

February 18, 2000

Mr. Daniel G. Malone
Acting Director, Licensing
Palisades Plant
27780 Blue Star Memorial Highway
Covert, MI 49043

SUBJECT: PALISADES PLANT - NOTICE OF ENFORCEMENT DISCRETION RE:
BACKUP STEAM SUPPLY FOR TURBINE-DRIVEN AUXILIARY FEEDWATER
PUMP P-8B (TAC NO. MA8220, NOED 00-6-002)

Dear Mr. Malone:

By letter dated February 16, 2000, you requested that the NRC exercise discretion not to enforce compliance with the surveillance requirement (and the implied operability requirement) in the Palisades Technical Specification (TS) 4.9a.2 for the manual backup steam supply for steam-turbine-driven auxiliary feedwater pump P-8B.¹ Your letter documented information discussed with the NRC in a telephone conference on February 16, 2000, from 11:45 a.m. to 12:50 p.m. The principal NRC staff members who participated in that telephone conference were:

Singh Bajwa, Projector Director, Project Directorate III
Claudia Craig, Chief, Section 1, Project Directorate III
Darl Hood, Senior Project Manager, Project Directorate III, Section 1
James Tatum, Senior Technical Reviewer, Plant Systems Branch
See-Meng Wong, Technical Reviewer, Probabilistic Safety Assessment Branch
Geoffrey Grant, Director, Division of Reactor Projects, Region III
Eugene Cobey, acting Chief, Reactor Projects Branch 3, Region III
Jay Lennartz, Senior Resident Inspector, Region III

You requested enforcement discretion to permit plant startup from the current maintenance outage, and permit subsequent operation, until an application for license amendment to change the TS can be processed. This letter documents our telephone call of February 16, 2000, when we orally issued this Notice of Enforcement Discretion (NOED).²

¹ The auxiliary feedwater system, including the specific components mentioned in this letter, is described in the Palisades Updated Final Safety Analysis Report (UFSAR), Section 9.7, including UFSAR Figure 9-13, which is a piping and instrumentation diagram of the system.

² During the telephone call on February 16, 2000, you made two corrections to the attachment to your letter of the same date requesting enforcement discretion. In the section entitled "Probabilistic Safety Assessment," the number 6.31E-6/yr (on page 6), which represents the increase in core damage frequency, was corrected to 6.61E-6/yr. In the section titled "Compensatory Measures to be Taken" (page 9), the last sentence was corrected to read: "Required monthly testing of P-8B will also verify that isolation from the normal steam supply to Pump P-8B remains adequate." The latter correction deleted the phrase "provide opportunity to" so as to more clearly reflect that you have committed to verify adequate isolation on a monthly basis.

You stated that the plant was currently heating up in preparation for taking the reactor critical on Wednesday, February 16, 2000. However, before the reactor can be taken critical, auxiliary feedwater pump P-8B is required to be operable by TS 3.5.1a, which states, in part, "The steam driven pump shall be operable prior to making the reactor critical." Associated TS Surveillance Requirement 4.9a.2 requires a monthly test and states "The OPERABILITY of the steam-driven pump shall be verified by starting alternately from each control room switch and from the pump test-key switch in a three month period." The phrase "each control room switch" refers to the switches on the main control board that operate the steam supply valves, CV-0522B and CV-0522A, for the normal (automatically actuated) and backup (manually actuated) steam supplies to the P-8B turbine. However, during the maintenance outage on February 5, 2000, a steam leak developed beneath the floor of the turbine building from the underground piping that provides a manual backup steam supply to auxiliary feedwater pump P-8B. You state that this manual backup steam supply line provides no required safety function, but it does provide an alternative steam supply to P-8B for operational flexibility. You subsequently excavated the area immediately surrounding the leak and removed and replaced the pipe section containing the leak. Since the apparent cause of the leak is corrosion originating from the exterior of the pipe, you concluded that the integrity of the remainder of the line, which has not been completely inspected, cannot be quantitatively proven. Due to the inability to easily demonstrate compliance with the requirements of the American Society of Mechanical Engineers' *Boiler and Pressure Vessel Code* for the entire length of underground pipe, you decided on February 13, 2000, to consider this manual backup steam supply line inoperable. Therefore, you requested enforcement discretion to permit plant startup and subsequent operation until a TS change request can be processed. That change request would revise TS Surveillance Requirement 4.9a.2 to clearly specify that it applies to the switch for the primary steam supply valve CV-0522B and the pump test-key switch on the automatic auxiliary feedwater actuation system, but not to the switch for the manual backup steam supply valve. You requested discretion under Criteria 3a and 3c of Section B.2 of NRC Inspection Manual Chapter 9900, "Technical Guidance, Operations - Notices of Enforcement Discretion." You requested enforcement discretion only for the period of time necessary to process a license amendment to change the TS.

