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Docket Number 50-346

10 CFR 50.90

License Number NPF-3

Serial Number 2982

October 27, 2003

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

Subject: Davis-Besse Nuclear Power Station  
Supplemental Information for Technical Specification Change regarding Technical Specification 3/4.7.1.7, "Motor Driven Feedwater Pump System" to Correct the Safety-Grade Designation of the Motor Driven Feedwater Pump Flow Indication in Surveillance Requirement 4.7.1.7.e.2 (LAR 03-0001, TAC No. MB9017).

Ladies and Gentlemen:

By letter dated May 19, 2003 (Serial Number 2947), the FirstEnergy Nuclear Operating Company (FENOC) submitted an application for amendment of the Operating License, Appendix A, Technical Specifications (TS) for the Davis-Besse Nuclear Power Station (DBNPS). The proposed amendment would correct Technical Specification 3/4.7.1.7, "Motor Driven Feedwater Pump System," regarding the use of the words "safety-grade" with regards to the Motor Driven Feedwater Pump Flow Indication in Surveillance Requirement 4.7.1.7.e.2.

During a telephone discussion held with members of the DBNPS staff on July 2, 2003, the NRC staff requested documented responses to their questions previously provided by electronic mail on June 20, 2003. The DBNPS responses are contained in Enclosure 1.

This information does not affect the conclusions stated in the previously submitted license amendment application that there is no adverse impact on nuclear safety, that no environmental impact statement or environmental assessment need be prepared, and that the proposed amendment involves no significant hazards consideration.

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Should you have any questions or require additional information, please contact Mr. Kevin L. Ostrowski, Manager - Regulatory Affairs, at (419) 321-8450.

The statements contained in this submittal, including its enclosures, are true and correct to the best of my knowledge, information and belief. I declare under penalty of perjury that the foregoing is true and correct.

Executed on: 10/27/03.

Very truly yours,

  
\_\_\_\_\_  
Lew W. Myers, Chief Operating Officer

EJS

Enclosures

cc: Regional Administrator, NRC Region III  
J. B. Hopkins, NRC/NRR Senior Project Manager  
D. J. Shipley, 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

Davis-Besse Nuclear Power Station (DBNPS)  
License Amendment Request 03-0001  
Motor Driven Feedwater Pump System Flow Indicator  
- Responses to NRC Questions -

1. NRC Question:

Confirm that the flow indication for the motor-driven feedwater pump (MDFP) was not originally installed as or subsequently upgraded to safety-related standards.

DBNPS Response:

The DBNPS received its Operating License on April 22, 1977, without a MDFP System being installed.

Prior to restart of the DBNPS in December 1986, the non-safety related MDFP System was installed in the turbine building. As discussed in NRC NUREG-1177, "Safety Evaluation Report Related to the Restart of the Davis-Besse Nuclear Power Station, Unit 1 Following the Event of June 9, 1985," Section 3.3.1.3, "Motor-Driven Pumps," "The licensee has installed a new, full capacity non-safety-related motor-driven feedwater pump (MDFP)." NUREG-1177, Section 3.3.1.2 also states, "A non-safety-related motor-driven feedwater pump (MDFP), associated valves, piping, controls, and instrumentation are also able to provide flow equivalent to one AFW pump to either steam generator."

The addition of the MDFP System to the DBNPS was described in letter Serial Number 1182, dated September 10, 1985 submitted to the NRC. This letter states that there is no intent to fully qualify the system in part because the MDFP is located in the turbine building area of the plant that is not seismically qualified. The flow element FE5876 that feeds the flow indicator FI5876 is located in the MDFP discharge piping inside the turbine building and is not maintained as a "Q" component. The MDFP discharge flow indicator (FI5876) is located in the Control Room and was purchased as a "Q" component. However, it is maintained as a non-Q component and it does not provide a safety-related flow indication as discussed in the response to Question 4 below.

The MDFP description was added as Section 9.2.8 to the DBNPS Updated Safety Analysis Report (USAR) by Revision 9. This description originally and still explicitly states the MDFP is not safety related.

2. NRC Question:

Confirm that the flow indication for the motor driven feedwater pump is not relied upon for accident mitigation, including a high energy line break associated with one auxiliary

feedwater pump train with a concurrent single failure associated with the other train of auxiliary feedwater.

