

From: <jsturdavant@firstenergycorp.com>
To: <cal@nrc.gov>, <cst1@nrc.gov>, <dbnrc@firstenergycorp.com>
Date: 2/24/04 9:00AM
Subject: Davis-Besse CAL 3-02-001 Closure

Attached is an early copy of the DBNPS request for closure of CAL 3-02-001. This is a "PDF" file. It was signed and sent out via UPS over night delivery 2/23/04 but we thought you may want an early copy via e-mail due to the hard copy system being a little slower thru UPS and the NRC mail room

E-mail is wonderful.

(See attached file: Serial 1-1345 CAL 3-02-001 Closure.pdf)

Joe Sturdavant

Davis-Besse Nuclear Power Station
Regulatory Affairs
419-321-8199

(See attached file: Serial 1-1345 CAL 3-02-001 Closure.pdf)

CC: <gadunn@firstenergycorp.com>, <dtgudger@firstenergycorp.com>, <caprice@firstenergycorp.com>

B-28



FirstEnergy Nuclear Operating Company

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Docket Number 50-346

License Number NPF-3

Serial Number 1-1345

February 23, 2004

Mr. James L. Caldwell, Administrator
United States Nuclear Regulatory Commission, Region III
801 Warrenville Road
Lisle, IL 60532-43551

Subject: Closure of Confirmatory Action Letter Items 4 and 5 and Completion of Confirmatory Action Letter 3-02-001

Dear Mr. Caldwell:

The purpose of this letter is to provide an update and request closure of the remaining open Confirmatory Action Letter (CAL) 3-02-001 Items four (4) and five (5), provide a status for the remaining CAL Items, and request closure of the CAL in its entirety.

As a result of the identification of degradation of the Davis-Besse Nuclear Power Station (DBNPS) Reactor Pressure Vessel (RPV) head in March 2002, the Nuclear Regulatory Commission (NRC) issued FirstEnergy Nuclear Operation Company (FENOC) CAL 3-02-001 on March 13, 2002, to document six specific activities FENOC intended to implement to resolve the RPV head degradation issue. As explained below, and in Attachment 1, FENOC has completed the actions specified for these open Items and each of the other CAL Items. Therefore, FENOC respectfully requests the NRC close this CAL.

Confirmatory Action Letter, Item 4

CAL Item 4 states as follows:

Obtain NRC review and approval of the repair or modification and testing plans for the RPV head, prior to implementation of those activities. Prior to restart of the reactor, obtain NRC review and approval of any modification and testing activity related to the reactor core or reactivity control systems.

CAL Item 4 Status:

On December 24, 2002, the NRC provided an CAL 3-02-001B Update of the original CAL 3-02-001. Confirmatory Action Letter Item 4 was stasured to remain open pending successful

completion of the Reactor Coolant System pressure test and Control Rod Drive performance test.

Davis-Besse Nuclear Power Station (DBNPS) Serial Letter Number 1-1336, dated November 26, 2003, described the results of the Reactor Coolant System pressure test. FENOC reported, based on the test results, no outstanding items were identified. Also, FENOC committed to perform the Control Rod drop surveillance when the plant returned to Mode 3. This Control Rod Drive performance testing, as committed to in Serial Letter 1-1336, Appendix C, Item 15, was a Control Rod drop surveillance test as performed by DBNPS procedure DB-SC-03270, "Control Rod Assembly Insertion Time Test."

The Control Rod Drive performance testing was completed satisfactorily in accordance with procedure DB-SC-03270 on February 10, 2004. The results of the individual Safety and Regulating Rod insertion times were equal to or less than 1.58 seconds as required by DBNPS Technical Specification 3.1.3.4.

This completes the actions required for CAL Item 4 and therefore, FENOC respectfully requests closure of this CAL Item.

Confirmatory Action Letter, Item 5

CAL Item 5 states as follows:

Prior to the restart of the unit, meet with the NRC to obtain restart approval. During that meeting, we expect you will discuss your root cause determination, extent of condition evaluations, and corrective actions completed and planned to repair the damage and prevent recurrence.

