

November 20, 2000

MEMORANDUM TO: Donald C. Cook Nuclear Plant Manual Chapter 0350 Panel

FROM: Geoffrey E. Grant, Director, DRP */RA/*

SUBJECT: MINUTES OF INTERNAL MEETING OF THE DONALD C. COOK  
NUCLEAR PLANT MANUAL CHAPTER 0350 PANEL

The Donald C. Cook Nuclear Plant Manual Chapter 0350 Panel charter was announced on April 17, 1998, and most recently revised on October 4, 2000. These internal meetings are used to discuss significant technical and performance issues, NRC regulatory approach, and inspection resources and priorities. Attached for your information are the minutes from the internal meeting of the Inspection Manual Chapter 0350 Restart Panel held on November 14, 2000.

Docket Nos. 50-315; 50-316

Attachments: As stated

cc w/att: T. Bergman, NRR  
S. Singh Bajwa, NRR  
C. Craig, NRR  
J. Stang, NRR  
J. Thompson, NRR  
J. Grobe, RIII  
G. Grant, RIII  
A. Vogel, RIII  
M. Holmberg, RIII  
B. Bartlett, RIII  
D. Passehl, RIII  
K. Coyne, RIII  
J. Maynen, RIII  
R. Walton, RIII  
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|        |             |  |          |  |          |  |          |  |
|--------|-------------|--|----------|--|----------|--|----------|--|
| OFFICE | RIII        |  | RIII     |  | RIII     |  | RIII     |  |
| NAME   | Passehl/trn |  | Veget    |  | Bajwa    |  | Grant    |  |
| DATE   | 11/17/00    |  | 11/17/00 |  | 11/17/00 |  | 11/20/00 |  |

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MEETING MINUTES: Internal MC 0350 Restart Panel Meeting  
on the D. C. Cook Nuclear Plant

DATE: November 14, 2000

TIME: 1:00 p.m. (Eastern)

**ATTENDEES:**

S. Bajwa  
B. Bartlett  
K. Coyne  
C. Craig

G. Grant  
J. Maynen  
D. Passehl  
J. Stang  
A. Vogel

Discussion Topics:

1. *Plant Status and Inspector Insights*

The Senior Resident Inspector provided a summary of plant activities. Unit 2 continues to operate at full power with no significant equipment problems.

Unit 1 restart activities are continuing. The licensee is making progress toward starting core reload activities. There are a number of items that the licensee must complete in order for core reload to begin. These include items associated with the control room ventilation system, nuclear instrumentation, system turnovers, and housekeeping inside containment.

The Senior Resident Inspector discussed some insights regarding quality of engineering work products, maintenance rule items, and performance indicator data. None were restart concerns.

2. *Discuss Recent Licensee Event Reports*

The Panel discussed the following Licensee Event Reports (LERs) to determine whether the reports should be added to the Unit 1 Restart Action Matrix (RAM):

Unit 1

- 315/2000-007-00, ESF Ventilation System Inoperable Due to Technical Specification Surveillance Test Methodology
- 315/1999-031-01, Valves Required to Operate Post-accident Could Fail to Open Due to Pressure Locking/thermal Binding
- 315/1998-053-01, Failure to Calibrate the Core Exit Thermocouples as Required by Technical Specifications
- 315/1998-051-01, Reactor Trip Signal from Manual Safety Injection Not Verified as Required by Technical Specification Surveillance
- 315/1998-034-01, "Flow Rates to Containment Spray Headers Are Potentially Lower than Design Basis Values

## Unit 2

- 316/2000-014-00, Reactor Trip Signal Not Verified as Required by Technical Specifications
- 316/1998-049-01, Emergency Boron Injection Flow Path Inoperable Due to Original Design Deficiencies

The issues described in several of the LERs above had been previously reviewed prior to restart of Unit 2. The Panel reviewed the information provided in the supplemented LERs and in the new LERs and determined that none of the LERs above should be added to the Unit 1 RAM. However, Mr. Bartlett took action to review the licensee's corrective actions for LER 316/2000-014-00 as part of the resident inspectors' review of licensee surveillance activities. In addition, Mr. Passehl took action to include this LER when reviewing the effectiveness of the licensee's corrective actions during the upcoming Problem Identification and Resolution Inspection, currently scheduled for early in 2001.

### 3. *Discuss Restart Readiness Team Inspection Plan*

The Panel approved the Restart Readiness Team Inspection Plan.

### 4. *Discuss Restart Action Matrix (RAM)*

The Panel reviewed the status of items listed on the Unit 1 RAM. The Panel approved closure of the following Unit 1 RAM Items:

- RAM Item 8.4, NRC Review of Leak Before Break Methodology for the Pressurizer Surge Line. Closure documentation for this RAM item is provided in a November 8, 2000, letter to the licensee (ADAMS accession number ML003767675).
- RAM Item 8.6, QAPD Cad-Weld Commitment. Closure documentation for this RAM item is provided in a November 7, 2000, letter to the licensee (ADAMS accession number ML003767583).

