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

Subject: NRC Corrective Action Team Inspection Identified Areas of Concern During Inspection of the Davis Besse Nuclear Power Station

Dear Mr. Caldwell:

The purpose of this letter is to provide an update of the corrective actions for the areas of concern identified by the NRC Corrective Action Team Inspection (CATI) during the November 12, 2003 Public Meeting. The three (3) areas of concern identified during the meeting were related to the effectiveness of:

1) Identification and cause evaluation of design and equipment issues;
2) Implementation of corrective actions to address engineering issues (adequacy of calculations); and
3) Implementation of corrective action elements supporting programs (trending).

The DBNPS corrective actions taken and planned in response to the above areas are detailed in Attachment 1.

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,

Barry Allen
for M. B. Bezilla

JCS/PSJ

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

Area of Concern 1 – Identification and Cause Evaluation

As discussed in the Davis Besse Nuclear Power Station (DBNPS) Integrated Restart Report (IRR) (letter Serial 1-1336), the IRR Supplement (letter Serial 3026), and the Operational Improvement Plan (letter Serial 1-1342), assessments were performed to measure performance in the area of corrective actions. For example, in the summer of 2003, NRC inspections and NQA assessments identified areas for improvement in corrective actions. Although they found that root cause analyses were rigorous for Significant Conditions Adverse to Quality (SCAQ), they identified weaknesses with respect to apparent cause analyses for conditions of lesser significance.

In response, as described in the DBNPS IRR, the following actions are complete or will be taken to address these issues:

The procedural requirements for apparent cause analyses were strengthened to specify the analytical methods to be used, and to provide a checklist for attributes for apparent cause analyses.

The number of apparent cause evaluators was reduced and additional training provided to the evaluators. Apparent cause evaluators will be required to maintain proficiency requirements.

The Corrective Action Review Board (CARB) is now performing assessments of the apparent cause analyses. These assessments will continue until the apparent cause analyses presented to CARB meet the goal for quality of apparent cause analyses. After adequacy has been established (as determined by the CARB Chairman), the CARB will review selected apparent cause evaluations to provide additional assurance of their continued acceptability.

Condition Report Analysts within each section have received strengthened roles and responsibilities with respect to apparent cause analyses through formal Systematic Approach to Training (SAT) type training. They have received the same training as apparent cause evaluators, and attend CARB meetings to enhance their standards for review and acceptance of apparent cause analyses.

A performance indicator has been implemented that measures the percentage of apparent cause evaluations accepted by the CARB.

On an interim basis, a select team of trained apparent cause evaluators reports directly to the Director - Support Services. This small team will conduct 2004 CR apparent cause evaluations until the newly trained apparent cause evaluators can by trained and fully qualified.

In addition to the CARB reviews, the Engineering Assessment Board (EAB) reviews a sampling of engineering related CRs, especially those that are categorized to have an apparent or root cause performed, to ensure the appropriate level of technical rigor and analytical thinking is applied in the evaluation of the condition.

With respect to the identification and cause evaluation of design and equipment issues, the Operational Improvement Plan for Cycle 14 includes several activities that will contribute to improved performance in these areas. Specifically, the Design Basis Assessment Report (DBAR) and System Health Report (SHR) were re-instituted during 2003. These reports provide informational tools to the station staff that will contribute to improved identification and evaluation of design and equipment issues through alignment on the importance of improved performance in these areas. This is accomplished by identifying potentially adverse trends in design engineering products and programs (DBAR) and station equipment issues (SHR).

Additionally, the safety conscious work environment benefits of a high volume/low threshold Condition Report (CR) system is to be reinforced with site personnel by June 30, 2004.

