

May 26, 2004

MEMORANDUM TO: Davis-Besse Oversight Panel

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

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 November 18, 2003. Attached for your information are the minutes from the internal meeting of the Davis-Besse Oversight Panel, the Closure Basis Document to Support Closure of Restart Checklist Item 2.c, and the approved RAM Closure Forms.

Attachments: As stated

cc w/att: D. Weaver, OEDO
J. Caldwell, RIII
G. Grant, RIII
S. Reynolds, DRP
B. Clayton, EICS
DB0350

DOCUMENT NAME: C:\ORPCheckout\FileNET\ML041530484.wpd

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	RIII	RIII	RIII	RIII
NAME	RBaker/dtp	DPassehl	CLipa	JGrobe
DATE	05/17/04	05/24/04	05/19/04	05/26/04

OFFICIAL RECORD COPY

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

DATE: November 18, 2003

TIME: 12:30 p.m. Central

ATTENDEES:

J. Grobe	W. Ruland	M. Salter-Williams
C. Lipa	J. Hopkins	J. Lara
D. Passehl	J. Stang	R. Daley
D. Hills	J. Shea	R. Baker
J. Jacobson		

Agenda Items:

1. Discuss/Approve Today's Agenda

The Panel approved the agenda, but modified the order of presentations. **THE APPROVED AGENDA REFLECTS THE ORDER LISTED IN THESE MINUTES.**

2. Discuss Plant Status and Inspector Insights and Emergent Issues List

M. Salter-Williams led a discussion of plant status and inspector insights and emergent issues. The plant remains in Mode 5. The licensee continues work on the breaker coordination bucket modification. Three breakers have been removed from Motor Control Center E-1. Three major issues have been identified with the modified buckets received onsite: 1) The installed fuses for all disconnects had higher than design ratings, and the fuses will have to be replaced, 2) Field installation wiring does not match the on site wiring, and 3) There have been three failures of relays in the buckets, two failures at the vendor's facility during testing, and one failure onsite. Twelve of the breakers appear to need to be environmentally qualified. The residents will continue to followup on these issues.

The replacement valve for DH 1508 failed during shop bench testing and another valve is on order. This will require another Decay Heat outage once the new valve arrives on site and is tested.

The Engineering Change Request for HPI pump testing is expected to be complete by Thursday, November 20, and the licensee expects to perform the testing this weekend. S. Unikewicz, NRR, is coordinating with J. O'Neill at the site to be onsite to observe testing of at least one HPI pump. S. Thomas, Senior Resident, will also observe the testing.

The most recent update is that the Senior Leadership Team will delay testing of the HPI pumps until 11/28/03, after the completion of the final Engineering Design Modification package.

3. Decision on Closure of Restart Checklist Item 2.c. "Structures, Systems, and Components Inside Containment"

J. Jacobson presented a summary of the closure basis for Restart Checklist Item 2.c, Structures, Systems, and Components Inside Containment. The Panel had previously discussed this item on October 24, 2003, and concluded that three Unresolved Issues (URIs) still required resolution. These issues have been reviewed for resolution, with the following results.

- 1) URI12 - RPV Lower Head Penetration Inspections. The memo to the Panel Chairman, dated 9/17/03, summarized the conclusion from NRC inspectors that the stains observed on the RPV lower head were from run-down from the upper head and that the lower head penetrations were not leaking. Additionally, the results from the NOP test inspection supports the NRC inspectors' conclusion.
- 2) URI13 - Conduit Tray Integrity. This RAM item was approved for closure at the October 9, 2003 Panel meeting, and closure will be documented in the CATI report.
- 3) URI14 - RayChem Splicing. The CR has been written to input training on this issue for contractors. The RAM item is ready to be presented to the Panel for closure, and closure will be documented in the CATI report.

