Template NRR-058

March 14, 2000

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

SUBJECT: PALISADES PLANT - ISSUANCE OF AMENDMENT RE: BACKUP STEAM SUPPLY FOR TURBINE-DRIVEN AUXILIARY FEEDWATER PUMP P-8B (TAC NO. MA8247)

Dear Mr. Malone:

The Commission has issued the enclosed Amendment No. 190 to Facility Operating License No. DPR-20 for the Palisades Plant. The amendment consists of changes to the Technical Specifications (TS) in response to your application transmitted by letter dated February 18, 2000, as supplemented March 8, 2000.

The amendment changes current TS 4.9a.2 and improved TS 3.7.5 and its associated bases to remove requirements associated with the backup steam supply to turbine-driven auxiliary feedwater pump P-8B. This amendment is issued on an exigent basis pursuant to 10 CFR 50.91(a)(6) inasmuch as the Commission finds that failure to act in a timely way would prevent resumption of operation.

A copy of our related safety evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/
Darl S. Hood, Senior Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-255

Enclosures: 1. Amendment No. 190 to DPR-20
2. Safety Evaluation

cc w/encl: See next page

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* While this is not a risk-informed licensing action, SPSB was requested to review the licensee's reliability logic associated with the action. Please see one correction on p. 4. Incorporated DSH.

March 14, 2000

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 14, 2000

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Acting Director, Licensing
Palisades Plant
27780 Blue Star Memorial Highway
Covert, MI 49043

SUBJECT: PALISADES PLANT - ISSUANCE OF AMENDMENT RE: BACKUP STEAM SUPPLY FOR TURBINE-DRIVEN AUXILIARY FEEDWATER PUMP P-8B (TAC NO. MA8247)

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Sincerely,

Darl S. Hood

Darl S. Hood, Senior Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-255

Enclosures: 1. Amendment No. 190 to DPR-20
2. Safety Evaluation

cc w/encl: See next page

Palisades Plant

cc:

Mr. Thomas J. Palmisano
Site Vice President
Palisades Plant
27780 Blue Star Memorial Highway
Covert, MI 49043

Mr. Robert A. Fenech, Senior Vice President
Nuclear, Fossil, and Hydro Operations
Consumers Energy Company
212 West Michigan Avenue
Jackson, MI 49201

Arunas T. Udrys, Esquire
Consumers Energy Company
212 West Michigan Avenue
Jackson, MI 49201

Regional Administrator, Region III
U.S. Nuclear Regulatory Commission
801 Warrenville Road
Lisle, IL 60532-4351

Jerry Sarno, Supervisor
Covert Township
P. O. Box 35
Covert, MI 49043

Office of the Governor
P. O. Box 30013
Lansing, MI 48909

U.S. Nuclear Regulatory Commission
Resident Inspector's Office
Palisades Plant
27782 Blue Star Memorial Highway
Covert, MI 49043

Drinking Water and Radiological
Protection Division
Michigan Department of
Environmental Quality
3423 N. Martin Luther King Jr Blvd
P. O. Box 30630 CPH Mailroom
Lansing, MI 48909-8130

Michigan Department of Attorney General
Special Litigation Division
630 Law Building
P.O. Box 30212
Lansing, MI 48909

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

CONSUMERS ENERGY COMPANY

DOCKET NO. 50-255

PALISADES PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 190
License No. DPR-20

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Consumers Energy Company (the licensee) dated February 18, 2000, as supplemented March 8, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public; and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public;

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to the license amendment and Paragraph 2.C.(2) of Facility Operating License No. DPR-20 is hereby amended to read as follows:

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 190 , and the Environmental Protection Plan contained in Appendix B are hereby incorporated in the license. Consumers Energy Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of issuance and shall be implemented within 30 days, except that implementation with respect to the improved Technical Specification shall be on or before October 31, 2000.

FOR THE NUCLEAR REGULATORY COMMISSION

Claudia M. Craig

Claudia M. Craig, Chief, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: March 14, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 190

FACILITY OPERATING LICENSE NO. DPR-20

DOCKET NO. 50-255

Revise Appendix A Technical Specifications, including the issued but not yet implemented Improved Technical Specifications (ITS), by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE	INSERT
4-45	4-45
ITS 3.7.5-1	ITS 3.7.5-1
ITS 3.7.5-2	ITS 3.7.5-2
ITS 3.7.5-3	ITS 3.7.5-3
ITS 3.7.5-4	---
ITS B 3.7.5-2	ITS B 3.7.5-2
ITS B 3.7.5-4	ITS B 3.7.5-4
ITS B 3.7.5-5	ITS B 3.7.5-5
ITS B 3.7.5-6	ITS B 3.7.5-6

4.9 AUXILIARY FEEDWATER SYSTEM TESTS

Surveillance Requirements

Auxiliary Feedwater Pumps

a. At least once per 31 days:

1. The OPERABILITY of each motor-driven pump shall be verified by starting from the control room hand switch, from the breaker and from the pump test-key switch in a three month period.