DBNPS Response:

As licensed by the NRC, the MDFP System is not required during design basis accidents. There are no accidents analyzed in USAR Chapter 15 that credit the MDFP System including its flow indication.

In the event of a high energy line break associated with one auxiliary feedwater pump train with a concurrent single failure associated with the other train of auxiliary feedwater, the MDFP may be utilized to achieve safe shutdown, but it is not safety-related and can not be credited in mitigating any design basis accident.

If both AFW Pumps were not available and the MDFP System was being used, the flow indicator FE/FI 5876 would not be the relied-upon indicator in such an accident. As discussed in the response to NRC Question 4, the flow would be indicated by safety-grade indication FE/FI 4630 for steam generator 1-1 and safety-grade indication FE/FI 4631 for steam generator 1-2.

3. NRC Question:

Please resurrect history as to why it was originally classified as safety related in the Technical Specifications.

DBNPS Response:

As discussed in Section 3.0, "Background," of License Amendment Request 03-0001, the MDFP discharge flow indication was not originally described as safety related in the DBNPS Technical Specifications (TS). Surveillance Requirement (SR) 4.7.1.7.e.2 prior to TS Amendment 193 did not contain the words "Safety Grade" in front of flow indication. Technical Specification Amendment 193, approved October 10, 1994, changed several SRs to clarify the testing of the MDFP System. The requested change to SR 4.7.1.7.e.2 to add "Safety Grade" was made in error.

4. NRC Question:

Demonstrate that there is no safety reason for the original requirement that the flow indication be SG [Safety Grade]. Include a discussion of all SG/nonSG interfaces for the AFW [Auxiliary Feedwater] System.

DBNPS Response:

As discussed in the above response to Question 3, there was no original requirement that the flow indication be safety grade. USAR, Chapter 15 Accident Analysis, does not discuss or credit the MDFP flow indication in the mitigation of any accident. The proposed correction does not involve a physical alteration of the plant or a change in the methods governing normal plant operation.

The only AFW System interfaces potentially affected by the proposed change are those with the MDFP System. As shown on USAR Figure 10.4-12A (annotated copy enclosed), the MDFP System interfaces with the safety-grade AFW System at check valves AF49 and AF52, which prevent backflow from the AFW System to the MDFP System. The MDFP System and the AFW System also share a non-safety grade test flow line to the condensate storage tanks.

