

March 13, 2003

MEMORANDUM TO: Davis-Besse Nuclear Power Station IMC 0350 Panel

FROM: John A. Grobe, Chairman, Davis-Besse Oversight Panel

SUBJECT: MINUTES OF INTERNAL MEETING OF THE DAVIS-BESSE  
OVERSIGHT PANEL

The implementation of the IMC 0350 process for the Davis-Besse Nuclear Power Station was announced on April 29, 2002. An internal panel meeting was held on March 4, 2003. Attached for your information are the minutes from the internal meeting of the Davis-Besse Oversight Panel , Integrated Leak Rate Test Inspection Plan (50-346/2003-005(DRS), Emergency Core Cooling System and Containment Spray System Sump Inspection Plan ( 50-346/2003-006), and the "Open" Action Items List.

Attachments: As stated

cc w/att: H. Nieh, OEDO  
J. Dyer, RIII  
J. Caldwell, RIII  
M. Parker, RIII  
K. Coyne, NRR  
D. Thatcher, NRR  
DB0350

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|        |              |  |          |  |          |  |  |
|--------|--------------|--|----------|--|----------|--|--|
| OFFICE | RIII         |  | RIII     |  | RIII     |  |  |
| NAME   | DPassehl/klg |  | CLipa    |  | JGrobe   |  |  |
| DATE   | 03/08/03     |  | 03/06/03 |  | 03/13/03 |  |  |

**OFFICIAL RECORD COPY**

MEETING MINUTES: Internal IMC 0350 Oversight Panel Meeting  
Davis-Besse Nuclear Power Station

DATE: March 4, 2003

TIME: 1:00 p.m. Central

ATTENDEES:

|            |            |             |             |
|------------|------------|-------------|-------------|
| J. Grobe   | K. Coyne   | D. Hills    | M. Phillips |
| C. Lipa    | M. Parker  | R. Gardner  | D. Thatcher |
| J. Hopkins | D. Passehl | S. Burgess  |             |
| C. Thomas  | J. Collins | Z. Falevits |             |

Agenda Items:

1. Plant Status and Inspector Insights

C. Thomas provided a briefing on current plant activities.

2. Discuss Inspection Plans

K. Coyne presented the inspection plan for the emergency core cooling system and containment spray system sump. The Panel approved the plan with minor comments. The approved plan is attached to these minutes.

**NEW ACTION ITEM** - Containment coatings will not be covered in the emergency core cooling system and containment spray system sump inspection. C. Lipa took action to determine which inspection will cover this activity.

M. Farber presented the inspection plan for the containment integrated leak rate test. The Panel approved the plan with minor comments. The approved plan is attached to these minutes.

**NEW ACTION ITEM** - D. Passehl took action to research IMC 0620 and determine what the agency policy is regarding placing inspection plans on ADAMS, including when (e.g., before or after conduct of the inspection) does the plan need to be posted.

Z. Falevits presented the inspection plan for the corrective action team inspection. The Panel had a number of comments. Z. Falevits took action to incorporate the comments into his inspection plan. The Panel directed that further reviews of the Restart Action Matrix be performed to determine which of the NRC's special inspections are to contribute to closing out particular Restart Action Matrix items. The corrective action team inspection plan will be presented again to the Panel at a future meeting.

S. Burgess and M. Parker discussed their views regarding performance of a backlog assessment inspection to be performed by the senior reactor analysts. The Panel tabled this issue for future discussion.

**NEW ACTION ITEM - C.** Lipa took action to determine the type of backlog assessment that will be performed and by whom. Two attributes need to be considered: (1) the capability of the licensee to manage the backlog in an operating environment; and (2) the impact of the backlog on equipment reliability.

3. Discuss E-Mail From JCraig Regarding Follow-up to February 4, 2003, Commission Briefing

The Panel discussed February 24, 2003, email to J. Grobe and B. Brach from Paul Gunter, Director, Reactor Watchdog Project, regarding the February 4, 2003, Commission Meeting on Davis-Besse.