2. The OPERABILITY of the steam driven pump shall be verified by starting alternately from the control room switch for the steam supply (CV-0522B) and from the pump test-key switch.

3. Verify that each non-automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

b. At least once per 18 months:

1. Verify that each Automatic Valve (CV-0736A, CV-0737A, CV-0727 and CV-0749) actuates to its correct position (or that specified flow is established) upon receipt of a simulated auxiliary feedwater pump start signal.

2. Verify that each pump starts automatically upon receipt of an auxiliary feedwater actuation test signal.

Basis

The periodic testing of Section 4.9.a will verify auxiliary feedwater pump control circuits.

The OPERABILITY testing of Section 4.9.b will verify auto initiation of the auxiliary feedwater system by simulating a low steam generator level and observation of pump start. To automatically start the "C" pump requires placing the "A" pump in manual. To automatically start the "B" pump requires placing the "A & C" pumps in manual. These tests may be performed during plant operations. OPERABILITY of the flow control valves (CV-0736A, CV-0737A, CV-0727 and CV-0749) will be verified through simulation of an auxiliary feedwater pump start signal and observing auxiliary feedwater system flow as monitored by installed instrumentation.

Reference

FSAR, Section 9.7

3.7 PLANT SYSTEMS

3.7.5 Auxiliary Feedwater (AFW) System

LCO 3.7.5 Two AFW trains shall be OPERABLE.

---NOTES---

1. Only one AFW train, which includes a motor driven pump, is required to be OPERABLE in MODE 4.
2. The steam driven pump is only required to be operable prior to making the reactor critical.
3. Two AFW pumps may be placed in manual for testing, for a period of up to 4 hours.

APPLICABILITY: MODES 1, 2, and 3,
MODE 4 when steam generator is relied upon for heat removal.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more AFW trains inoperable in MODE 1, 2, or 3. AND At least 100% of required AFW flow available to each steam generator. AND At least two AFW pumps OPERABLE.	A.1 Restore train(s) to OPERABLE status.	72 hours

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time of Condition A not met. OR One or more AFW trains inoperable for reasons other than Condition A with at least 100% of the required AFW flow available in MODE 1, 2, or 3.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	6 hours 30 hours
C. Two AFW trains inoperable with less than 100% of the required AFW flow available, in MODE 1, 2, or 3. OR Required AFW train inoperable in MODE 4.	----------NOTE---------- LCO 3.0.3 and all other LCO Required Actions requiring MODE changes or power reductions are suspended until at least 100% of the required AFW flow is available. ---------- C.1 Initiate action to restore one AFW train to OPERABLE status.	Immediately

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.7.5.1	Verify each required AFW manual, power operated, and automatic valve in each water flow path and in the steam supply flow path to the steam turbine driven pump, that is not locked, sealed, or otherwise secured in position, is in the correct position.	31 days
SR 3.7.5.2	----------NOTE---------- Not required to be met for the turbine driven AFW pump in MODE 3 below 800 psig in the steam generators. ----------	
	Verify the developed head of each required AFW pump at the flow test point is greater than or equal to the required developed head.	In accordance with the Inservice Testing Program
SR 3.7.5.3	----------NOTE---------- Only required to be met in MODES 1, 2 or 3 when AFW is not in operation. ----------	
	Verify each AFW automatic valve that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an actual or simulated actuation signal.	18 months
SR 3.7.5.4	----------NOTE---------- Only required to be met in MODES 1, 2, and 3. ----------	
	Verify each required AFW pump starts automatically on an actual or simulated actuation signal.	18 months

BASES

BACKGROUND (continued)

The steam turbine driven AFW pump receives steam from the steam generator E-50A main steam header upstream of the Main Steam Isolation Valve (MSIV). The steam supply valve receives an open signal from the Auxiliary Feedwater Actuation Signal (AFAS) instrumentation. The turbine driven AFW pump feeds both steam generators through the same flow paths as motor driven AFW pump P-8A.