As currently written, TS Surveillance Requirement 4.9a.2 specifically requires testing of the manual backup steam supply valve, which implies that this manual backup steam supply line is a required feature to support operability of P-8B. Considering the manual backup steam supply line inoperable, therefore, means that P-8B is inoperable because it lacks a required feature necessary to support its operability. In your letter and phone call of February 16, 2000, you explained that the normal steam supply to pump P-8B has both automatic and manual actuation capabilities. In addition, the two electrically driven auxiliary feedwater pumps, which are both safety related, have both automatic and manual actuation capabilities. You further stated that the manual backup steam supply line is not required for the P-8B function in any plant safety-related event. You performed a probabilistic safety analysis (PSA), comparing plant operation with and without the manual backup steam supply available, and found no significant change in risk. Based upon the PSA, you concluded that permanently disabling the alternate steam supply line to pump P-8B is below the Regulatory Guide 1.174 threshold of 1E-6/yr increase in core damage frequency and, therefore, permanently disabling the alternate steam supply line to P-8B is not safety significant. You also concluded that the manual backup steam supply does not meet any of the 10 CFR 50.36 criteria for inclusion in TS. You note that you considered possible repair methods for the underground pipe, including both complete replacement of the underground pipe, and rerouting the steam supply through the turbine

building. You found that either repair method would cost in excess of one million dollars, and that either method would take longer than 6 weeks to design, fabricate, and install. Because you found that such a replacement would have no significant safety benefit, you concluded the expense of repair could not be justified on the basis of maintaining operational flexibility. Therefore, you stated that you are preparing a license amendment request to change the TS to remove the requirements associated with the manual backup steam supply for pump P-8B, and this request would be submitted within 48 hours of the NRC staff's verbal approval of the requested NOED on February 16, 2000.

In your letter and telephone discussion, you identified compensatory measures that will be taken. During plant operation, the underground steam line will be isolated from its associated steam generator and from the other steam supply to pump P-8B. This isolation will limit the possibility of additional steam leaks from the underground piping, and of the underground piping adversely affecting the normal steam supply to pump P-8B. You stated that P-8B will be tested monthly to verify that isolation of the backup steam supply line from the normal steam supply to pump P-8B remains adequate.

You also indicated that the Palisades Plant Review Committee had reviewed the requested NOED, concluded that operation of the facility in accordance with the proposed enforcement discretion would not involve a significant hazard consideration as defined in 10 CFR 50.92, and recommended approval of the NOED.

Based upon these considerations, the NRC staff concluded that Criteria 3a and 3c of Section B.2 of NRC Inspection Manual Chapter 9900 were met. Criterion 3a states "The equipment or system does not perform a safety function in the mode in which operation is to occur (e.g., a TS which requires the equipment to be operable in a mode not required by the UFSAR)." Criterion 3a was satisfied by your review of the Palisades auxiliary feedwater system design and UFSAR Chapter 14 events, Station Blackout, Anticipated Transients Without Scram, and Post-Fire Safe Shutdown, that confirmed that the backup underground steam supply is not credited in any plant safety analyses and is not required for any design- or license-basis events. Criterion 3c states, in part: "The TS or other license conditions require a test, inspection, or system realignment that is inappropriate for the particular plant conditions, in that it does not provide a safety benefit..." Your PSA results indicate that permanently disabling the alternate steam supply line to P-8B is not safety significant. Consequently, to the extent that TS 4.9a.2 requires starting the steam-driven auxiliary feedwater pump utilizing the control room switch associated with the manual backup steam supply, the NRC staff agrees that such testing is unnecessary. Additionally, the function of the manual backup steam supply does not meet the 10 CFR 50.36 criteria for inclusion in the TS. You have committed to submit, within 48 hours of our verbal approval of the requested NOED, a license amendment request to change both the current TS and the improved TS to remove the requirements associated with the manual backup steam supply for pump P-8B.

On the basis of the staff's evaluation of your request, we have concluded that a NOED is warranted because we are clearly satisfied that this action involves minimal or no safety impact, is consistent with the enforcement policy and staff guidance, and has no adverse impact upon public health and safety. Therefore, it is our intention to exercise discretion not to enforce compliance with TS 4.9a.2 for the manual backup steam supply for steam-turbine-driven auxiliary feedwater pump P-8B until issuance of the license amendment application, which is to be submitted no later than 12:50 p.m on February 18, 2000. The NRC staff plans to complete

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its review and issue the license amendment within 4 weeks of the date of this letter. In granting this NOED, the NRC staff further recognizes that you have committed to monthly testing of pump P-8B to verify that isolation of the backup steam supply line from the normal steam supply to pump P-8B remains adequate.

As stated in the enforcement policy, action will be taken, to the extent that violations were involved, for the root cause that led to the noncompliance for which this NOED was necessary.

Sincerely,

/RA/

S. Singh Bajwa, Director
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reaction Regulation

Docket No. 50-255

cc: See next page

D. Malone

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February 18, 2000

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Sincerely,

/RA/

S. Singh Bajwa, Director
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reaction Regulation

Docket No. 50-255

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