**NEW ACTION ITEM - S.** Thomas took action to provide an answer to the following questions and document in his next inspection report:

1) Did NRC's O350 Panel review FirstEnergy's analysis to forego inspection and testing of two of the four reactor coolant pumps to assure compliance with technical specifications and regulatory requirements? (RAM Item E-23)

2) If so, what were the NRC findings? (RAM Item E-24)

4. Discuss Items from March 3, 2003, Allegation Review Board Meeting

D. Passehl discussed the results of the March 3, 2003, Allegation Review Board meeting.

**NEW ACTION ITEM - D.** Passehl took action to draft a memo to NRR (Tad Marsh) to include in response to AMS RIII-03-0014 (Kucinich Petition) that RIII reviewed the petition and there are no new technical issues.

5. Discuss Action Items

The Panel discussed the list of "open" action items. The Panel directed that Action items 139, 142, 160, 161, 170 be closed due the actions being accomplished.

Item 139 - "Licensing Actions Review for DBOP [Davis-Besse Oversight Panel] Internal Meetings"

Item 142 - "Properly reassign past inspection hours charged to TAC W90086 into the Reactor Program System (RPS). Prepare a memo to JDyer to reassign hours."

The Panel determined that the inspection hours going forward, starting on February 9, 2003 would be assigned to Special Inspection Procedure 93812.

The SRI & BC reviewed past charges to TAC W90086 by the SRI & RI and determined that 792 hours were charged between April 02 and Feb. 8, 2003. Of that, approximately 317 hours were direct inspection.

Item 160 - "Draft fragnet of inspection resources, plans, and schedules"

Item 161 - "Update the RAM"

Item 170 - "Prepare a special inspection plan for the ILRT [Integrated Leak Rate Test]"

6. Discussion of Licensing Issues and Actions

J. Hopkins and A. Mendiola discussed the status of licensing issues and actions. No new items were identified.

7. Discuss Items for Licensee Weekly Calls

The Panel discussed discussion topics for the next weekly call with the licensee.

8. Discuss/Update Milestones and Commitments

The Panel reviewed and discussed upcoming milestones and commitments. No new items were identified.

| Item Number | Action Item (Date generated)   | Assigned to | Comments   |
|-------------|--|-------------|--|
| 24a         | Discuss making information related to HQ/licensee calls publicly available | Panel       | <p>Discuss by June 30, after safety significance assessment complete. 6/27 - Invite Bateman to panel mtg. To discuss what else is needed to closeout the CAL (i.e. quarantine plan). 7/2 - NRR not yet ready to discuss. 7/16 - See if procedures have changed on CAL closeout - does JD need to send letter? 7/18 - Discussed - is there an applicable regional procedure? 8/6 - Discussed. Need to determine the final approach on the core removed from the head and the final approach on the head before the quarantine can be lifted. 8/22 - Revisit action item after letter sent to licensee confirming plans with old vessel head (head may be onsite longer than originally anticipated) 8/29 - Memo to be sent to Region, with a letter to go out next week. 10/01- Discussed.</p> <p>1) Conduct NRC staff survey-due 10/7 2)Memo to NRR - due 10/11 3) Region to issue letter 11/07- Letter required from NRR on head quarantine status. 11/19 - Letter in draft. 01/03 - A. Mendiola to look at phone conference writeups on quarantine decision making to determine if they can be released to the public. 01/07 - discussed 01/21 - discussed. 01/31- A. Mendiola's action. 02/11 - Completion of Licensee Phase 3 sampling plan required. 02/21 - 17.5 Rem to cut samples, Less samples may be required.</p> |

| Item Number | Action Item (Date generated)  | Assigned to | Comments  |
|-------------|---|-------------|---|
| 54a         | Review TSP amendment and advise the panel on the need for a TIA on Davis-Besse (7/2)  | D. Pickett  | <p>7/9 - Discussed. Will wait for response from licensee; 7/16 - Discussed - added action item 54b; 8/6 - Sent to the licensee on 7/22 and a response is due by 8/22; 8/22 - Discussed - need to check if response has been received; 8/27 - Received response - DRS is reviewing - will fax to NRR for 54b; 8/29 - Discussed, DRS report of response to be issued to panel prior to item 54b; 10/1-Discussed. DRS coordinating with NRR; 11/07-Discussed - On hold for draft with specific information; 12/10 - B. Dean believed B. Bateman thought a calculation for sufficient volume of TSP was completed to technical specification value. However questions whether the calculation was to technical specification or actual TSP level remain; 01/03 - Item under NRR review. Calculation completion expected on Jan 17. Allegation issue in RIII domain; 01/07 - Allegation Item #3 under NRR Review for Resolution; 01/21 - Item #3 is under Region III control for final letter, holding for NRR input; 02/11 - Writeup for NRR input provided 4 answers, going back to reviewer to ensure specific tasking is clear to answer allegation concerns. Action item 54c created; 02/21 - Allegation at 242 day mark. Effective expression of due date required; 02/24 -further communications with the Technical Specification Branch in HQ deemed necessary</p> |
| 54c         | In relation to action item 54a - Assess method to ensure Technical Specifications are adequate for a cycle, administrative controls vs. amending technical specifications (02/11) | A. Mendiola | 02/11 - Address first meeting in March  |