One pump at full flow is sufficient to remove decay heat and cool the plant to Shutdown Cooling (SDC) System entry conditions.

The AFW System supplies feedwater to the steam generators during normal plant startup, shutdown, and hot standby conditions.

The AFW System is designed to supply sufficient water to the steam generators to remove decay heat with steam generator pressure at the setpoint of the MSSVs, with exception of AFW pump P-8C. If AFW pump P-8C is used, operator action may be required to either trip two of four Primary Coolant Pumps (PCPs), start an additional AFW pump, or reduce steam generator pressure. This will allow the required flowrates to the steam generators that are assumed in the safety analyses. Subsequently, the AFW System supplies sufficient water to cool the plant to SDC entry conditions, and steam is released through the ADVs, or the turbine bypass valve if the condenser is available.

The AFW System actuates automatically on low steam generator level by an AFAS as described in LCO 3.3.3, "Engineered Safety Feature (ESF) Instrumentation" and 3.3.4, "ESF Logic." The AFAS initiates signals for starting the AFW pumps and repositioning the valves to initiate AFW flow to the steam generators. The actual pump starts are on an "as required" basis. P-8A is started initially, if the pump fails to start, or if the required flow is not established in a specified period of time, P-8C is started. If P-8A and P-8C do not start, or if required flow is not established in a specified period of time, then P-8B is started.

The AFW System is discussed in the FSAR, Section 9.7 (Ref. 1).

BASES

LCO (continued)

The AFW System is considered to be OPERABLE when the components and flow paths required to provide AFW flow to the steam generators are OPERABLE. This requires that the two motor driven AFW pumps be OPERABLE in two diverse paths, each supplying AFW to both steam generators. Prior to making the reactor critical during a plant startup, the turbine driven AFW pump shall be OPERABLE and capable of supplying AFW flow to both steam generators. When steam generator pressure is reduced, it is not required to have design inlet pressure available to the turbine driver in order to declare the turbine driven AFW pump OPERABLE. As steam generator pressure drops, the required AFW pump discharge head decreases accordingly. The reduced steam generator pressure available at lower temperatures in MODE 3 does not inhibit the turbine driven AFW pump's ability to feed the steam generator (Ref. 3). The piping, valves, instrumentation, and controls in the required flow paths shall also be OPERABLE.

The LCO is modified by three Notes. Note one indicates that only one AFW train, which includes a motor driven pump, is required to be OPERABLE in MODE 4. This is because of reduced heat removal requirements, the short period of time in MODE 4 during which AFW is required, and the insufficient steam pressure available in MODE 4 to power the turbine driven AFW pump. Note two states that the turbine driven AFW pump is only required to be made OPERABLE prior to making the reactor critical. It is required to be OPERABLE during subsequent MODE 1, 2, and 3 operation. This allowance is needed to provide sufficient steam pressure to perform turbine and pump testing. Note three indicates that any two AFW pumps may be placed in manual mode for the purpose of testing, for not more than 4 hours. In this situation, the third AFW pump would still be available in the event of a plant transient. The two pumps that are in manual could be used at the discretion of the operator.

APPLICABILITY

In MODES 1, 2, and 3, the AFW System is required to be OPERABLE and to function in the event that the main feedwater is lost. In addition, the AFW System is required to supply enough makeup water to replace steam generator secondary inventory, lost as the plant cools to MODE 4 conditions.

During heatup, the turbine driven AFW pump is only required to be made OPERABLE prior to making the reactor critical. It is required to be OPERABLE during subsequent MODE 1, 2, and 3 operation. This allowance is needed to provide sufficient steam pressure to perform turbine and pump testing.

BASES

APPLICABILITY (continued)

In MODE 4, the AFW System may be used for heat removal via the steam generator.

In MODES 5 and 6, the steam generators are not normally used for decay heat removal, and the AFW System is not required.

ACTIONS

A.1

With one or more AFW trains (pump or flow paths) inoperable, in MODE 1, 2, or 3, and at least 100% of the required AFW flow available to each steam generator, and at least two AFW pumps OPERABLE, action must be taken to restore the components to OPERABLE status within 72 hours. The 72 hour Completion Time is reasonable, based on the redundant capabilities afforded by the AFW System, the time needed for repairs, and the low probability of a DBA event occurring during this period. Two AFW pumps and the associated flow paths remain to supply feedwater to both steam generators.

