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Docket Number 50-346

10 CFR 50.90

License Number NPF-3

Serial Number 3127

April 6, 2005

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555-0001

Subject: Davis-Besse Nuclear Power Station (DBNPS)
Supplemental Information to License Amendment Application to Revise
Technical Specification (TS) 3/4.9.2, Refueling Operations – Instrumentation
(License Amendment Request (LAR) 02-0006, TAC No. MC5473)

Ladies and Gentlemen:

By letter dated December 20, 2004 (Serial Number 3093), the FirstEnergy Nuclear Operating Company (FENOC) submitted an application for an amendment to the DBNPS Technical Specifications. The primary purpose of this proposed amendment, License Amendment Request (LAR) 02-0006, is to revise TS 3/4.9.2, Refueling Operations – Instrumentation, to prevent unnecessary repetition of the channel functional testing of the source range neutron flux monitors immediately prior to the start of core alterations. However, since NUREG-1430, *Standard Technical Specifications – Babcock and Wilcox Plants*, states, “Licensees adopting portions of the improved STS to existing technical specifications should adopt all related requirements, as applicable, to achieve a high degree of standardization and consistency,” the proposed amendment also includes other changes to make TS 3/4.9.2 more consistent with NUREG-1430. For example, NUREG-1430 Limiting Condition for Operation (LCO) 3.9.2 simply states that “Two source range neutron flux monitors shall be OPERABLE,” and does not refer to specific source range indication features. Therefore, consistent with NUREG-1430, LAR 02-0006 proposes to relocate the discussion of source range indication features to the Technical Specification Bases.

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On February 9, 2005, a telephone conference call was held between the NRC staff and the FENOC staff. During this call, the NRC staff requested additional technical justification for the portion of the amendment which relocates requirements regarding the source range neutron flux monitor visual and audible count rate indications to the TS Bases. The following discussion provides this technical justification.

LCO 3.9.2 is applicable only during MODE 6 (Refueling). In MODE 6, the safety function of the source range indication is to alert the operators to a reactivity change during refueling operations. Before refueling, the reactor coolant and the refueling canal water above the reactor are increased in boron concentration so that, with all control rods removed, the k_{eff} of the core is no greater than 0.99. Under this condition, a criticality accident during refueling is not considered credible. With this in mind, attention is focused on changes in reactivity that would result from dilution of the boron concentration.

During refueling or maintenance operations when the reactor closure head has been removed, dilution of the reactor coolant boron concentration is unlikely because the sources of dilution water to the makeup tank and therefore to the Reactor Coolant System are isolated, and the makeup pumps are not operating. However, cycle-specific analyses for a dilution accident during shutdown confirm that a minimum shutdown margin of 1% $\Delta k/k$ will be maintained for postulated events during refueling, conservatively assuming the makeup pumps are started with the makeup tank filled with dilution water. Even though shutdown margin will be maintained through the postulated dilution events, it is expected that source range indication will be available to alert the operators of the need to take mitigating actions.

Moving details of the source range monitor indication system design and functional requirements to the Bases is acceptable because it is not necessary to include this type of information in the TS to protect public health and safety. The proposed amendment retains the requirement for two OPERABLE source range monitors and continues to require CHANNEL CHECKS every twelve hours to verify the information in the control room. In addition, this change is acceptable because the information removed from TS will be adequately controlled in the TS Bases under the TS Bases Control Program specified in TS 6.17. This program provides for evaluation of changes in accordance with 10 CFR 50.59 to ensure the Bases are properly controlled.

No changes to the source range indication features are currently contemplated. However, future changes to the current source range indication design would require processing a design change in accordance with established FENOC procedures. These procedures require an assessment of the impacts that the change would have on other functional areas and documents, including operations, training, procedures and the Updated Safety Analysis Report. In addition, a 10 CFR 50.59 review of the design change would be required. The design process procedures also ensure compliance with 10 CFR 50 Appendix B Criterion III, Design Control, which protects design basis and interface requirements during design changes. The procedural requirements provide assurance that the safety function of the source range indication will be maintained, and that the operator will be provided with timely indication of a boron dilution event.

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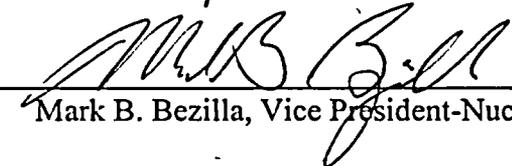
Therefore, the proposed change is consistent with NUREG-1430, is technically justified by the controls provided by 10 CFR 50 Appendix B and 10 CFR 50.59, and will have no impact on the health and safety of the public.

The enclosure presents the list of commitments for this letter.

Should you have any questions or require additional information, please contact Mr. Henry L. Hegrat, Supervisor – Fleet Licensing, at (330) 315-6944.

The statements contained in this submittal, including its associated enclosures and attachments, are true and correct to the best of my knowledge and belief. I am authorized by the FirstEnergy Nuclear Operating Company to make this submittal. I declare under penalty of perjury that the foregoing is true and correct.

Executed on: April 6, 2005

By: 
Mark B. Bezilla, Vice President-Nuclear

MSH

Enclosure

cc: Regional Administrator, NRC Region III
J. B. Hopkins, NRC/NRR Senior Project Manager
N. Dragani, Executive Director, Ohio Emergency Management Agency,
State of Ohio (NRC Liaison)
C. S. Thomas, NRC Region III, DB-1 Senior Resident Inspector
Utility Radiological Safety Board

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Enclosure

COMMITMENT LIST

THE FOLLOWING LIST IDENTIFIES THOSE ACTIONS COMMITTED TO BY THE DAVIS-BESSE NUCLEAR POWER STATION (DBNPS) IN THIS DOCUMENT. ANY OTHER ACTIONS DISCUSSED IN THE SUBMITTAL REPRESENT INTENDED OR PLANNED ACTIONS BY THE DBNPS. THEY ARE DESCRIBED ONLY FOR INFORMATION AND ARE NOT REGULATORY COMMITMENTS. PLEASE NOTIFY HENRY L. HEGRAT, SUPERVISOR – FLEET LICENSING (330-315-6944), OF ANY QUESTIONS REGARDING THIS DOCUMENT OR ANY ASSOCIATED REGULATORY COMMITMENTS.

COMMITMENTS	DUE DATE
None	Not applicable