



FirstEnergy Nuclear Operating Company

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Docket Number 50-346

License Number NPF-3

Serial Number 1-1349

February 27, 2004

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

Subject: Response to an Apparent Violation in Inspection Report No. 50-346/03-19;
EA-03-0209

Ladies and Gentlemen:

The FirstEnergy Nuclear Operating Company (FENOC) received the subject Inspection Report dated January 28, 2004 (Log Letter 1-4506), documenting the results of the special inspection conducted by the Nuclear Regulatory Commission (NRC) at the Davis-Besse Nuclear Power Station (DBNPS). This inspection was performed to determine whether reasonable confidence exists that docketed information is complete and accurate in all material respects and that appropriate corrective actions have been taken to ensure future regulatory submittals are complete and accurate. As a result of this inspection, an apparent violation was identified for the failure to provide complete and accurate information in the November 11, 1998, response to NRC Generic Letter 98-04, "Potential for Degradation of the Emergency Core Cooling System and the Containment Spray System after a Loss-of-Coolant Accident Because of Construction and Protective Coating Deficiencies and Foreign Material in Containment" for the DBNPS.

On February 4, 2004, FENOC notified Ms. Christine Lipa of NRC Region III that FENOC intended to respond to the apparent violation in writing and would not be requesting a predecisional enforcement conference regarding the apparent violation. Attachment 1 to this letter provides the FENOC written response to this apparent violation.

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.

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Very truly yours,

A handwritten signature in cursive script, appearing to read "Lew W. Myers". The signature is written in black ink and is positioned above the printed name.

Lew W. Myers

GMW/s

Attachments

cc: NRC Regional Administrator, Region III
DB-1 Senior NRC/NRR Project Manager
DB-1 Senior NRC Resident Inspector
Utility Radiological Safety Board

STATEMENT OF APPARENT VIOLATION (EA-03-209)

The inspectors identified an apparent violation of 10 CFR 50.9(a) regarding the licensee's failure to provide the NRC complete and accurate information in the licensee's response to NRC Generic Letter 98-04, "Potential for Degradation of the Emergency Core Cooling System and the Containment Spray System After a Loss-of-Coolant-Accident Because of Construction and Protective Coating Deficiencies and Foreign Material in Containment." The response, dated November 11, 1998, failed to provide complete and accurate information concerning protective coating deficiencies and foreign material in containment.

REASON FOR THE APPARENT VIOLATION

DBNPS Serial Letter Number 2571 provided a response to NRC Generic Letter 98-04 on November 11, 1998. This letter provided a summary description of processes implemented to ensure that Service Level 1 protective coatings inside the containment are procured, applied, and maintained in compliance with regulatory requirements and the plant-specific design and licensing basis. The discussion provided exceptions to the Service Level 1 coatings used inside containment and also discussed the potential impact of coating debris on long-term cooling and containment atmosphere cooling following a postulated design basis accident. This response was based on information contained at the time within the Updated Safety Analysis Report (USAR), the Final Safety Analysis Report (FSAR), the Quality Assurance Program, the Maintenance Rule Program, and reasonable engineering judgment.

During the Twelfth Refueling Outage in the Spring of 2000, it was noted that degradation of the coating on the Containment Vessel dome interior was occurring. It was determined that this degradation represented no adverse affect on plant safety, and Engineering Work Request (EWR) 01-0505 was initiated to determine the necessary long-term resolution of the issue.

During the Thirteenth Refueling Outage that commenced February 16, 2002, evaluations performed to support EWR 01-0505 resulted in the discovery of a letter dated December 17, 1976, from Babcock & Wilcox to the Toledo Edison Company regarding the protective coating applied to Nuclear Steam Supply System (NSSS) components. This letter identified that Babcock & Wilcox had no data regarding design basis accident testing of the coating material (paint) applied to the Reactor Vessel, Steam Generators, Pressurizer, and Reactor Coolant System piping. This letter, along with any subsequent acknowledgement or response, was not located in the DBNPS Nuclear Records Management System, and its existence was apparently unknown during the evaluation performed in response to Generic Letter 98-04. A Condition Report (CR) was initiated to resolve the coating issues on these components, and during evaluation of this CR it was discovered that the coating material applied to the Core Flood Tanks was of the same type, and therefore unqualified for containment service. This issue led to the

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reporting that the Containment Emergency Sump could be significantly challenged by the quantity of failed coating material and other debris present in the Containment after a postulated Loss of Coolant Accident (LOCA) under DBNPS Licensee Event Report (LER) 2002-005.