B.1 and B.2

When Required Action A.1 cannot be completed within the required Completion Time, or with one or more AFW trains (pump or flow paths) inoperable, for reasons other than Condition A with at least 100% of the required AFW flow available in MODES 1, 2, and 3, the plant must be placed in a MODE in which the LCO does not apply. To achieve this status, the plant must be placed in at least MODE 3 within 6 hours, and in MODE 4 within 30 hours.

The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

BASES

ACTIONS (continued)

C.1

Required Action C.1 is modified by a Note indicating that all required MODE changes or power reductions are suspended until at least 100% of the required AFW flow is available.

With two trains inoperable and less than 100% of the required AFW flow available in MODES 1, 2, and 3, or the required AFW train inoperable in MODE 4, the plant is in a seriously degraded Condition with no safety related means for conducting a cooldown, and only limited means for conducting a cooldown with nonsafety grade equipment. In such a condition, the plant should not be perturbed by any action, including a power change, that might result in a trip. The seriousness of this condition requires that action be started immediately to restore at least 100% of the required AFW flow available. LCO 3.0.3 is not applicable, as it could force the plant into a less safe condition.

SURVEILLANCE REQUIREMENTS

SR 3.7.5.1

Verifying the correct alignment for the required manual, power operated, and automatic valves in the AFW water and steam supply flow path provides assurance that the proper flow paths exist for AFW operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since these valves are verified to be in the correct position prior to locking, sealing, or securing. This SR also does not apply to valves that cannot be inadvertently misaligned, such as check valves. This Surveillance does not require any testing or valve manipulations; rather, it involves verification that those valves capable of potentially being mispositioned are in the correct position.

This test need not be performed for the steam driven AFW pump for MODE 4 operation.

The 31 day Frequency is based on engineering judgment, is consistent with the procedural controls governing valve operation, and ensures correct valve positions.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 190 TO FACILITY OPERATING LICENSE NO. DPR-20

CONSUMERS ENERGY COMPANY

PALISADES PLANT

DOCKET NO. 50-255

1.0 INTRODUCTION

By letter dated February 18, 2000, as supplemented March 8, 2000, Consumers Energy Company (the licensee) submitted an application for a license amendment to change the Technical Specifications (TSs) for the Palisades Plant. The proposed amendment would change current Technical Specification (CTS) 4.9a.2, "Auxiliary Feedwater System Tests--Surveillance Requirements--Auxiliary Feedwater Pumps," by removing the surveillance requirement with respect to the backup steam supply to turbine-driven auxiliary feedwater (AFW) pump P-8B. As changed, the monthly surveillance requirement would apply to the switch for the primary steam supply valve (CV-0522B) and the pump test-key switch on the automatic AFW actuation system, but not to the switch for the manual backup steam supply valve.

Related changes would also be made to improved TS 3.7.5, "Auxiliary Feedwater (AFW) System," as issued November 30, 1999 (Amendment 189) but not yet implemented. Condition A for ITS 3.7.5 currently provides a completion time of 7 days for restoration if one of the two steam supplies for the turbine-driven AFW pump becomes inoperable (provided the other supply is operable). The proposed amendment would delete ITS 3.7.5, Condition A, and the remaining conditions and their associated actions would be relettered. ITS 3.7.5, Condition B, currently allows a completion time of 72 hours for restoration of an inoperable AFW pump (provided that at least 100 percent of required AFW flow and at least two operable AFW pumps are available). Condition B also specifies a second completion time: "10 days from discovery of failure to meet the LCO [limiting condition for operation]." The proposed amendment would delete this second completion time in Condition B. The proposed amendment would also revise ITS Surveillance Requirement 3.7.5.1 to only require verification of valve alignment in the remaining steam supply to P-8B (i.e., reference to the backup steam supply would be eliminated). The licensee also forwarded associated changes for the ITS Bases.

2.0 BACKGROUND

On February 5, 2000, a steam leak developed beneath the turbine building floor in the underground pipe which provides steam to the turbine-driven AFW pump from steam generator E-50B (i.e., the backup steam supply). The steam leak resulted from degradation due to corrosion from the outside surface of the pipe. Although the leaking pipe section was repaired,

the condition along the entire length of the underground steam pipe could not be easily ascertained. Since the above ground steam supply pipe from steam generator E-50A (i.e., the primary steam supply) remained in good condition, the licensee determined that replacement of the underground pipe would be of minimal safety benefit, and that the expense of repair (i.e., replacement by either an above-ground or underground line) was not justified.

