inspection Manual Chapter 0350 Restart Oversight Panel will continue to provide oversight of D. C. Cook through restart of Unit 1 and until sufficient operating experience has accumulated such that augmented NRC oversight through a Restart Oversight Panel is no longer necessary and NRC oversight can occur under the routine inspection program.

While the specific Restart Action Matrix issues have been adequately resolved, you remain responsible for ensuring that any other issues which may impact plant restart and safe operation are promptly identified and properly addressed. In addition, continued focus must be applied to correcting the remaining deficiencies in structures, systems, and components that were deferred until after restart. Region III will continue to monitor D. C. Cook Unit 1 startup activities through resident and region-based inspection activities, including a period of continuous observation during restart of the plant.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Sincerely,



J. E. Dyer  
Regional Administrator

Docket Nos. 50-315; 50-316  
License Nos. DPR-58; DPR-74

Enclosure: Restart Action Matrix

cc w/encl: A. C. Bakken III, Site Vice President  
J. Pollock, Plant Manager  
M. Rencheck, Vice President, Nuclear Engineering  
R. Whale, Michigan Public Service Commission  
Michigan Department of Environmental Quality  
Emergency Management Division  
MI Department of State Police  
D. Lochbaum, Union of Concerned Scientists

Enclosure

## D. C. Cook Restart Action Matrix Unit 1

December 8, 2000

Item No.	Description	NRC Lead	Inspection Procedure	References	Documentation	ECD	Status
<b>Inspection Report References</b>							
<p>Notes:</p> <p>ECD Estimated Completion Date (Present to IMC 0350 Panel)            NRR NRC Office of Nuclear Reactor Regulation            RRATI Restart Readiness Assessment Team Inspection            SER Safety Evaluation Report            SRI Senior Resident Inspector            UCS Union of Concerned Scientists</p> <p>IR 2000021 - Biennial Permanent Mods &amp; Annual 50.59 Insp 11/06/00 to 11/17/00            IR 2000022 - Resident Inspector Report 10/11/00 to 11/11/00            IR 2000023 - Unit 1 Restart Readiness Assessment Team Inspection 11/27/00 to 12/01/00            IR 2000025 - Resident Inspector Report 11/12/00 to 12/31/00</p>							
<b>Restart Issues</b>							
<b>1. Ice Condenser Operability</b>							
1.1	Unit 1 ice condenser restoration - Observe ice condenser ice load & surveillance testing	SRI	IP 71111.22 (Surveillance Testing)	LER 315/2000-001-00, Stress Loads for the Ice Condenser Basket Assembly Greater Than Allowed by Safety Analysis Report  IR 99026	IR 2000022 (10/11/00 to 11/11/00)	11/06/00	Closed  IR 2000022 (Pending)
<b>2. Containment Operability</b>							
2.1	Evaluate modifications to the Unit 1 recirculation sump to address previous deficiencies with inadequate inventory, dead ended compartments and sump venting.	Biennial Permanent Mods & Annual 50.59 Insp	71111.17 (Permanent Plant Modifications)	IR 99029	IR 2000021 (11/06/00 to 11/17/00)	11/21/00	Closed  IR 2000021 (Pending)
2.2	Confirm removal of fibrous material in the Unit 1 Containment that could clog the recirculation sump.	SRI	71111.20 (Refueling and Outage Activities)	IR 2000016	IR 2000023 (11/27/00 to 12/01/00)	11/21/00	Closed  IR 2000023 (Pending)