| Item Number | Action Item (Date generated)   | Assigned to              | Comments   |
|-------------|--|--------------------------|--|
| 73          | Send feedback form on IMC 0350 procedure to IIPB (8/6)   | Lipa Mendiola            | 8/6 - Generate feedback after panel meetings reduced to once per week. 8/29 - Discussed - no change. 10/1 - Discussed. 11/7 - D Passehl sent email to C Carpenter and D Coe indicating that we would be able to perform a review of the draft IMC 0350 during the first quarter of 2003. 12/3- discussed. 01/03 - 2 parts, short part- C. Lipa with P. Harris, long part- B. Dean. 01/07 - 2 <sup>nd</sup> larger response will require meeting between all parties. 01/21 - Communications with P. Harris 01/31-Meeting with P. Harris on Feb 4. 02/11 - Many concerns identified by the panel for inclusion. 02/21 - July 1 due date for larger input. |
| 97          | Bulletins 2002-01 and 2002-02 response and acceptance (9/5)  | NRR                      | 11/07 - Discussed, further research and discussion required; 01/07 - RAI response expected Mid February; 01/31- On track; 02/11 - New Orders will supercede BL2002-01 and BL2002-02 responses with the exception of the BL2002-01 Boric Acid Corrosion program information request; 02/21 - Licensee RAI response delayed. Both Order and BL2002-01 Boric Acid Corrosion program responses to be tracked as RAM items; 02/24 - Licensee response to an RAI request is expected on March 7.   |
| 126         | Review Davis-Besse/Vessel Head Degradation web site content for ease of use by the public. (11/07) | Strasma                  | 02/11 - Checked, but revisiting item. 02/21 - Web site being reassessed.   |
| 132         | Consolidate RAM (12/19)  | C.Lipa/<br>A.Mendiola    | Due Fri 1/17. 01/31 - Item open 02/11 - working 02/21 - to determine the need for ONE list.  |
| 133         | 12/29 Taping of debate   | J.Collins/<br>D.Simpkins | 01/03 - Licensee to deliver tape to J. Strasma 02/24 - Tape sent   |

| Item Number | Action Item (Date generated)  | Assigned to          | Comments   |
|-------------|---|----------------------|--|
| 136         | NRR acceptance of NOP/NOT criteria and method (01/03)   | W. Dean              | 01/07 - Item discussed. Meeting summary of November 26, 2002 meeting has notation of NRR staff impressions of test plan. Once drafted, issue will be surveyed to staff to determine if consciences is correct. 01/21 - Meeting summary to discuss Fluse System, Test agreement, and future inspections. 1/31 - T. Chan fwd to J. Hopkins. 2/11 - J. Jacobson questions need to be folded in (chem-wipes) 2/21 - Polling of staff discussed. 2/24 - Polling of staff by March 7 |
| 138         | Evaluate the effectiveness of the Comm Plan (01/07)   | A. Mendiola, C. Lipa | 01/31 - Ongoing 02/21 - New EDO Comm Plan for Crisis Update, A. Mendiola to review for inclusion.  |
| 139         | Licensing Actions Review for DBOP internal meeting on 01/21/03 (01/07)  | J. Hopkins           | 01/21 - Moved to next internal meeting. 01/31 - Moved 02/11 - Next meeting 02/21 - Moved 03/04 - closed  |
| 142         | Properly reassign past inspection hours charged to TAC W90086 into the Reactor Program System (RPS). Prepare a memo to JDyer to reassign hours. (01/09) | C. Lipa              | 01/31 - In progress<br>02/11 - Resident Inspector 0350 special inspection plans presented to the panel and accepted. 02/21 - Note how many 0350 hours would have been assigned to inspection prior to the 0350 inspection TAC creation. 03/04 - Decided inspection hours going forward, starting on Feb. 9, 2003 would be assigned to Special Insp. Procedure 93812 - closed.  |
| 143         | Prepare a special inspection plan for the NOP/NOT test. (01/09)   | J. Jacobson          | 02/21 - date to be determined  |
| 144         | Prepare a special inspection plan for the corrective action team inspection. (01/09)  | D. Hills             | 01/31 - Working Z. Falevits and R. Gardner; 02/21 - date to be determined; 03/04 - plan discussed and comments to be incorporated  |
| 145         | Prepare a special inspection plan for the restart readiness team inspection. (01/09)  | D. Passehl           | 02/21 - date to be determined  |