The Panel concurred with the resolution of the URIs and approved closure of Restart Checklist Item 2.c, Structures, Systems, and Components Inside Containment. **THE CLOSURE BASIS DOCUMENT FOR RESTART CHECKLIST ITEM 2.c IS ATTACHED TO THESE MINUTES.**

4. Brief Panel on Appendix R Exemption Issue Update

R. Daley briefed the Panel on the Appendix R Exemption Issue. The SER restraint is 45 minutes based on the level of coolant in the reactor reaching the top of the active fuel region in the event that a PORV fails to reseal during a fire in the control room. The licensee has demonstrated that the PORV block isolation valve can be shut within 15 minutes. The question that remains is - Is it a safety concern to allow the licensee to use RCS inventory reaching the top of the active fuel region as a limit?

The Panel concluded that NRR needs to document whether or not there is a safety concern with letting RCS inventory decrease to the level of the top of the active fuel. The TIA needs to be rewritten to address RCS inventory not Pressurizer indication.

The Panel decided to document the question in a formal manner, by revising the TIA, to allow NRR to document an answer in a formal manner as to whether or not there is a safety concern. R. Daley took the action to revise the TIA and attach it to a memo from R. Daley to J. Grobe by the close of business tomorrow, 11/19/03.

5. Discuss Communication Status

J. Stang briefed the Panel on communication status, reiterating that the Communication Team Tracking Matrix needs to be updated with completion data when the items are

resolved. J. Stang will update the tracking matrix and present the updated matrix for review at the next Panel meeting.

6. Brief Panel on Highlights from 11/12 Public Meetings

C. Lipa briefed the Panel on highlights from the November 12 Public meetings. The major focus of discussions was on the CATI presentation. The Panel will request a followup brief from the licensee for an assessment of the corrective action program for effectiveness of deficiency correction. The Panel needs to understand how the licensee's presentation provides confidence that its corrective action program is acceptable.

9. Discuss New/Potential Licensing Issues

J. Hopkins led a discussion on new or potential licensing issues. J. Hopkins informed the Panel that during the last weekly licensing call with the licensee, the issue of having a licensing exemption approved prior to using boron precipitation control as a back-up method was discussed. The Panel decided that all outstanding licensing issues should be reviewed against the applicable Technical Specification, FSAR page, or copy of the operability evaluation to determine if there are any concerns for restart. J. Hopkins took the lead for preparing this brief and present the information for Panel review at the next meeting.

10. Discuss Allegations: 1) New; 2) Determine If Required to Be Resolved Prior to Restart; and 3) Requested Extensions

D. Passehl discussed the status of outstanding allegations. D. Passehl reported that there is currently one open allegation which is a restart concern, which involves the Emergency Diesel Generator Square D-relays. R. Daley is working with the licensee on the issue.

11. Discuss Licensee's Request for Extension until 12/5 on Submittal of Risk Assessment on HPI Pump Performance Deficiencies

C. Lipa led a discussion on the licensee's request for an extension, until 12/05/03, for providing the risk assessment on the HPI pump performance deficiencies. The request is approved and S. Burgess will be following up with the licensee to schedule the Re-SERP once the licensee risk assessment has been received and reviewed.

12. Discuss Recently Received D-B Letter from T. Gurdziel to the IG

C. Lipa led a discussion on the fourth D-B from Mr. Gurdziel to the IG, and the Panel decided that there were no allegations or new issues requiring a response.

13. Discuss Initial Draft of Confirmatory Order for Comments

A. Mendiola led a review of the draft Confirmatory Order for comments. The Panel provided several comments on the format and content, and decided that the draft will need to be reviewed again following receipt and review of the licensee's Integrated Readiness to Support Restart report is submitted the first of next week.

14. Discuss RAM Closure Forms

C. Lipa led a discussion of the Ram items ready for closure. **THE RESTART ACTION MATRIX ITEMS THAT THE PANEL APPROVED FOR CLOSURE ARE ATTACHED TO THESE MINUTES.**

15. Discuss Items for Licensee Weekly Calls

C. Lipa led a discussion of specific issues to address during the next weekly call with the licensee. The major items suggested by the Panel were: 1) scheduling of the HPI pump acceptance testing to support observation by NRR inspector S. Unikewicz, and 2) discuss issues surrounding the breaker coordination bucket modification, i.e., are receipt inspections performed, how will the installation schedule be affected?

