

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.

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DOCUMENT NAME: G:\cook\restart memo to dyer.wpd ***See previous concurrence**
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OFFICE	RIII	E	RIII	E	RIII		RIII	E	NRR
NAME	Passehl*		Vegel*		Holmberg*		Bartlett*		Stang*
DATE	12/8/00		12/8/00		12/8/00		12/8/00		12/7/00
OFFICE	NRR		NRR	E	RIII		RIII		
NAME	Craig*		Bajwa*		Grant		Dyer		
DATE	12/8/00		12/8/00		06/ /01		06/ /01		06/ /01

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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

Attachment

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

December 8, 2000

Item No.	Description	NRC Lead	Inspection Procedure	References	Documentation	ECD	Status
Inspection Report References							
<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 & 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>							
Restart Issues							
1. Ice Condenser Operability							
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)
2. Containment Operability							
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)

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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)
3. Valve Operability							
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)
4.. Auxiliary Feedwater Operability							
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)
5. Electrical System Operability							
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)
6. Emergency Core Cooling System Operability							
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)

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7. Licensing Basis Control Program							
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)
8. Licensing Issues, Amendments, Unreviewed Safety Questions							
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

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Item No.	Description	NRC Lead	Inspection Procedure	References	Documentation	ECD	Status
Guidelines for Restart Approval							
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)

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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.	Veget	IMC 0350		IR 2000023 (11/27/00 to 12/01/00)	11/21/00	Closed IR 2000023 (Pending)

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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