| Item Number | Action Item (Date generated)   | Assigned to | Comments  |
|-------------|--|-------------|---|
| 147         | Generate a list of items to consider after restart as well as transition back to the normal 0350 when terminating the 0350 Panel. The items should include plans to augment inspection of corrective actions, inservice inspection, and safety culture monitoring. (01/09) | D. Passehl  | 01/31 - working;<br>02/11 - Include dates and deadlines to Manual Chapter 0350 restart inspections planner                                      |
| 149         | SRI to coordinate with GWright inspection of corrective actions that have been completed by the resident staff. The intent is to find ways to allow GWright's inspection to take credit for what the resident staff already accomplished. (01/09)                          | S. Thomas   | 01/31 - open;<br>02/11 - Documented items in Resident Inspection Report;<br>02/21 - Good communications noted; 03/04 - Documentation in IR03-02 |
| 150         | SBurgess to develop a position paper on the state of plant risk when the plant attains Mode 4 for the first time. The purpose is to support NRC scheduling of major inspections until closer to Mode 2. (01/09)  | S. Burgess  |   |
| 151         | Develop a plan to assess the safety culture at the plant to close Restart Checklist Item 4.b, effectiveness of corrective actions. Discuss at next 0350 internal Panel meeting. (01/09)  | G. Wright   |   |

| Item Number | Action Item (Date generated)   | Assigned to                | Comments  |
|-------------|--|----------------------------|---|
| 154         | Marty has action to followup by 1/21 with licensee to understand licensee's actions to address common mode failure issues (i.e., topical issues) and brief Panel. Then develop inspection plan to address topical issues. (01/09)  | M. Farber                  | 02/21 - Date to be determined   |
| 156         | Read Generic Safety Issue-191, "Assessment of Debris Accumulation on PWR Sump Pump Performance" (01/09)  | J. Hopkins                 | 01/21 - Determine status of GSI-191; 02/21 - Check GL98-04 response on coatings. Draft GL and Draft Reg Guide needs review for DB relevance; 02/24 - Request Response Review and Program Implementation to GL98-04; 03/04 - activity to be reassigned to Reactor Engineer who will close sump LER |
| 158         | In Ken O'Brien's programmatic inspection plan, add to the summary page the addition of Restart Checklist Item 3.i, Process for Ensuring Completeness and Accuracy of Required Records and Submittals to the NRC, and deletion of Item 3.h, Radiation Protection Program. (01/09) | D. Hills/<br>J. Jacobson   | 02/25 - Plan for Programs, part 2 brought to panel - comments to be incorporated.   |
| 160         | Draft fragnet of inspection resources, plans, and schedules. (01/09)   | C. Lipa                    | 01/21 - Fragnet-"time line"; 01/31 - Names needed; 03/04 - closed   |
| 161         | Update the RAM. (01/09)  | J. Jacobson<br>M. Phillips | 02/21 - Add NCV's to RAM; 03/04 - closed  |
| 162         | Modified Containment Walkdown List assessment to look into effects on ILRT and NOP/NOT tests. (01/21)  | P. Lougheed                | 02/21 - Factor into ILRT plan   |