A Root Cause Analysis performed for the associated CRs attributed the application of non-qualified coatings to a lack of process compliance by the Architect/Engineering firm (Bechtel, Inc.) and their sub-contractors during initial plant construction and during the installation of components with factory standard coatings, and the lack of appropriate coating procedural controls for items installed within containment.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

On November 4, 2002, FENOC submitted DBNPS LER 2002-005, documenting the potential clogging of the Containment Emergency Sump due to the amount of unqualified coatings inside of containment in conjunction with the relatively small surface area of the sump strainer. On May 5, 2003, FENOC submitted DBNPS LER 2003-002, documenting potential degradation of the High Pressure Injection (HPI) pumps due to debris in the post-accident emergency sump fluid. The most recent revisions of these LERs (Revision 2 of LER 2002-005 dated May 21, 2003, and Revision 1 of LER 2003-002 dated January 29, 2004) documented the following corrective actions that have been taken with respect to unqualified coatings in containment and their effects on emergency equipment:

- The old Containment Emergency Sump Strainer was removed and a new strainer with greater surface area was installed.
- Unqualified coatings have been removed from major equipment in Containment (including the Core Flood Tanks, the Reactor Service Structure, and the Service Water piping for the Containment Air Coolers) and replaced with qualified coatings.
- A Nuclear Safety-Related Coatings Program has been developed for coating material controls and application to structures and components located within the Containment.
- Where possible, fibrous insulation was removed from Containment. The fibrous insulation and unqualified coatings left in the Containment have been identified and evaluated (in conjunction with other potential debris) for effect on the Emergency Core Cooling System and Containment Spray System. The evaluation included debris generation, debris transport, and head loss analysis to verify there is adequate margin for Net Positive Suction Head (NPSH) at the affected pumps. Controls have been established for potential debris sources to ensure adequate NPSH requirements are met.

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- Evaluations were performed in conjunction with the modifications implemented on the containment emergency sump, which examined the Low Pressure Injection System, the HPI System, the Containment Spray System, and the Boron Precipitation Control System.
- The following modifications were implemented for the HPI Pumps:
 - Self-flushing plates with approximately 0.050-inch diameter holes were installed on the water supply take-offs to the hydrostatic bearings to prevent debris that could plug the bearing orifices from entering the supply lines.
 - The locations of the hydrostatic bearing supply take-offs were moved from the periphery of the pump fourth stage volute to a new location on the side of the fifth stage volute across from the impeller and adjacent to the discharge wear ring, which is closer to the shaft.
 - A new hydrostatic bearing design was installed that was based on a “figure 8” pocket configuration. Relief grooves were added to the hydrostatic bearing pockets to provide an “escape” path for the debris that gets into the bearing.
 - The parts with wear surfaces that are subject to debris that were not already hard-faced were replaced with hard-faced parts.
 - The original cyclone separators in the pump seal water supply line were replaced with new model with larger internal clearances (smallest clearance is 0.230 inches).

On November 26, 2003, Serial Letter Number 2994 was submitted to the NRC to revise the DBNPS response to NRC Generic Letter 98-04.

An extent of condition review of a select sample population of regulatory submittals to the NRC has been performed. This review did not identify any widespread 10 CFR 50.9 noncompliances or programmatic concerns. However, as a result of this review, other 10 CFR 50.9 discrepancies were identified and corrected as discussed in the October 24, 2003, report on the results of the review (Serial Letter Number 1-1330). Based on the results of this review, FENOC has expanded its sample of DBNPS regulatory correspondence, and is currently reviewing the final scope identified.

CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

The Nuclear Safety-Related Coatings Program will be maintained for coating material controls and application to structures and components located within the Containment.

FENOC took the following actions to ensure future compliance with 10 CFR 50.9 at the DBNPS:

- Issued a new company policy stressing the requirements for complete and accurate information,

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- Provided training to personnel on the need for ensuring information is complete and accurate,
- Established training for new supervisors and employees, which includes responsibilities under 10 CFR 50.9 for complete and accurate information, and
- Issued a new procedure governing validation, review, and approval of correspondence with the NRC.

Additionally, as summarized in the Integrated Report to Support Restart of the DBNPS submitted to the NRC on November 23, 2003 (Serial Letter Number 1-1336), FENOC has taken extensive action to improve its management and human performance.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

The DBNPS has achieved full compliance with the requirements of 10 CFR 50.9(a), "Completeness and Accuracy of Information" on November 26, 2003, with submittal of Serial Letter Number 2994 to the NRC to revise the DBNPS response to NRC Generic Letter 98-04.