CAL Item 5 Status:

In the December 24, 2002, NRC CAL 3-02-001B Update, Item 5 was stasured to remain open pending submittal of the Integrated Restart Report summarizing the root cause determination, extent of condition evaluations, and corrective actions completed and planned to prevent recurrence. FENOC submitted the DBNPS Integrated Restart Report and Supplement, dated November 23, 2003 (Serial Letter 1-1336), and February 6, 2004 (Serial Letter 3026), respectively. These letters provided an overall discussion of the DBNPS restart activities including: the causes of the RPV Head degradation; extent of condition reviews; systems, programs and organizational reviews. Corrective and preventive actions were taken as identified in the Integrated Restart Report and its Supplement. The restart activities, as reported in Serial Letter 3026 Attachment 3, have been completed or are being tracked to completion by the DBNPS Regulatory Commitment Tracking System (RCTS).

Additionally, the CAL 3-02-001B Update requested FENOC meet with the NRC to discuss the root causes, extent of condition, completed and planned corrective and preventive actions and provide justification for restart of the DBNPS. FENOC provided this information and described its plans for restart and long-term improvement for the DBNPS in a public meeting

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with the NRC on February 12, 2004, at Camp Perry, Ohio. At this meeting FENOC requested approval for restart of the DBNPS.

Therefore, FENOC respectfully requests that CAL Item 5 be closed.

Confirmatory Action Letter 3-02-001- Completion

The March 13, 2002 CAL required FENOC to notify the NRC Regional Administrator, when the actions addressed in CAL 3-02-001 are complete. As previously described in this letter, and Attachment 1, FENOC has completed the actions specified in each of the CAL Items. Attachment 1 also lists the relevant FENOC correspondence for each CAL Item for reference.

Therefore, FENOC respectfully requests closure of CAL 3-02-001.

There are no new regulatory commitments contained in this letter. If there are any questions concerning this matter, please contact Mr. Gregory A. Dunn, Manager – Regulatory Affairs at 419-321-8450.

Sincerely,



JCS/s

Attachments

cc: U.S. NRC Document Control Desk
John A. Grobe, Chairman NRC 0350 Panel
DB-1 Senior NRC/NRR Project Manager
DB-1 Senior NRC Resident Inspector
Utility Radiological Safety Board

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**FENOC's Status of Completion of the Restart
Confirmatory Action Letter 3-02-001**

Confirmatory Action Letter, Item 1

CAL Item Description

Quarantine components or other material from the RPV head and CRDM nozzle penetrations that are deemed necessary to fully address the root cause of the occurrence of degradation of the leaking penetrations. Prior to implementation, plans for further inspection and data gathering to support determination of the root cause will be provided to the NRC for review and comment.

NRC's Status

CAL Update 3-02-001E, dated September 19, 2003 (Log 1-4445):

This issue is closed.

CAL Update 3-02-001E stated, the additional specimens described in the previous update to this Confirmatory Action Letter were obtained by the licensee and shipped to Battelle Northwest Laboratory (BNL) shortly after issuance of the last CAL update. The materials received at BNL were inventoried and NRC staff confirmed that the specimens identified in the CAL update had been received. Upon shipment of the specimens, the quarantine of the old reactor head was released, and the head was shipped for disposal on August 26, 2003.

FENOC's Action

As described in the original RPV Head degradation root cause report, FENOC created a plan to preserve and collect evidence necessary for the root cause investigation. As described above in the CAL 3-02-001E Update the degraded reactor vessel head was quarantined, cut samples of the areas of degradation for further data, and shipped those samples to the laboratory for analysis. The quarantine was then lifted and the RPV head was shipped off-site for disposal on August 26, 2003.