| Item Number | Action Item (Date generated)   | Assigned to | Comments  |
|-------------|--|-------------|---|
| 163         | Flag Allegations requiring action prior to restart (01/21)   | M. Phillips | 02/11 - All of them require action. Resolve with one letter including Item 164; 02/21 - Develop criteria for Allegations considered Restart Items. Criteria needs Panel approval. |
| 164         | Discuss the need for a Chilling Effect Letter with Bruce Berson (01/21)  | M. Phillips | 01/31 - Pre-work and then ARB; 02/11 - Resolve with one letter including Item 163; 02/21 - Draft letter with C. Lipa, emailed to Panel for review;                                |
| 166         | Once DRS has developed a draft CY-2004 baseline inspection schedule for Davis-Besse (in conjunction with the upcoming regional inspection planning meeting), DRS will present this to the 0350 panel for review. (01/31) | Panel       | 02/11 - currently in planning; 02/21 - inspection schedule letter due as soon as possible; 03/04 - in final   |
| 170         | Prepare a special inspection plan for the ILRT (02/11)   | M. Farber   | 03/04 - closed  |
| 172         | Create a schedule letter to replace/notify that annual assessment letter and end of cycle public meetings are not occurring (02/11)  |             | 02/11 - Panel determined that Annual Assessment letter and End of Cycle public meetings not occurring.  |
| 173         | Prepare an OSHA MOU letter based on email dated 2/6 from Bilik (2/18)  | S.Thomas    | 02/21 - D. Simpkins working   |
| 174         | Review 2/4 transcript for Mr. Witt's recommendations (2/18)  | R. Lickus   |   |
| 175         | LER licensee commitment on Containment Air Cooler Supplement for 01/31/03 (02/21)  | J. Hopkins  | 02/21 - Attempt to get by end of February; 03/04 - Licensee wrote CR to address missed commitment   |
| 176         | Determine which inspection will cover containment coatings (03/04)   | C. Lipa     |   |

| Item Number | Action Item (Date generated)  | Assigned to | Comments |
|-------------|---|-------------|----------|
| 177         | Research IMC0620 and determine what agency policy re: placing inspection plans on ADAMS, including when (e.g., before or after conduct of inspection) does the plan need to be posted. (03/04)  | D. Passehl  |          |
| 178         | Determine the type of backlog assessment that will be performed and by whom. Two attributes need to be considered: (1) the capability of the licensee to manage the backlog in an operating environment; and (2) the impact of the backlog on equipment reliability. (03/04)  | C. Lipa     |          |
| 179         | Provide answer to questions and document in next inspection report:<br>1) Did NRC's O350 Panel review FirstEnergy's analysis to forego inspection and testing of two of the four reactor coolant pumps to assure compliance with technical specifications and regulatory requirements? (RAM Item E-23)<br>2) If so, what were the NRC findings? (RAM Item E-24) (03/04) | S. Thomas   |          |
| 180         | Draft a memo to NRR (Tad Marsh) to include in response to AMS RIII-03-0014 (Kucinich Petition) that RIII reviewed the petition and there are no new technical issues. (03/04)   | D. Passehl  |          |

## INSPECTION PLAN

### INTEGRATED LEAK RATE TEST

#### Davis-Besse Nuclear Power Station

Inspection Report Number 50-346/2003005(DRS)

#### Inspection Objectives

There are four objectives for this integrated leak rate test (ILRT) inspection:

1. To review the calculation establishing volume fractions to be used in placing instrumentation.
2. To review the ILRT procedure.
3. To monitor the preparation for and performance of the ILRT
4. To evaluate the results of the ILRT

**Inspection Dates:** March 17 through 27, 2003

#### Applicable Inspection Procedures

IP 70307, "Containment Integrated Leak Rate Test Procedure Review"

IP 70313, "Containment Integrated Leak Rate Test Surveillance"

IP 70323, "Containment Integrated Leak Rate Test Results Evaluation"

IP 93812, "Special Inspection"

Prepared by:     /RA/    

Martin J. Farber  
Patricia Lougheed

Reviewed by:     /RA/    

Ronald N. Gardner, Chief  
Electrical Engineering Branch

Reviewed by:     /RA/ 03/04/03    

Christine A. Lipa, Chief  
Reactor Projects Branch 4

Approved by :     /RA/ 03/13/03    

John A. Grobe, Chairman  
Davis-Besse Oversight Panel

## **INSPECTION PLAN DETAILS**

### **I. Inspectors**

M. Farber, Reactor Inspector  
V. Patricia Lougheed, Reactor Inspector

### **II. Inspection Approach**

The inspection of the ILRT incorporates the following components:

- 1) Ascertain if the licensee's procedure for the performance of the ILRT complies with regulatory requirements, guidance, and licensee commitments.
- 2) Evaluate the technical adequacy of this procedure to determine containment leak tight integrity.
- 3) Witness test preparation activities to ensure that the ILRT results will not be invalidated due to improper valve lineups or unaccounted for air inleakage .
- 4) Ascertain through inspector observation, records review, and independent calculations whether the ILRT is being properly conducted
- 5) Independently verify the acceptability of test results through on-the-spot analysis and further in-depth, independent analysis.
- 6) Ensure test is properly validated in accordance with regulations
- 7) Verify that the licensee has adequately performed, reviewed, and evaluated the operational Type A containment tests (ILRT)

### **III. Detailed Inspection Schedule**

#### Preparation

- NRC Inspection Procedure review March 3 - 6, 2003
- ILRT Procedure Review March 10 - 14, 2003
- Review ILRT lineup drawings March 10 - 14, 2003
- Travel March 17, 2003

#### ILRT Inspection

- Entrance Meeting: March 18, 2003
- Monitor ILRT Test briefing March 20, 2003
- Continue Procedure and Lineup Drawing Review, March 17 - 21, 2003
- Monitor Valve Lineups and Instrument Placement, March 17 - 20, 2003

- Final containment walk-through, March 20 2003
- Monitor Pressurization, At-pressure data collection, validation, and depressurization, March 21 - 24, 2003
- Monitor system restoration, March 24 - 25, 2003
- Review test results, March 26 - 27, 2003
- Exit meeting, March 28, 2003

#### Inspection Documentation

- Inputs Due: Close of Business, April 4, 2003
- Draft Completed: April 11, 2003
- Management Review and Approval Completed: April 18, 2003
- An inspection report must be issued before April 27, 2003 (30 days from the exit)

#### **IV. Specific Inspection Activities**

##### a. Review the following activities

- ILRT test procedure
- ILRT test boundary drawings
- ILRT test briefing
- Containment readiness walkdowns
- Valve lineups
- Instrument placement
- containment pressurization
- At-pressure data collection
- Validation
- Post-test system and containment restoration
- Test results

#### • **Starfire Information**

There are currently no resource estimates for this inspection. Direct inspection time will be charged to Inspection Procedure 93812 with an IPE of "ER." Preparation and documentation for this inspection will use an IPE of SEP or SED.

#### • **Findings**

The Risk Informed Inspection Notebook and the Significance Determination Process (SDP) for Davis-Besse Nuclear Power Station have been developed and approved. Inspectors must be able to address the questions of Manual Chapter 0612 and process the finding through phase 2 of the SDP as necessary. Green findings will be documented in the inspection report. Findings that appear to be "other than green" shall be immediately discussed with the licensee and the senior reactor analyst, to ensure that Davis-Besse PRA information is correctly considered. Enforcement action for green or non-SDP issues will be handled in accordance with the Enforcement Policy.

- **Documentation**

The report will be prepared in a format similar to that contained in Manual Chapter 0612, allowing for documenting of observations due to the nature of the inspection. Completion of this inspection will satisfy Restart Action Matrix item C-11, Evaluate Containment Integrated Leak Rate Test Results and the portion of SUP-52, which directs assessment of the programs and controls (tracking systems) in place for maintaining knowledge of the configuration of the fission product barriers including containment leakage monitoring and tracking, and containment isolation device operability (valves, blank flanges).

- **Interface and Coordination**

Meetings with the Licensee

- An entrance meeting will be held at 9:30 a.m. on Friday, March 18, 2003
- The exit meeting is tentatively scheduled for 10:30 a.m. on Friday, March 28, 2003

Routine Interactions

Through-out the inspection, inspectors are expected to have routine interactions with licensee employees. It is expected that these interactions will be professional in nature and will normally be conducted without the lead inspector present. Any questions or requests for further information arising from these meetings will be conveyed to the lead inspector.