RELEVANT INFORMATION RELATED TO THE APPLICATION OF THE ENFORCEMENT POLICY

A. Severity Level

The "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy) in Supplement VII, "Miscellaneous Matters," provides guidance for the severity level of inaccurate and incomplete information. FENOC believes the apparent violation described above does not rise to the level of Severity Level I or Severity Level II Violation because the inaccurate information was not provided deliberately or with careless disregard for its accuracy.

B. Civil Penalty Assessment

The conditions involving unqualified coatings and their potential impact on the Containment Emergency Sump as well as the conditions involving the design deficiencies of the HPI Pumps were identified by FENOC as a result of the DBNPS Return to Service Plan. Both of these issues were reported to the NRC via LERs 2002-005 and 2003-002. Based upon these identified and reported problems, the NRC requested FENOC validate the response to Generic Letter 98-04 as part of the 10 CFR 50.9 Extent of Condition Review. In response, FENOC identified the inaccurate statements in the response to Generic Letter 98-04, and reported the inaccuracies on September 15, 2003 (Serial Letter Number 1-1328). Therefore, under Section VI.C.2.b of the NRC's Enforcement Policy, FENOC believes credit is warranted for self-identification of the issues that led to the discovery of the incomplete/inaccurate response to Generic Letter 98-04. It should be noted that the NRC previously issued a Yellow finding to FENOC for the failure to

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identify the unqualified coatings and to take corrective action in light of GL 98-04 (EA-03-131, Log Letter Number 1-4456, dated October 7, 2003).

As previously documented in the correspondence discussed above, FENOC has taken prompt and comprehensive corrective actions with respect to these issues. The corrective actions taken include:

- Corrective actions for the underlying hardware conditions,
- Correction and updating of the response to Generic Letter 98-04,
- 10 CFR 50.9 Extent of Condition Reviews,
- Preventive actions to ensure the completeness and accuracy of information, and
- Actions to improve management and human performance.

Therefore, under Section VI.B.2.c of the Enforcement Policy, FENOC believes credit is warranted for corrective action for the issues associated with the incomplete/inaccurate response to Generic Letter 98-04.

C. Mitigation

Section VII.B of the Enforcement Policy discusses the mitigation of enforcement sanctions, including civil penalties. In accordance with Item 2 of this Section, FENOC requests the NRC to consider refraining from issuing a civil penalty because:

- The DBNPS is in an extended outage,
- The underlying problems with the Containment Emergency Sump and HPI Pumps were identified as a result of a comprehensive program for problem identification, and the problems with the GL 98-04 response were identified as a result of the 10CFR50.9 Extent of Condition review,
- The apparent violation is based upon activities occurring prior to the outage,
- The apparent violation is not a Severity Level I violation,
- The apparent violation was not willful, and
- FENOC requires NRC concurrence to restart the DBNPS.

In accordance with Item 4 of Section VII.B of the Enforcement Policy, FENOC requests the NRC to consider refraining from issuing a civil penalty because:

- The apparent violation was identified by FENOC as part of the corrective action for previous apparent violations of 10 CFR 50.9 arising from the Augmented Inspection Team (AIT) Follow-up Inspection Report 2002-008, dated October 2, 2002 (Log Letter Number 1-4300).

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- The apparent violation has some of the same root causes (i.e., lack of a sufficiently rigorous process for validating regulatory correspondence) to the previous 10 CFR 50.9 apparent violations identified in the AIT Follow-up Inspection Report,
- The apparent violation does not substantially change the regulatory concern associated with the previous 10 CFR 50.9 apparent violations identified in the AIT Follow-up Inspection Report,
- As discussed above, comprehensive corrective and preventive actions have been taken, and
- The apparent violation is not a Severity Level I violation.

D. Statute of Limitations

Furthermore, in accordance with Title 28, U.S.C.A., § 2462, FENOC believes a civil penalty would be inconsistent with the applicable statute of limitations on civil penalties because the original response to Generic Letter 98-04 on November 11, 1998, occurred more than five years before enforcement actions were commenced with respect to the apparent violation.

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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 Davis-Besse. They are described only as information and are not regulatory commitments. Please notify the Manager – Regulatory Affairs (419-321-8450) at Davis-Besse of any questions regarding this document or associated regulatory commitments.

COMMITMENTS

DUE DATE

Maintain the Nuclear Safety-Related Coatings Program for coating material controls and application to structures and components located within the Containment. (This is an existing commitment previously described in DBNPS LER 2002-005-02)

N/A