Enclosure

Item No.	Description	NRC Lead	Inspection Procedure	References	Documentation	ECD	Status
2.3	Evaluate Licensee Corrective Actions for Containment Internal Structural Walls	SRI NRR	71111.20 (Refueling and Outage Activities)	LER 316/2000-003-00, Containment Internal Concrete Structures Do Not Meet Design Load Margins  0350 Mtg. Minutes dtd. 06/12/00	IR 2000023 (11/27/00 to 12/01/00)  Panel Internal Meeting Minutes	11/21/00 (SRI)  11/28/00 (NRR)	Closed  IR 2000023 (Pending)
<b>3. Valve Operability</b>							
3.1	Evaluate modifications completed to resolve operability of the Unit 1 MOVs	Biennial Permanent Mods & Annual 50.59 Insp	71111.17 (Permanent Plant Modifications)	LER 315/1999-031-00, Interim - Valves Required to Operate Post-Accident Could Fail to Open Due to Pressure Locking/Thermal Binding  IR 2000002	IR 2000021 (11/06/00 to 11/17/00)	11/28/00	Closed  IR 2000021 (Pending)
3.2	Evaluate Modifications Completed to Address Unit 1 Compressed Air System Operability	Biennial Permanent Mods & Annual 50.59 Insp	71111.17 (Permanent Plant Modifications)	IR 99029	IR 2000021 (11/06/00 to 11/17/00)	11/21/00	Closed  IR 2000021 (Pending)
<b>4.. Auxiliary Feedwater Operability</b>							
4.1	Evaluate modifications completed to resolve operability of the AFW system, associated with postulated high energy line breaks.	Biennial Permanent Mods & Annual 50.59 Insp)	71111.17 (Permanent Plant Modifications)	LER 315/1999-026-00, High Energy Line Break Programmatic Inadequacies Result in Unanalyzed Conditions  IR 2000007	IR 2000021 (11/06/00 to 11/17/00)	11/21/00	Closed  IR 2000021 (Pending)
<b>5. Electrical System Operability</b>							
5.1	Evaluate modifications completed to resolve the Unit 1 electrical system fuse and breaker coordination.	Biennial Permanent Mods & Annual 50.59 Insp	71111.17 (Permanent Plant Modifications)	IR 2000007	IR 2000021 (11/06/00 to 11/17/00)	11/21/00	Closed  IR 2000021 (Pending)
<b>6. Emergency Core Cooling System Operability</b>							
6.1	Evaluate setpoint changes for the Unit 1 RWST Level to account for measurement error and instrument uncertainties	Biennial Permanent Mods & Annual 50.59 Insp	71111.17 (Permanent Plant Modifications)	IR 2000007	IR 2000021 (11/06/00 to 11/17/00)	11/21/00	Closed  IR 2000021 (Pending)

Enclosure

Item No.	Description	NRC Lead	Inspection Procedure	References	Documentation	ECD	Status
<b>7. Licensing Basis Control Program</b>							
7.1	Evaluate licensing basis program controls for safety reviews in accordance with 10 CFR 50.59.	Biennial Permanent Mods & Annual 50.59 Insp	71111.02 (Evaluation of Changes, Tests, or Experiments)	IR 99023	IR 2000021 (11/06/00 to 11/17/00)	11/21/00	Closed IR 2000021 (Pending)
<b>8. Licensing Issues, Amendments, Unreviewed Safety Questions</b>							
8.1	Reconstitution of Assumptions and Methodology for Transient Mass Distribution (TMD) Sub-compartment Analysis and Containment Sub-compartment Structural Issues	NRR	N/A		11/28/00 NRR Evaluation Issued	11/28/00	Closed 0350 Mtg. 11/28/00
8.2	Tornado Missile Licensing Bases Change - Use of approved PRA Techniques	NRR	N/A		License Amendment 247 (U1) 228 (U2)	11/21/00	Closed 0350 Mtg. 11/21/00
8.3	Pressurizer Heater Surveillance Change TS 4.4.2	NRR	N/A		License Amendment 246 (U1) 227 (U2)	10/20/00	Closed 0350 Mtg. 10/24/00
8.4	NRC Review of Leak Before Break Methodology for the Pressurizer Surge Line	NRR	N/A		11/08/00 SER Issued	11/14/00	Closed 0350 Mtg. 11/14/00
8.5	ILRT TS Change and Exemption	NRR	N/A		License Amendment 248 (U1) 229 (U2)	11/21/00	Closed 0350 Mtg. 11/21/00
8.6	QAPD Cad-Weld Commitment	NRR	N/A		11/07/00 SER Issued	11/14/00	Closed 0350 Mtg. 11/14/00
8.7	USQ on Methodology Changes (modeling of operator actions and use of actual tube flows) to Tube Rupture Analysis. (SG Overfill)	NRR	N/A		IR 2000023 (11/27/00 to 12/01/00)	11/21/00	Closed IR 2000023 (Pending)
8.8	USQ on HELB - Licensing Basis Change Request for 10D on Plume and SRP, MEB 3-1 exclusion areas. Tac no. MA 8893/94	NRR	N/A		License Amendment 249 (U1) 230 (U2)	11/21/00	Closed 0350 Mtg. 11/21/00
8.9	Technical Specification Change Request Valve Position for Automatic Valves in the Auxiliary Feedwater System	NRR	N/A		License Amendment 250 (U1) 231 (U2)	11/29/00	Closed 0350 Mtg. 12/01/00