16. Discuss Update Milestones and Commitments

The Panel reviewed and discussed upcoming milestones and commitments. The suggestion was made to add the upcoming Ohio Governor Taft brief on December 9 to the list.

Closure Basis for Restart Checklist Item 2.c, "Structures, Systems, and Components Inside Containment"

As part of the corrective actions resulting from the reactor vessel head degradation, the licensee established a return to service plan to identify, monitor, and control all actions necessary for the safe and reliable return to service of Davis-Besse. The plan consisted of seven building blocks designed to support safe and reliable restart of the plant and to ensure sustained performance improvements. One of the building blocks, "Containment Extent of Condition Program," was tasked with evaluating and dispositioning the extent of condition throughout the Reactor Coolant System (RCS) and containment systems, structures, and components relative to the degradation mechanisms that occurred on the reactor vessel head.

NRC Inspection Report 50-346/02-09 reviewed the licensee's plan for inspections, including methods, control of walkdown boundaries, resolution of obstructed examinations, and control of inspection records. Two findings of very low safety significance were identified. The first was associated with lack of acceptance criteria and the second was associated with inadequate training and certification of inspection personnel. Weaknesses were identified in the licensee's implementation of the containment inspection program.

NRC Inspection Report 50-346/02-12 focused on evaluating corrective actions for the issues previously identified. This inspection concluded that the above issues were adequately resolved and that the inspections were effectively implemented. Three Unresolved Items (URIs) associated with corrective actions for corrosion of electrical conduit, potential leakage of reactor vessel bottom head incore instrumentation penetrations, and failure to follow the procedure for Raychem™ splice removal on electrical cable were identified. Restart Checklist Item 2.c was held open pending review of these URIs.

Unresolved item 50-346/02-12-01 concerned reactor vessel bottom head incore instrumentation penetrations. The NRC reviewed the licensee's activities to resolve the potential leakage of reactor vessel bottom head incore instrumentation penetrations. The licensee performed chemical analysis of the deposits found on the reactor vessel sides and bottom, and in a July 30, 2003, letter to the NRC, concluded that the deposits did not result from leakage from the penetrations. Additionally, the bottom head was inspected for signs of leakage after completion of the 7 day NOP/NOT leak test. This test provided reasonable assurance that the bottom head penetrations were not leaking, and the inspection results will be documented in NRC Inspection Report 50-346/03-23..

Unresolved item 05000346/2002012-02 concerned corrosion of electrical conduit. During a previous inspection conducted in October 2002, the NRC team noted that corrosion appeared to be particularly concentrated in areas where moisture and boric acid from the containment atmosphere had condensed and dripped onto electrical components. In particular, the NRC team noted substantial corrosion and deposits of crystallized boric acid on conduits. Based on this observation, the NRC team identified a concern that boric acid corrosion of conduit may create a high electrical resistance and challenge the ground function of the electrical conduit. This condition, was subsequently documented by the licensee in CR 02-06788. The cause analysis for CR 02-06788 determined that, as a general rule, up to 50 percent loss of conduit cross

sectional area was acceptable without loss of function as an electrical ground path. The conduits in question were determined to have only surface corrosion amounting to less than 25 percent reduction in cross sectional area and were therefore, deemed acceptable.

Subsequently, CR 03-05239 was issued stating that no loss in wall thickness was acceptable for 1/2-inch and 3/4-inch conduits. Ultrasonic testing was performed to determine the wall thickness of corroded conduits. The licensee determined that all conduits were acceptable as-is. Based on this conclusion, the team determined that no violation of NRC requirements existed. This URI is considered closed, and will be documented in NRC Inspection Report 05-346/03-10.