### 5. *Discuss Licensee's Reply to Allegations*

The NRC had requested D.C. Cook to perform an investigation into concerns provided to the NRC and provide a written response. The Panel discussed the licensee's responses to determine the impact of the concerns on Unit 1 restart and whether additional action was necessary.

### 6. *Discuss Potential Reduction in Margin of Structural Members in the Ice Condenser*

The Panel discussed an issue regarding the potential reduction in margin of structural members in the ice condenser. The licensee documented this issue in Licensee Event Report 315/2000-001-00, "Stress Loads for the Ice Condenser Basket Assembly Greater than Allowed by Safety Analysis Report." The NRC determined that there was no Unreviewed Safety Question with respect to structural margins in the ice condenser.

7. *Discussion of Licensing Plan - Discuss Licensing Issues/USQs That Need to Be Reviewed and Preliminary Scope and Schedule of Reviews*

The Panel reviewed the status of licensing issues as listed on the Unit 1 RAM. All issues appeared close to being resolved on schedule.

8. *Discuss/Update Milestones and Commitments.*

The Panel discussed important upcoming meetings and deadlines.

9. *Other.*

Enclosure 1 provides latest Restart Action Matrix.

Enclosure 1

## D. C. Cook Restart Action Matrix

### Unit 1

November 14, 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)</p> <p>NRR NRC Office of Nuclear Reactor Regulation</p> <p>RRATI Restart Readiness Assessment Team Inspection</p> <p>SER Safety Evaluation Report</p> <p>SRI Senior Resident Inspector</p> <p>UCS Union of Concerned Scientists</p> <p>IR 2000021 - Biennial Permanent Mods &amp; Annual 50.59 Insp 11/06/00 to 11/17/00</p> <p>IR 2000022 - Resident Inspector Report 10/11/00 to 11/11/00</p> <p>IR 2000023 - Unit 1 Restart Readiness Assessment Team Inspection 11/27/00 to 12/01/00</p> <p>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<br><br>IR 99026 | IR 2000022 (10/11/00 to 11/11/00) | 11/06/00 | Closed<br><br>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 | Open                               |
| 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 2000022 (10/11/00 to 11/11/00) | 11/21/00 | Open                               |

## Enclosure 1

| Item No.  | Description  | NRC Lead                                     | Inspection Procedure                          | References   | Documentation                        | ECD                                  | Status |
|---|--|--|---|--|--------------------------------------|--------------------------------------|--------|
| 2.3   | Evaluate Licensee Corrective Actions for Containment Internal Structural Walls   | SRI<br><br>NRR                               | 71111.20<br>(Refueling and Outage Activities) | LER 316/2000-003-00, Containment Internal Concrete Structures Do Not Meet Design Load Margins<br><br>0350 Mtg. Minutes dtd. 06/12/00                 | Memo from NRR to IMC 0350 Panel      | 11/21/00 (SRI)<br><br>11/17/00 (NRR) | Open   |
| <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<br>(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<br><br>IR 2000002 | IR 2000021<br>(11/06/00 to 11/17/00) | 11/21/00                             | Open   |
| 3.2   | Evaluate Modifications Completed to Address Unit 1 Compressed Air System Operability   | Biennial Permanent Mods & Annual 50.59 Insp  | 71111.17<br>(Permanent Plant Modifications)   | IR 99029   | IR 2000021<br>(11/06/00 to 11/17/00) | 11/21/00                             | Open   |
| <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<br>(Permanent Plant Modifications)   | LER 315/1999-026-00, High Energy Line Break Programmatic Inadequacies Result in Unanalyzed Conditions<br><br>IR 2000007                              | IR 2000021<br>(11/06/00 to 11/17/00) | 11/21/00                             | Open   |
| <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<br>(Permanent Plant Modifications)   | IR 2000007   | IR 2000021<br>(11/06/00 to 11/17/00) | 11/21/00                             | Open   |
| <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<br>(Permanent Plant Modifications)   | IR 2000007   | IR 2000021<br>(11/06/00 to 11/17/00) | 11/21/00                             | Open   |

Enclosure 1

| 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 | Open   |
| <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   |                     | IR 2000025 (11/12/00 to 12/31/00)   | 11/21/00 | Open   |
| 8.2   | Tornado Missile Licensing Bases Change - Use of approved PRA Techniques  | NRR   | N/A   | TAC no. MA 9176/77  | License Amendment                   | 11/21/00 | Open   |
| 8.3   | Pressurizer Heater Surveillance Change TS 4.4.2  | NRR   | N/A   |                     | License Amendment 246 (U1) 227 (U2) | 10/20/00 | Closed |
| 8.4   | NRC Review of Leak Before Break Methodology for the Pressurizer Surge Line   | NRR   | N/A   | 11/08/00 SER Issued | SER                                 | 11/14/00 | Closed |
| 8.5   | ILRT TS Change and Exemption   | NRR   | N/A   |                     | License Amendment                   | 11/21/00 | Open   |
| 8.6   | QAPD Cad-Weld Commitment   | NRR   | N/A   | 11/07/00 SER Issued | SER                                 | 11/14/00 | Closed |
| 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   |                     | Memo from NRR to IMC 0350 Panel     | 11/21/00 | Open   |
| 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                   | 11/21/00 | Open   |
| 8.9   | Technical Specification Change Request Valve Position for Automatic Valves in the Auxiliary Feedwater System   | NRR   | N/A   |                     | License Amendment                   | 11/27/00 | Open   |
| <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 2000025 (11/12/00 to 12/31/00)   | 11/28/00 | Open   |