Area of Concern 2- Adequacy of Engineering Calculations

As discussed in DBNPS letter Serial 2998, the DBNPS System Health Assurance Plan included System Health Assurance Reviews, which included the Latent Issues Reviews and the Safety Function Validation Project. These reviews examined the safety functions of 15 systems whose functions comprise 99 percent of core damage frequency (CDF) and large early release frequency (LERF). As a result of these reviews, it was concluded that, in general, the systems could perform their safety functions. However, DBNPS identified a generic concern with respect to the lack of a robust calculation control process. The DBNPS is taking action to improve its calculations. Activities to improve the quality of design basis calculations have also been planned as part of the Operational Improvement Plan (letter Serial 1-1342). The following activities will be performed:

The procedure governing creation and revision of calculations, NOP-CC-3002, "Calculations", will be revised to incorporate improvements identified by a recent independent assessment of the DBNPS calculations. The revised procedure will require upgrading existing "critical calculations" (e.g., those which provide Technical Specification limits and those which support accident analyses in the Updated Safety Analysis Report) to the standards in the new procedure when each is revised during planned modification activities or other planned calculation revisions. The revised procedure will also specify that under emergent circumstances, critical calculations should be upgraded to the standards in the new procedure when each is revised. The procedure governing creation and revision of calculations will be revised by March 31, 2004.

"Critical calculations" will be identified and reviewed. Following this review, a schedule for updating those "critical calculations" requiring revision to the upgraded standards in the revised procedure NOP-CC-3002 will be developed. This schedule will be provided to the NRC by July 30, 2004.

Training will be provided to the DBNPS engineering staff on the new calculation procedure. This training will include the use of case studies with the objective of achieving better calculation quality. This training will be completed by September 30, 2004.

A design engineering calculation database will be created. This database will be designed to help manage and keep track of design engineering calculations. This database is to include critical information for the DBNPS calculations including such attributes as the title, purpose, affected equipment, related calculations, and an electronic copy of each calculation. Entry of calculation information into the database is ongoing with "critical calculations" being incorporated by December 31, 2004.

An indicator will be developed for monitoring calculation health. This indicator will be implemented by May 31, 2004.

As noted in the FENOC presentation on December 10, 2003, "Engineering and Corrective Action Improvements," an independent outside assessment of engineering calculations has been performed. This assessment was entered into the DBNPS Corrective Action Program to document recommendations for improvements to the calculation program. As described in the independent assessment report, none of the issues identified challenged the conclusions of the calculations reviewed and therefore, do not raise any equipment operability issues. In accordance with the Operational Improvement Plan, independent outside assessments are to be performed periodically through Cycle 14.

In addition, as a compensatory measure, the Engineering Assessment Board (EAB) has expanded its role to include the review of engineering calculations.

Design Engineering performed training on the lessons learned from the "Calculation Collective Significance Review" CR evaluation. The training stressed the need for application of the rigor and technical completeness for the plant design basis principles of the FENOC Engineering Principles and Expectations policy.

Area of Concern 3 – Implementation of Trending

As discussed in the DBNPS IRR, the trending of CRs has been resumed through the Quarterly Trend Summary Report. The period of time when CR trending was discontinued during 13RFO was included in a Quality Trend Summary Report for this time period, i.e., the second quarter 2002 through the second quarter 2003. The Quarterly Trend Summary Report now utilizes more advanced statistical process control techniques to identify trends from the patterns of events. These reports are also being used to place more emphasis in making comparisons of corrective action program statistics across the FENOC fleet. Also, benchmarking has been initiated to compare DBNPS to industry performance in CR trending. Future reports will utilize Institute of Nuclear Power

Operations (INPO) Plant Information Center data to facilitate comparison of DBNPS CR trend data with the industry.

As discussed in the FENOC November 12, 2003 Public Meeting presentation, preparation and issuance of the DBNPS System Health Report has resumed with the third quarter 2003 System Health Report. The System Health Report is issued on a quarterly basis and provides trending of equipment issues.

As indicated in the Operational Improvement Plan for Cycle 14, the DBNPS Design Engineering Assessment Report (DBAR) was instituted in 2003. The DBAR focuses on Design Engineering Section design basis health (eg, outstanding USAR changes, outstanding calculation changes) engineering programs health (eg, 10CFR50.59 program implementation performance), engineering quality (eg, EAB assessments), and monitoring engineering workload activities. The DBAR is issued on a quarterly basis and provides an important tool for trending design engineering products and program-related issues.

COMMITMENT LIST

The following list identifies those new 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.

The commitments described in this submittal have been docked in previous correspondence. Please notify the Manager - Regulatory Affairs (419-321-8450) of any questions regarding this document or associated regulatory commitments.

COMMITMENTS	DUE DATE
None	N/A