Unresolved item 05000346/2002012-03 concerned removal of Raychem™ splices from electrical cable. During Containment Air Cooler (CAC) motor replacement, the licensee identified splitting of the motor cable insulation as documented in CR 02-05459. The cable jacket and insulation to the three CAC motor high speed windings were found to be split at the ends which were normally covered by Raychem™ heat shrink sleeves. The damage was observed after the Raychem™ sleeves were removed for de-terminating the motors. In 2002, the NRC examined this issue and concluded that the CAC cable had apparently been cut by a sharp instrument, rather than the result of an aging or contamination related mechanism as initially assumed by the licensee. The NRC determined that the splitting was in fact a deep gash. The licensee subsequently determined the gash was inflicted by a contractor when removing the Raychem™ sleeves with a knife. To address this concern, the licensee initiated work orders to replace the section of the high speed cable of the three CAC motors between the motor and the penetrations with an equivalent cable. The work procedures were revised, and the workers received training on the revised procedures. This URI is considered closed, and will be documented in NRC Inspection Report 05-346/03-10.

On November 18, 2003, the Davis-Besse Oversight Panel met to discuss this issue and concluded that Restart Checklist Item 2.c is closed.

RAM Items Approved for Closure at Panel

November 18, 2003

RAM Item No. - E-38

Closed: Y

Date of E-Mail - 8/1/03 & 8/5/03 to Grobe

Author - Blanch

Description of Issue - Provide answer to the ten questions asked regarding methodology of site to address hydrogen buildup in containment given inoperability of hydrogen analyzers.

Restart Checklist Item: N/A

Description of Resolution - By letter dated October 9, 2003, from the Panel Chairman to Mr. Blanch, each of the ten questions was provided a specific answer. The letter is available in ADAMS.

Reference Material - Letter to Blanch dated October 9, 2003 (ADAMS Accession No. ml032820576).

RAM Item No. - L-08

Closed: Y

Date of Letter - 06/12/02

Author - Lochbaum (Union of Concerned Scientists) UCS-03.a

Description of Issue - Did FENOC perform a safety evaluation in accordance with 10 CFR 50.59 before power washing the Davis-Besse head to remove boric acid?

Description of Resolution - No. None of the criteria in 10 CFR 50.59 pertain to the power washing activity. The requirement in 10 CFR 50.59, "Changes, Tests, and Experiments," states, in part, the licensee shall obtain a license amendment prior to implementing a proposed change, test or experiment if the change, test, or experiment would:

- result in more than a minimal increase in the frequency of occurrence of a malfunction of an accident previously evaluated in the FSAR (as updated);
- result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety previously evaluated in the FSAR (as updated);
- result in more than a minimal increase in the consequences of an accident previously evaluated in the FSAR (as updated);
- result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the FSAR (as updated);
- create a possibility for an accident of a different type than any previously evaluated in the FSAR (as updated);
- create a possibility for a malfunction of an SSC important to safety with a different result than any previously evaluated in the FSAR (as updated);
- result in a design basis limit for a fission product barrier as described in the FSAR (as updated) being exceeded or altered; or

- result in a departure from a method of evaluation described in the FSAR (as updated) used in establishing the design bases or in the safety analysis.

Since the implementation of power washing as a method to remove boric acid from the reactor head does not impact any of the criteria stated above, a 50.59 analysis was not required.

RAM Item No. - L-83

Closed: Y

Date of Letter - 12/16/02

Author - Gurdziel (G-17)

Description of Issue - How could you roll and weld tubes with air behind them, meet applicable standards, and not have even one question from any credible review organization about the value of what you are doing?

Restart Checklist Item: N/A

Description of Resolution - The question was considered by the Panel to be rhetorical in nature. Therefore, this item is closed based on the question's rhetorical nature.

RAM Item No. - L-88

Closed: Y

Date of Letter - 02/16/03

Author - Gurdziel (G-20)

Description of Issue - Each trail of leakage on the side of the reactor vessel is the result of a failure of the reactor upper head flange gaskets at different times during previous runs. Will they use new gaskets, or re-use the old one?