FENOC Submittal References

Serial Letter 1-1270, dated April 18, 2002; Root Cause Analysis Report Regarding Reactor Pressure Vessel Head Degradation

Serial Letter 1-1275, dated May 21, 2002; DBNPS Return to Service Plan (Revision 0)

Serial Letter 2955, dated July 23, 2003; Reactor Vessel Closure Head Welding Data Sheets

Serial Letter 2968, dated August 13, 2003; Final Report on Examination of Reactor Vessel Head Degradation and Safety Significance Assessment Update

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**FENOC's Status of Completion of the Restart
Confirmatory Action Letter 3-02-001**

**Serial Letter 3004, dated November 8, 2003; Disposition of Reactor Vessel Head Sample
Piece "A2B"**

**Serial Letter 3007, dated November 20, 2003; Resubmittal of Final Report on Examination of
Reactor Vessel Head Degradation**

**Serial Letter 3019, dated February 13, 2004; Disposition of Reactor Vessel Head Sample
Pieces "A2A7L", "A2A7M", and "A2A7N"**

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**FENOC's Status of Completion of the Restart
Confirmatory Action Letter 3-02-001**

Confirmatory Action Letter, Item 2

CAL Item Description

Determine the root cause of the degradation around the RPV head penetrations, and promptly meet with the NRC to discuss this information after you have reasonable confidence in your determination.

NRC's Status

CAL Update 3-02-001E, dated September 19, 2003 (Log 1-4445):

This issue is closed.

CAL Update 3-02-001E stated, FENOC submitted its Root Cause Analysis Report of the RPV head degradation. The DBNPS Root Cause Analysis Report provided a broad scope assessment of the "root cause," covering various programmatic, implementation and managerial issues, along with a description of the technical sequence of events from the initiation of cracking in the CRDM nozzles to the formation of the cavity. The staff reviewed the report and based on the information currently available, concluded that the analysis presents a plausible scenario of the degradation at the DBNPS. Uncertainties with regard to the technical details of the RPV head degradation preclude a definitive conclusion to the technical Root Cause Analysis Report. The level of understanding of the root cause is sufficient for the licensee to proceed with use of the replacement head from the Midland plant. FENOC also conducted seven individual assessments in the Management & Human Performance areas. These reports were reviewed as part of the NRC's Management and Human Performance special inspections. The overall assessment was of appropriate depth and breadth to develop actions to correct and prevent recurrence of the management and human performance deficiencies associated with the reactor head degradation.

FENOC's Action

Section III of the "Integrated Restart Report to Support Restart of the DBNPS" (IRR), dated November 23, 2003, (Serial Letter 1-1336) summarizes the root cause analyses performed for the degradation of the reactor vessel head and the failure to identify the degradation.

FENOC Submittal References

Serial Letter 1-1270, dated April 18, 2002; Root Cause Analysis Report Regarding Reactor Pressure Vessel Head Degradation

Serial Letter 1-1286, dated August 21, 2002; Management and Human Performance Root Cause Analysis Report

Serial Letter 1-1289, dated September 23, 2002; Revision 1 to Root Cause Analysis Report Regarding Reactor Pressure Vessel Head Degradation

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**FENOC's Status of Completion of the Restart
Confirmatory Action Letter 3-02-001**

Serial Letter 1-1299, dated January 9, 2003; Submittal of Root Cause Evaluations Root Cause Analysis of:

Quality Assurance Oversight; Root Cause Analysis of Operations; Assessment of Company Nuclear Review Board; Root Cause Analysis of Corrective Action Problem Resolution Human Performance and Implementation; Root Cause Analysis of Engineering Assessment Capabilities, and Evaluation of Corporate Management

Serial Letter 1-1306, dated March 27, 2003; Collective Significance Review of Causal Factors Associated with the RPV Head Degradation and Revision 2 of the Management and Human Performance Improvement Plan

Serial Letter 1-1314, dated May 2, 2003; Submittal of Revision 1 of the Root Cause Assessment of Engineering Capabilities

Serial Letter 1-1336, dated November 23, 2003; Integrated Restart Report to Support Restart of the DBNPS and Request for Restart Approval

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**FENOC's Status of Completion of the Restart
Confirmatory Action Letter 3-02-001**

Confirmatory Action Letter, Item 3

CAL Item Description

Evaluate and disposition the extent of condition throughout the reactor coolant system relative to the degradation mechanisms that occurred on the RPV head.