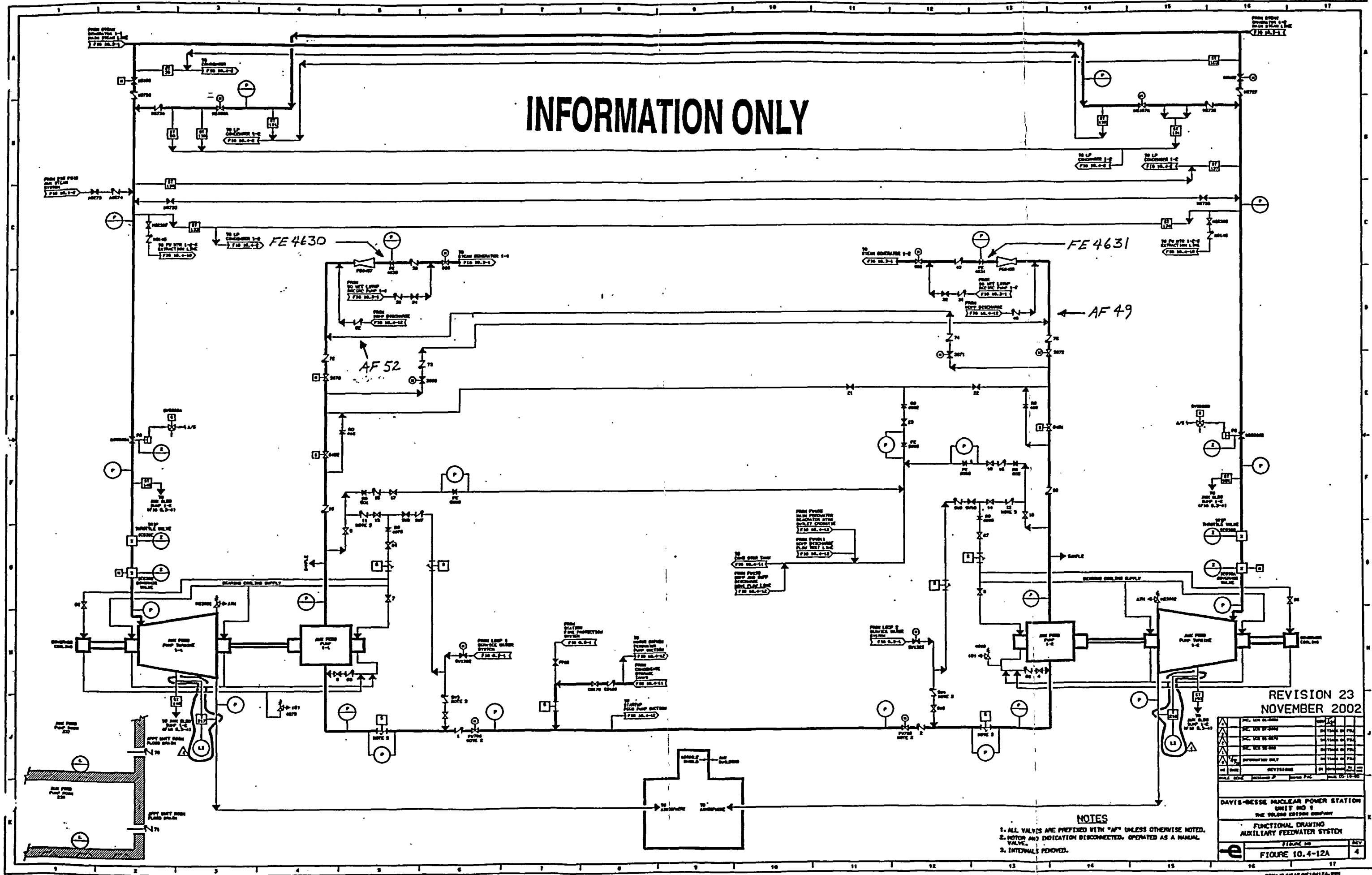
The MDFP discharge pipe connection to the safety-grade AFW system is upstream of the safety-grade flow indication associated with the AFW piping to each steam generator as shown on USAR Figure 10.4-12A. Accordingly, if the MDFP is in operation and providing feedwater to the steam generators, the flow will be indicated by safety-grade indication FE/FI 4630 for steam generator 1-1 and safety-grade indication FE/FI 4631 for steam generator 1-2. These two safety-grade flow indicators are tested under TS SR 4.3.3.6. The AFW System Flow path is demonstrated operable by using these flow indicators under TS SR 4.7.1.2.1.c, 4.7.1.2.1.f, and 4.7.1.2.1.g.

MDFP SR 4.7.1.7.e.2 is a situational-type SR, and is required to be performed only as a post-modification or repair test when the modification or repair is upstream of the MDFP test flow line tie-in to the non-safety related condensate storage tanks. It is not used to determine safety grade flow to the steam generators. Accordingly, there is no safety reason that the MDFP FE/FI 5876 flow indication be safety grade.

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DBNPS Updated Safety Analysis Report  
Annotated Figure 10.4-12A  
Auxiliary Feedwater System

INFORMATION ONLY



- NOTES
- 1. ALL VALVES ARE PREFIXED WITH "AF" UNLESS OTHERWISE NOTED.
  - 2. MOTOR AND INDICATION DISCONNECTED. OPERATED AS A MANUAL VALVE.
  - 3. INTERVALS REMOVED.

REVISION 23 NOVEMBER 2002	
REV	DESCRIPTION
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DAVIS-BESSE NUCLEAR POWER STATION  
UNIT NO. 1  
THE YALCO DESIGN COMPANY  
FUNCTIONAL DRAWING  
AUXILIARY FEEDWATER SYSTEM  
FIGURE 10.4-12A

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**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 THE MANAGER – REGULATORY AFFAIRS (419-321-8450) AT THE DBNPS OF ANY QUESTIONS REGARDING THIS DOCUMENT OR ANY ASSOCIATED REGULATORY COMMITMENTS.

COMMITMENTS	DUE DATE
None	N/A