Restart Checklist Item: 2.c

Description of Resolution - There has never been any indication that the trails on the side were associated with gasket leakage. The licensee has always used new gaskets. The author's assumption appears to be that gaskets are re-used between outages. In reality, the licensee uses O-rings and not gaskets for these seals. Discussions with the cognizant licensee engineer verified that new O-rings are used each refueling outage. Prior to the most recent installation of the reactor head, the inspectors observed the two new O-rings that were staged in the Containment building.

As part of the normal plant testing during heatup, the reactor upper head flange to reactor flange inner O-ring is verified to be leak tight. This is done by opening a leakoff isolation valve that taps off a small annulus area located between the two O-rings. This was performed during the licensee's recent NOP test, with no leakage detected.

Reference Material - NRC Inspection Report No. 50-346/03-23.

RAM Item No. - LER-02

Closed: Y

Description of Issue - LER 50-346/2002-002 documented through-wall cracking in three control rod drive mechanism (CRDM) nozzles with pressure boundary leakage from Nozzle 3 and degradation of the reactor vessel head.

Description of Resolution - The finding described above is the result of a licensee performance deficiency. Specifically, the licensee failed to properly implement the boric acid corrosion control and corrective action programs, which allowed the reactor coolant system pressure boundary leakage to occur undetected for a prolonged period of time. The risk significance of this finding was evaluated by the NRC and determined to be of high safety significance (in the Red range) as documented by the NRC in inspection report 50-346/03-16 dated May 29, 2003.

An NRC Davis-Besse Oversight Panel was created in April 2002 to make sure that all corrective actions, required to ensure that Davis-Besse can operate safely, are taken before the plant is permitted to restart. The Panel was established under the Agency's Manual Chapter 0350 and created a "restart checklist" categorizing 31 actions in seven major areas that must be completed before the NRC can make a restart decision. As of September, 2003, the Oversight Panel determined that the licensee had adequately completed 18 of those actions. The completed checklist items included Items Nos. 1.a & 1.b, associated with NRC review of the licensee root cause determinations as documented in NRC inspection reports No. 50-346/03-04 and 50-346/02-18. The NRC also reviewed licensee corrective actions associated with vessel head replacement as documented in 50-346/02-07. However, an outstanding Checklist item No. 2.a related to NRC reviews of the reactor vessel head replacement was open as of November 2003, pending NRC review of the final acceptance testing of the replacement vessel head and the completion of hot control rod testing. These two specific remaining activities are adequately captured under CAL-04.

This LER was closed in Inspection Report 05000346/2003018.

Reference Material - NRC Inspection Report No. 50-346/03-18 (ADAMS Accession No. ml033080433).

RAM Item No. - LER-17

Closed: Y

Description of Issue - LER 2003-008-00 documented a condition where the licensee installed 5 relays in to the Safety Features Actuation System (SFAS) which were not rated for that application.

Description of Resolution - The inspectors identified a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Actions, having very low safety significance for failing to identify the appropriate corrective actions to address all significant causal factors related the configuration control aspects associated with the installation of unqualified relays in the SFAS system. This issue was considered NRC-identified because, even though two root cause evaluations were completed for two separate Significant Conditions Adverse to Quality (SCAQ) condition reports related to this issue (Technical Evaluation of Output Relay Issues for the Safety Features Actuation System (SFAS) (CR 03-02725), and Procurement of SFAS Relays

(CR 03-03232)), neither evaluation addressed the configuration control aspects of how five generation 3 relays managed to be installed, prior to refueling outage 13, and not be identified as a causal factor in either of the two root cause evaluations. This issue has been entered into the licensee's corrective action program as CR 03-08556. This LER was closed in Inspection Report 05000346/2003018.

Reference Material - NRC Inspection Report No. 50-346/03-18 (ADAMS Accession No. ml033080433).