Enclosure

Item No.	Description	NRC Lead	Inspection Procedure	References	Documentation	ECD	Status
<b>Guidelines for Restart Approval</b>							
C.3.3	Operator Issues						
C.3.3.d	Effectiveness of restart simulator/required training necessary to re-familiarize personnel with operating conditions.	SRI	71111.11 (Licensed Operator Requalification)		IR 2000023 (11/27/00 to 12/01/00)	11/28/00	Closed  IR 2000023 (Pending)
C.3.3.e	Assessment of plant staff performance during restart. Sustained control room observations by NRC personnel	RRATI	IMC 0350		IR 2000023 (11/27/00 to 12/01/00)	12/08/00	Closed  IR 2000023 (Pending)
C.4	Assessment of Physical Readiness of the Plant						
C.4.a	Operability of Technical Specification systems, specifically those with identified operational, design, and maintenance issues.	SRI RRATI	71111.15 (Operability Evaluations)		IR 2000023 (11/27/00 to 12/01/00)	12/01/00	Closed  IR 2000023 (Pending)
C.4.b	Operability of required secondary and support systems.	SRI RRATI	IMC 0350		IR 2000023 (11/27/00 to 12/01/00)	12/01/00	Closed  IR 2000023 (Pending)
C.4.c	Results of pre-startup testing.	SRI	IMC 0350		IR 2000023 (11/27/00 to 12/01/00)	12/01/00	Closed  IR 2000023 (Pending)
C.4.d	Adequacy of system lineups.	RRATI SRI	IMC 0350		IR 2000023 (11/27/00 to 12/01/00)	12/01/00	Closed  IR 2000023 (Pending)
C.4.e	Adequacy of surveillance tests/test program.	SRI	IP 71111.22 (Surveillance Testing)	LER 50-315/99003-00, Control Room pressurization Surveillance Test Does Not Test System In Normal Operating Condition	IR 2000023 (11/27/00 to 12/01/00)	12/01/00	Closed  IR 2000023 (Pending)

Enclosure

Item No.	Description	NRC Lead	Inspection Procedure	References	Documentation	ECD	Status
C.4.f	Significant hardware issues resolved (i.e., equipment with poor material condition, equipment aging, modifications).	SRI  Biennial Permanent Mods & Annual 50.59 Insp	71111.17 (Permanent Plant Modifications)	LER 50-315/99011-01, Air System for Emergency Diesel Generators May Not Support Long Term Operability Due to Original Design Error	IR 2000023 (11/27/00 to 12/01/00)	11/28/00	Closed  IR 2000023 (Pending)
C.4.g	Adequacy of the power ascension testing program.	SRI	IMC 0350		IR 2000023 (11/27/00 to 12/01/00)	11/28/00	Closed  IR 2000023 (Pending)
C.4.h	Effectiveness of the plant maintenance program.	SRI	71111.12 (Maintenance Rule Implementation)		IR 2000023 (11/27/00 to 12/01/00)	12/05/00	Closed  IR 2000023 (Pending)
C.4.i	Maintenance backlog managed and impact on operation assessed.	SRI	IMC 0350		IR 2000023 (11/27/00 to 12/01/00)	11/28/00	Closed  IR 2000023 (Pending)
C.4.j	Adequacy of plant housekeeping and equipment storage.	SRI	IMC 0350		IR 2000023 (11/27/00 to 12/01/00)	12/07/00	Closed  IR 2000023 (Pending)
C.5	Assessment of Compliance with Regulatory Requirements						
C.5.a	Applicable licensee amendments have been issued.	NRR	IMC 0350		Memo from NRR to IMC 0350 Panel	12/01/00	Closed 0350 Mtg. 12/01/00
C.5.b	Applicable exemptions have been granted.	NRR	IMC 0350		Memo from NRR to IMC 0350 Panel	12/01/00	Closed 0350 Mtg. 11/28/00
C.5.c	Applicable reliefs have been granted.	NRR	IMC 0350		Memo from NRR to IMC 0350 Panel	12/01/00	Closed 0350 Mtg. 11/28/00
C.5.d	Imposed orders have been modified or rescinded.	NRR	IMC 0350		Memo from NRR to IMC 0350 Panel	12/01/00	Closed 0350 Mtg. 11/28/00
C.5.e	Confirmatory Action Letter conditions have been satisfied.	Vegel	IMC 0350		IR 2000023 (11/27/00 to 12/01/00)	11/21/00	Closed  IR 2000023 (Pending)