# Enclosure 1

| Item No. | Description   | NRC Lead   | Inspection Procedure                     | References   | Documentation  | ECD      | Status |
|----------|---|--|--|--|--|----------|--------|
| 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)  | 12/01/00 | Open   |
| 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<br>RRATI   | 71111.15 (Operability Evaluations)       |  | IR 2000022 (10/11/00 to 11/11/00)<br><br>IR 2000023 (11/27/00 to 12/01/00) | 12/01/00 | Open   |
| C.4.b    | Operability of required secondary and support systems.  | SRI<br>RRATI   | IMC 0350                                 |  | IR 2000023 (11/27/00 to 12/01/00)  | 12/01/00 | Open   |
| C.4.c    | Results of pre-startup testing.   | SRI  | IMC 0350                                 |  | IR 2000025 (11/12/00 to 12/31/00)  | 12/01/00 | Open   |
| C.4.d    | Adequacy of system lineups.   | RRATI<br>SRI   | IMC 0350                                 |  | IR 2000023 (11/27/00 to 12/01/00)  | 12/01/00 | Open   |
| 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 2000025 (11/12/00 to 12/31/00)  | 12/01/00 | Open   |
| C.4.f    | Significant hardware issues resolved (i.e., equipment with poor material condition, equipment aging, modifications).            | SRI<br><br>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 2000022 (10/11/00 to 11/11/00)  | 11/28/00 | Open   |
| C.4.g    | Adequacy of the power ascension testing program.  | SRI  | IMC 0350                                 |  | IR 2000025 (11/12/00 to 12/31/00)  | 11/28/00 | Open   |

## Enclosure 1

| Item No. | Description   | NRC Lead                   | Inspection Procedure                          | References | Documentation                            | ECD      | Status |
|----------|---|----------------------------|---|------------|--|----------|--------|
| C.4.h    | Effectiveness of the plant maintenance program.               | SRI                        | 71111.12<br>(Maintenance Rule Implementation) |            | IR 2000022<br>(10/11/00 to 11/11/00)     | 12/01/00 | Open   |
| C.4.i    | Maintenance backlog managed and impact on operation assessed. | SRI<br>SRA                 | IMC 0350                                      |            | IR 2000025<br>(11/12/00 to 12/31/00)     | 11/28/00 | Open   |
| C.4.j    | Adequacy of plant housekeeping and equipment storage.         | SRI                        | IMC 0350                                      |            | IR 2000025<br>(11/12/00 to 12/31/00)     | 11/21/00 | Open   |
| 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          | 11/21/00 | Open   |
| C.5.b    | Applicable exemptions have been granted.                      | NRR                        | IMC 0350                                      |            | Memo from NRR to IMC 0350 Panel          | 11/21/00 | Open   |
| C.5.c    | Applicable reliefs have been granted.                         | NRR                        | IMC 0350                                      |            | Memo from NRR to IMC 0350 Panel          | 11/21/00 | Open   |
| C.5.d    | Imposed orders have been modified or rescinded.               | NRR                        | IMC 0350                                      |            | Memo from NRR to IMC 0350 Panel          | 11/21/00 | Open   |
| C.5.e    | Confirmatory Action Letter conditions have been satisfied.    | Vegel                      | IMC 0350                                      |            | Memo to IMC 0350 Panel                   | 11/21/00 | Open   |
| C.5.f    | Significant enforcement issues have been resolved.            | Vegel                      | IMC 0350                                      |            | Memo to IMC 0350 Panel                   | 11/21/00 | Open   |
| C.5.g    | Allegations have been appropriately addressed.                | Vegel                      | IMC 0350                                      |            | Memo to IMC 0350 Panel                   | 11/21/00 | Open   |
| C.5.h    | 10 CFR 2.206 Petitions have been appropriately addressed.     | NRR                        | IMC 0350                                      |            | Memo from NRR to IMC 0350 Panel          | 11/21/00 | Open   |
| 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                   |          | Open   |
| C.6.e.2  | Appropriate state and local officials -Congressional Affairs  | NRR<br>RIII PAO            | IMC 0350                                      |            | RIII PAO to provide press release to OCA |          | Open   |

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| Item No. | Description   | NRC Lead       | Inspection Procedure | References | Documentation          | ECD      | Status |
|----------|---|----------------|----------------------|------------|------------------------|----------|--------|
| C.6.e.3  | Appropriate state and local officials<br>-Inform Stakeholders (UCS) | NRR            | IMC 0350             |            | Memo to IMC 0350 Panel | 11/21/00 | Open   |
| 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   |