## INSPECTION PLAN DETAILS

**I Inspector:** Kevin Coyne, Operations Engineer, NRR

**II Schedule:**

|                               |  |
|-------------------------------|--|
| Send Inspection Request List: | February 19, 2003<br>(Documentation is not expected to be complete until March 15, 2003) |
| Inspection Preparation:       | March 24 - March 28, 2003  |
| Entrance Meeting              | March 31, 2003   |
| Onsite Inspection:            | March 31 - April 4, 2003   |
| Exit Meeting:                 | TBD  |

**III Preparation:**

The inspector has established a point of contact and requested documents needed to support the inspection prior to the start of on-site inspection activities. The following points of contact have been established:

|             |                |
|-------------|----------------|
| Bill Marini | (419) 321-7523 |
| Mark Rimer  | (419) 321-7463 |

The inspectors will review the applicable UFSAR and TS requirements, in addition to NRC guidance associated with the resolution of Generic Safety Issue 191, "Assessment of Debris Accumulation on PWR Sump Performance."

**IV Region III Inspection Activities:**

The review shall cover the as-built design features of modifications to the Emergency Core Cooling System (ECCS) sump to verify its capability to perform its intended functions with a sufficient margin of safety. The inspection will focus on the impact of system modifications rather than original system design. Information from this inspection will be used as an input into the assessment of the licensee's ability to maintain and operate the facility in accordance with the design basis (See Davis-Besse Restart Action Matrix Item SUP-23 and IP 95003, paragraph 02.03.b). The inspectors will observe/review the following critical attributes of the recirculation sump modification:

1. Computational methods and results consistent with licensing basis and computer codes are approved for use.
2. Structural analyses consistent with licensing basis assumed loadings for seismic events, missile impact, jet impingement, and differential pressure.
3. Net positive suction head limitations met and consistent with licensing basis assumptions.

4. Sump screen capability to resist clogging and prevent bypass of material that could damage emergency core cooling or spray system (e.g. pump damage, clogging of spray heads, clogging of ECCS throttle valves)
5. Licensee adequately considered changes to the sump configuration on the ability to maintain critical safety functions (e.g. impact on sump instrumentation, capability to maintain water seal on sump suction valves, ECCS switch over criteria)
6. As-built configuration of modified sump consistent with design (completion of this attribute may require assistance from regional staff if field work is not complete when the on-site inspection is performed).
7. Conformance with draft staff guidance contained in the resolution to GSI-191, "Assessment of Debris Accumulation on PWR Sump Performance"
  - Draft generic letter 2003-xx, "Potential Impact of Debris Blockage on Emergency Recirculation During Design-Basis Accidents at Pressurized-Water Reactors." (ADAMS Accession No. ML022740574)
  - Prepublication Draft Regulatory Guide DG-1107, "Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident," (ADAMS Accession No. ML023100171)

Detailed review/inspection guidance for review of the containment sump modification design, implementation, testing, and configuration control is provided below (this information has been extracted from IP 95003 and IP 71111.17):

a. Design Review

Compare the as-built design with the current design basis and the licensing requirements for the selected system and consider the following questions:

- Verify that the modification does not invalidate assumptions made as part of the original design and the accident analyses, including interfaces with supporting systems.
- Does the modification invalidate design input parameters provided to accident analyses vendors?
- Have modified structures surrounding safety equipment, components, or structures been evaluated for seismic 2-over-1 considerations? Have modified equipment or components under the scope of 10 CFR 50.49 been thoroughly evaluated for environmental equipment qualification considerations such as temperature, radiation, and humidity.

Verify that fire, flood, missile, and high energy line break equipment protection barriers and systems have not been compromised.

#### Flowpaths and Hydraulic Characteristics

- Verify that revised flowpaths serve functional requirements under accident/event conditions. Verify that sump design does not impair subcompartment flow and is within design and licensing basis.
- Verify modification meets objectives without adversely impacting safety functions (e.g. net positive suction head requirements met, strainer removes debris to prevent loss of ECCS or spray, etc)

#### Structural Integrity & Material Compatibility

- Verify materials are compatible with physical interfaces and serve functional requirements under accident/event conditions.
- Verify replacement components are seismically qualified for application and safety classification is consistent with design bases.
- Verify modified SSCs structural integrity (including attachment points) acceptable for accident/event conditions (e.g. sump strainer can withstand expected missile, jet impingement, and differential pressure loadings).