RAM Item No. - NCV-14

Closed: Y

Description of Issue - As documented in Inspection Report 05000346/2003004, an NCV was issued for the failure to properly control the installation of a Poly-vinyl Chloride (PVC) jumper located in their service water system in accordance with the requirements of their "Control of Temporary Modifications" procedure. The failure of this jumper during a flushing evolution resulted in approximately 3000-4000 gallons of service water being spilled into containment.

Description of Resolution - The performance deficiency associated with this event was the failure to implement procedures appropriate to the circumstances. By not implementing the Control of Temporary Modifications procedure, inadequate controls were in place to control the fabrication and installation of a PVC jumper in the service water system. The inspectors reviewed the corrective actions associated with condition report (CR) 03-01888, "Service Water to Containment Air Cooler PVC Piping Break During Service Water Flush." The inspectors determined that a majority of the corrective actions associated with this CR had been implemented and appropriately addressed the causes of the performance deficiency. The inspectors also reviewed the outstanding corrective actions and determined the due dates assigned to these actions were appropriate. This NCV was closed in Inspection Report 05000346/2003022.

RAM Item No. - NCV-19

Closed: Y

Description of Issue - Inadequately Implementation procedure NS-MD-01023 (Material Engineering Evaluation) During the Procurement Efforts for Replacement SFAS relays. Closed in same report.

Description of Resolution - The performance deficiency associated with this event is the failure to adequately implement procedures required for performing equivalency evaluations for components being replaced in safety related equipment. The inspectors reviewed the corrective actions associated with condition report (CR) 03-03232, "Inadequate Approval of Replacement SFAS [safety features actuation system] Output Relays: Deutsch 4CP36AF." This CR was classified by the licensee as a Significant Condition Adverse to Quality. The inspectors reviewed the assigned corrective actions associated with this CR and determined that the corrective actions were adequate to address the performance deficiency. The inspectors determined that several of the corrective actions associated with this CR had been implemented and that the due dates assigned to the outstanding corrective actions were appropriate. This NCV was closed in Inspection Report 05000346/2003022.

RAM Item No. - NCV-23

Closed: Y

Description of Issue - Failure to Properly Implement System Procedures During the Filling of the Circulating Water System.

Description of Resolution - The performance deficiency associated with this event was the failure to correctly implement procedures required for plant operation. The inspectors reviewed the corrective actions associated with condition report (CR) 03-03815, "West Pit Flooding." The inspectors determined that the corrective actions associated with this CR appropriately addressed the causes of the performance deficiency. The inspectors also reviewed the outstanding corrective actions and determined the due dates assigned to these actions were appropriate. This NCV was closed in Inspection Report 05000346/2003022.

RAM Item No. - NCV-24

Closed: Y

Description of Issue - As documented in Inspection Report 05000346/2003017, an NCV was issued when it was discovered that the plant had operated in Mode 1 and Mode 2 in excess of the allowed outage time, with two hydrogen analyzers inoperable. The cause of the inoperability was that the component cooling water (CCW) isolation valves on the inlet and outlet to the heat exchangers located in each of the two Containment Gas Analyzers Systems (CGAS) were found stuck shut. This condition rendered the CGAS incapable of performing its design function.

Description of Resolution - The performance deficiency associated with this event was the failure of the licensee to establish an appropriate operational test, for a time period to include original plant startup (1977) until May 2003, to ensure that sufficient cooling water flow would be provided to the hydrogen analyzer heat exchangers during operational Modes that required the hydrogen analyzers to be operable. The inspectors reviewed the corrective actions associated with condition report (CR) 03-03398, "Containment Gas Analyzer CCW Deficiencies." This CR was classified by the licensee as a Significant Condition Adverse to Quality. The inspectors determined that a majority of the corrective actions associated with this CR had been implemented and appropriately addressed the causes of the performance deficiency. The inspectors also reviewed the outstanding corrective actions and determined the due dates assigned to these actions were appropriate. This NCV was closed in Inspection Report 05000346/2003022.