NRC's Status

CAL Update 3-02-001B, dated December 24, 2002 (Log 1-4325):

CAL Update 3-02-001B stated, this CAL Item remains open pending additional NRC inspection of action regarding Inspection Report 2002-012 Unresolved Items and corrective actions for identified deficiencies.

FENOC's Action

As discussed in Section IV.C.1 of the Integrated Restart Report, FENOC has performed inspections of the reactor coolant system to identify the extent of condition of Primary Water Stress Corrosion Cracking and boric acid corrosion. As concluded in the IRR, Davis-Besse has conducted comprehensive inspections and evaluations of the condition of Structures, Systems and Components (SSC) within containment and has performed approximately 2,500 corrective actions. Davis-Besse concludes that the condition of SSCs within containment will support safe restart and operation.

Additionally, Serial Letter 1-1338, documented resolution of the final three (3) Inspection Report 2002-012 Unresolved Items (URI) for this CAL Item. These Inspection Report URIs are:

2002-12-01, Potential Leakage at the Reactor Vessel Incore Penetration Tubes

2002-12-02, Potential Impact of Corrosion on the Ground Function of Electrical Conduit in Containment

2002-12-03, Potential Failure to Follow the Procedure for Raychem Splice Removal on Electrical Cables

Since these three (3) Inspection Report URIs were inspected satisfactorily, FENOC requested closure of the three (3) URIs and CAL Item 3.

FENOC Submittal References

Serial Letter 1-1336, dated November 23, 2003; Integrated Restart Report to Support Restart of the DBNPS and Request for Restart Approval

Serial Letter 1-1338, November 26, 2003; Closure of Confirmatory Action Letter Item 3

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**FENOC's Status of Completion of the Restart
Confirmatory Action Letter 3-02-001**

Confirmatory Action Letter, Item 4

CAL Item Description

Obtain NRC review and approval of the repair or modification and testing plans for the existing RPV head, prior to implementation of those activities. Prior to restart of the reactor, obtain NRC review and approval of any modification and testing activity related to the reactor core or reactivity control systems. If the reactor vessel head is replaced in lieu of repair or modification, the replacement must comply with appropriate Commission rules and industry requirements.

NRC's Status

CAL Update 3-02-001B, dated December 24, 2002 (Log 1-4325):

CAL Update 3-02-001B stated, this CAL Item remains open pending NRC review of successful completion of the reactor coolant system pressure test and control rod drive performance test.

FENOC's Action

As discussed in Section IV.B of the Integrated Restart Report, FENOC has replaced the RPV Head, and has performed inspections and tests of the new head. The Mode 3 pressure test completed in September 2003 has verified its acceptability. Also, as described in the body of this letter, the Control Rod insertion time testing was completed as the final action for this CAL Item.

FENOC Submittal References

Serial Letter 1-1271, dated April 25, 2002; Partial Response to CAL 3-02-001 - Repair Plans for the DBNPS Reactor Pressure Vessel Head

Serial Letter 1-1281, dated August 9, 2002, Replacement of the RPV Head at the DBNPS

Serial Letter 1-1345, (this submittal); Closure of CAL Items 4 and 5 and Completion of CAL 3-02-001

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**FENOC's Status of Completion of the Restart
Confirmatory Action Letter 3-02-001**

Confirmatory Action Letter, Item 5

CAL Item Description

Prior to the restart of the unit, meet with the NRC to obtain restart approval. During that meeting, we expect you will discuss your root cause determination, extent of condition evaluations, and corrective actions completed and planned to repair the damage and prevent recurrence.

NRC's Status

CAL Update 3-02-001B, dated December 24, 2002 (Log 1-4325):

CAL Update 3-02-001B stated, FENOC submitted Revision 3 of the DBNPS Return to Service Plan to the NRC on September 23, 2002. Upon completion of the restart actions described in this plan, FENOC will submit its Integrated Restart Report summarizing the root cause determination, extent of condition evaluations and corrective actions completed and planned to prevent recurrence. Prior to entering Mode 2, FENOC will meet with NRC to discuss completed and planned actions as described in this Plan and to provide justification for restart.