Enclosure

Item No.	Description	NRC Lead	Inspection Procedure	References	Documentation	ECD	Status
C.5.f	Significant enforcement issues have been resolved.	Veigel	IMC 0350		IR 2000023 (11/27/00 to 12/01/00)	11/21/00	Closed IR 2000023 (Pending)
C.5.g	Allegations have been appropriately addressed.	Veigel	IMC 0350		IR 2000023 (11/27/00 to 12/01/00)	11/21/00	Closed IR 2000023 (Pending)
C.5.h	10 CFR 2.206 Petitions have been appropriately addressed.	NRR	IMC 0350		Memo from NRR to IMC 0350 Panel	12/01/00	Closed 0350 Mtg. 11/28/00
C.6	Coordination with Interested Agencies and Parties						
C.6.e.1	Appropriate state and local officials -FEMA	RIII State Liaison Officer	IMC 0350		Memo to IMC 0350 Panel		Closed 0350 Mtg. 11/28/00
C.6.e.2	Appropriate state and local officials -Congressional Affairs	NRR RIII PAO	IMC 0350		OCA Notified; RIII PAO to provide press release to OCA		Open
C.6.e.3	Appropriate state and local officials -Inform Stakeholders (UCS)	NRR	IMC 0350		Memo to IMC 0350 Panel		Closed 0350 Mtg. 11/28/00
C.6.f	Appropriate public interest groups.	Public Affairs	IMC 0350		N/A		Open
C.6.g	Local news media.	Public Affairs	IMC 0350		N/A		Open



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December 8, 2000

MEMORANDUM TO: J. E. Dyer, Regional Administrator

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

SUBJECT: RECOMMENDATION FOR RESTART APPROVAL FOR THE DONALD C. COOK (D.C. COOK) NUCLEAR PLANT - UNIT 1

This memorandum is to inform you that the NRC staff has completed the inspection and assessment activities outlined in its NRC Inspection Manual Chapter 0350 Restart Action Matrix regarding restart of the Donald C. Cook Nuclear Plant (D.C. Cook) - Unit 1. Previously, the NRC completed its inspection and assessment activities pertaining to Unit 2 restart, which was described in a memorandum to you dated June 12, 2000. Unit 2 successfully started up and attained full power in early July 2000. The NRC began the transition towards implementation of the revised reactor oversight process and the revised assessment process at D.C. Cook upon restart of Unit 2.

In early August 2000, the NRC Restart Oversight Panel approved a revised charter implementing the revised Inspection Manual Chapter 0350. The Panel approved a Restart Action Matrix for Unit 1, which included verifying operability of safety systems and containment, assessing operational readiness, and verifying that licensing issues necessary for restart would be addressed.

The NRC staff has completed its inspection and assessment activities for Unit 1 and has evaluated the effectiveness of the licensee's actions to address the issues that resulted in the plant shutdown. The Panel's assessment of the licensee's corrective actions was based on resident and region-based inspector observations and a number of special inspection efforts, including the Biennial Permanent Modifications and Annual 10 CFR 50.59 Inspection, and a Unit 1 Restart Readiness Assessment Team Inspection.

There have been frequent public meetings between the licensee and the Panel, and frequent internal meetings of the Panel membership. The results of these meetings were documented in public meeting summaries and internal Panel meeting minutes, all of which have been or will be placed in the NRC Public Electronic Reading Room. In addition, the Unit 1 Restart Action Matrix, which documents the actions initiated by the NRC pursuant to the Inspection Manual Chapter 0350 process, is attached. The Unit 1 Restart Action Matrix indicates where the basis for resolution of each issue is documented. In accordance with Inspection Manual Chapter 0350 guidelines, the NRC staff has coordinated with the Federal Emergency Management Agency, and will notify congressional, state and local officials, the media, and other interested parties, following issuance of the letter to American Electric Power closing the Restart Action Matrix.

CONTACT: Anton Vogel  
(630) 829-9620

Accordingly, the NRC Restart Oversight Panel concluded that D.C. Cook's performance improvement initiatives have been sufficiently effective to support restart of D.C. Cook Unit 1, and therefore, the Inspection Manual Chapter 0350 Restart Action Matrix for Unit 1 is closed with the exception of notifications noted above. Therefore, the Panel recommends approval for restart of D.C. Cook, Unit 1.

The NRC Restart Oversight Panel will continue to provide oversight of D.C. Cook through restart of Unit 1 and until sufficient operating experience has accumulated such that augmented NRC oversight through a Restart Oversight Panel is no longer necessary and NRC oversight can occur under the routine inspection program. While the specific Restart Action Matrix issues have been adequately resolved, the licensee is responsible for ensuring that any other issues which may impact plant restart and safe operation are promptly identified and properly addressed. The Region will continue to monitor licensee startup activities through resident and region-based inspections, including a period of continuous observation during restart of the plant.

Docket Nos. 50-315; 50-316

Attachment: Restart Action Matrix

cc w/att: J. Caldwell, RIII  
J. Grobe, RIII