#### Timing/Sequence Impact

- Verify that any timing or sequence changes during design basis accidents caused by changes to sump configuration are bounded by accident analyses (e.g. time to flood containment, time to sump swap over, etc.)
- Verify equipment will be able to function for the duration required under accident/event conditions (e.g. NPSH evaluation considers transient conditions and debris loading).

#### Licensing Basis Review

- 10 CFR 50.59 evaluation - verify whether the selected modifications have introduced a safety question (see 10 CFR 50.59.(c)(2)). Verify acceptability of licensee's conclusions for those modifications where evaluations in accordance with 10 CFR 50.59 were not performed.
- Verify that necessary Technical Specification changes have been identified and NRC approvals, if required, were obtained prior to modification implementation.

- Failure Modes Verify those failure modes introduced by the modification are bounded by existing analyses.

#### Modification Process Review

- Review the licensee's control of vendor supplied services and products including the evaluation for technical adequacy and quality assurance. The licensee's evaluation and control of vendor supplied services and products should be multi-disciplinary in its approach, including operations, engineering, maintenance, and the affected plant support groups.
- Verify that operations, engineering, maintenance, and affected plant support groups are involved in the evaluation and concurrence process for approving modification packages and related field change requests
- Ensure that verification and validation of computer programs used for design and for monitoring of important safety features has been adequately accomplished.

#### b. Implementation Review

Verify that affected operation procedures and training have been identified and necessary changes are in process. Verify that the plant simulator has been updated as required.

Determine if the system is operated consistent with the design and licensing documents.

As applicable, verify that new SSCs added to the plant have been reviewed for inclusion in the maintenance rule scope.

Verify consistency between system design and operation.

- Training programs are consistent with the current design.
- Verify that any required operator actions can be performed in the required time frame to mitigate design basis events. Verify that any changes to operator actions resulting from system modification(s) have been subjected to a safety evaluation and are consistent with the UFSAR including the accident analyses.

c. Testing Review

Verify that post-modification testing will maintain the plant in a safe configuration during testing. Verify that post-modification testing will establish operability by:

1. Verifying that unintended system interactions will not occur.
2. Verifying SSC performance characteristics, which could have been affected by the modification, meet the design bases.
3. Validating the appropriateness of modification design assumptions.
4. Demonstrating that the modification test acceptance criteria have been met.

NOTE: Licensees often use existing procedures, such as surveillance procedures, for post-modification testing. Although performance of existing procedures may have been reviewed by inspectors for other inspectable areas, inspectors still need to verify the appropriateness of using the existing procedures for validating the modification (as opposed to simply confirming continued operability).

d. Updating/Configuration Control Review

Verify that design and licensing documents have either been updated or are in the process of being updated to reflect the modifications. Examples of design documents which could be affected by modifications are: updated final safety analysis report, drawings, supporting calculations and analyses, plant equipment lists, and vendor manuals. Verify that provisions are in place and being followed to assure the accurate recording of the as-designed and as built conditions during the interim period between modification implementation and incorporation into the plant design basis documents.

Verify that significant plant procedures, such as normal, abnormal, and emergency operating procedures, testing and surveillance procedures, and licensed operator training manuals are updated to reflect the effects of the modification prior to being used.

If the plant modification added or deleted functions that could affect the plant specific SDP worksheets, inform the Regional SRA.

## **VI Documentation:**

The inspector will present the findings from this inspection/review to the 0350 Panel prior to a final exit meeting with the licensee.

Inspectors will document inspection findings and observations in report 50-346/03-006. The target date to issue the report will be 30 days following the exit meeting.

### **List of information to request for on-site inspection beginning on March 31, 2003.**

- 1) Schedule for completion of sump modification package and field work.
- 2) Documentation related to the genesis of ECCS sump modification, including the associated engineering change request package.
- 3) ECCS sump modification package including 50.59 evaluation.
- 4) Evaluation of operating procedure impacts and post modification testing requirements for modification (if not included in ECCS sump modification package).
- 5) Fabrication and construction drawings for the ECCS sump modifications.
- 6) List of calculations and analyses supporting sump modification, including brief overview of purpose and results.
- 7) List of condition reports and non-conformance reports associated with the ECCS sump modification, with a brief description of the condition.
- 8) List of procedures/work orders (including description) that control the work activities.
- 9) Field change requests for ECCS sump modification