CAL Issue No. 5 remains open pending that meeting and NRC restart approval.

FENOC's Action

Davis-Besse Serial Letters 1-1336 and 3026 submitted the DBNPS Integrated Restart Report and its Supplement. The Davis-Besse Integrated Restart Report, Serial Letter 1-1336, Section III and IV described the root cause analyses determinations, extent of condition evaluations and corrective actions completed and planned to prevent recurrence.

FENOC met with the NRC and discussed the RPV head degradation root causes, extent of condition and corrective actions and the DBNPS request for restart during a Public Meeting on February 12, 2004.

FENOC Submittal References

Serial Letter 1-1288, dated September 23, 2002; DBNPS Return to Service Plan, Revision 3

Serial Letter 1-1310, dated April 6, 2003; DBNPS Return to Service Plan, Revision 6

Serial Letter 1-1336, dated November 23, 2003; DBNPS Integrated Restart Report

Serial Letter 3026, dated February 6, 2004; DBNPS Integrated Restart Report Supplement

**Serial Letter 1-1345, (this submittal); Closure of CAL Items 4 and 5 and Completion of
CAL 3-02-001**

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**FENOC's Status of Completion of the Restart
Confirmatory Action Letter 3-02-001**

Confirmatory Action Letter, Item 6

CAL Item Description

Provide a plan and schedule to the NRC, within 15 days of the date of this letter, for completing and submitting to the NRC your ongoing assessment of the safety significance for the Reactor Pressure Vessel (RPV) head degradation.

NRC's Status

CAL Update 3-02-001B, dated December 24, 2002 (Log 1-4325):

This issue is closed.

CAL Update 3-02-001B stated, FENOC's plan and schedule for completing and submitting the assessment of the safety significance of the RPV head degradation was submitted on March 27, 2002. FENOC submitted the Safety Significance Assessment to the NRC on April 8, 2002 and responded to requests for additional information.

FENOC's Action

FENOC provided the DBNPS plan and schedule for Safety Significance Assessment of Reactor Pressure Vessel Head Degradation to the NRC on March 27, 2002, via Serial Letter 1-1267. FENOC provided an analysis of the safety significance of the RPV head degradation on April 8, 2002 (Serial Letter 1-1268) and provided the final examination report of the RPV Head Degradation, and updated the Safety Significance Assessment on August 13, 2003 (Serial Letter 2968).

FENOC Submittal References

Serial Letter 1-1267, dated March 27, 2002; Plan and Schedule for Safety Significance Assessment of Reactor Pressure Vessel Head Degradation

Serial Letter 1-1268, dated April 8, 2002; Safety Significance Assessment of the DBNPS Reactor Pressure Vessel Head Degradation

Serial Letter 1-1277, dated June 12, 2002; Response to Request for Additional Information Related to the DBNPS Safety Significance Assessment

Serial Letter 1-1280, dated July 12, 2002; Response to Request for Additional Information Related to the DBNPS Safety Significance Assessment

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**FENOC's Status of Completion of the Restart
Confirmatory Action Letter 3-02-001**

**Serial Letter 1-1282, dated July 20, 2002; Response to Request for Additional Information
Related to the DBNPS Safety Significance Assessment**

**Serial Letter 2968, dated August 13, 2003; Transmittal of Final Report on Examination of the
Reactor Vessel Head Degradation, and Safety Significance Assessment Update**

**Serial Letter 1-1290, dated November 18, 2002; Response to Request for Additional
Information Related to the DBNPS Safety Significance Assessment**

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COMMITMENT LIST

The following list identifies those actions committed to by the Davis-Besse Nuclear Power Station in this document. Any other actions discussed in the submittal represent intended or planned actions by The DBNPS. They are described only as information and are not regulatory commitments. Please notify the Manager – Regulatory Affairs (419-321-8450) of any questions regarding this document or associated regulatory commitments.

COMMITMENTS

None

DUE DATE

N/A