Before discovering the steam leak, the Palisades plant was shut down for a planned weekend outage to reduce accumulated impurities within the steam generators. Because the backup steam supply for the turbine-driven AFW pump is included in the CTS by Surveillance Requirement 4.9a.2, and because the licensee had determined that the turbine-driven AFW pump should be declared inoperable due to the degraded condition of its backup steam supply pipe, the licensee requested, on February 16, 2000, that the NRC grant a Notice of Enforcement Discretion (NOED) to allow the Palisades plant to startup and operate while a TS change could be processed to eliminate the surveillance requirement associated with the backup steam supply pipe. The NRC granted the licensee's request for an NOED, subject to the licensee's prompt filing of an amendment request. The licensee filed a timely application for license amendment on February 18, 2000. For completeness, the licensee's amendment request included a change to the Palisades ITS, which are scheduled to be implemented on or before October 31, 2000.

3.0 EVALUATION

Following the 1979 event that occurred at Three Mile Island, Unit 2 (TMI-2), the NRC performed detailed evaluations of the AFW systems at operating nuclear power plants to identify any changes that were necessary to assure plant safety. Plant-specific AFW system designs were evaluated against NUREG-75/087 (later issued as NUREG-0800), "Standard Review Plan [SRP]," Section 10.4.9, "Auxiliary Feedwater System," including Branch Technical Position (BTP) Auxiliary Systems Branch (ASB) 10-1, "Design Guidelines for Auxiliary Feedwater System Pump Drive and Power Supply Diversity for Pressurized Water Reactor Plants." The reliability of AFW systems was also assessed for several loss of feedwater transients, one of which included loss of feedwater concurrent with station blackout.

To resolve vulnerabilities identified by the NRC staff's review, the licensee substantially modified the AFW system at Palisades after the TMI-2 event. The current system consists of two independent trains, with an electric motor-driven pump (P-8A) and a turbine-driven pump (P-8B) in one train, and a single electric motor-driven pump (P-8C) in the other train. Any of the three AFW pumps are capable of supplying sufficient flow to maintain acceptable water level in either or both steam generators. The design satisfies the post-TMI acceptance criteria that was established for the Palisades AFW system and, in most respects, also satisfies the criteria given in Section 10.4.9 and BTP ASB 10-1 of the SRP. While the turbine-driven AFW pump has steam supply lines from both steam generators, only the steam supply valve (CV-0522B) associated with the above ground steam supply line receives an automatic actuation signal. The backup steam supply valve (CV-0522A) associated with the underground steam supply line does not receive an automatic actuation signal and must be actuated manually. The NRC staff's acceptance criteria regarding diversity of power source considerations are satisfied without reliance upon the backup (underground) steam supply line. Therefore, elimination of the backup steam supply line is acceptable.

The licensee indicated that the only instance for which the backup steam supply for P-8B has been credited is for a postulated fire in the southwest cable penetration room, which could affect CV-0522B and the controls for P-8A. The licensee's analysis of record relies upon either P-8C or CV-0522A to be available for satisfying the AFW function. With the elimination of the underground (backup) steam supply line for P-8B (which also eliminates CV-0522A), the licensee would now rely upon use of the manual handwheel for CV-0522B for providing steam to P-8B during this event. However, P-8C is unaffected and would continue to be the preferred source of AFW. The NRC staff considers this to be an acceptable approach for assuring availability of AFW during a fire in the southwest cable penetration room.

Another criteria that must be considered in eliminating the backup steam supply line deals with reliability of the AFW system. As stated in Section 10.4.9 of the SRP, Paragraph I, Item 17:

> An AFWS [AFW system] reliability analysis is performed in accordance with Item II.E.1.1 of NUREG-0737 using the methodology defined by Appendix III and Annex 1 of Appendix X in NUREG-0611 and NUREG-0635 to determine the system reliability and major contributors to AFWS system failure under various loss of main feedwater transients.[1]

The licensee evaluated the reliability of the AFW system with and without the backup steam supply line to AFW pump P-8B using the AFW system model that was developed for the plant Probabilistic Safety Assessment. The evaluation addressed the reliability of the AFW system to perform its intended functions under three specific transient event scenarios identified in NUREG-0635: (1) loss of main feedwater, (2) loss of main feedwater with loss of offsite power, and (3) loss of main feedwater with concurrent loss of all alternating current power (station blackout). Significant assumptions and features of the reliability analyses included:

(1) A mission time of six hours was used (the water inventory from the condensate storage tank and primary makeup water tank have sufficient volume to last at least six hours and there is a high likelihood that offsite power could be recovered within six hours),

(2) Component test and maintenance unavailabilities and operator actions to restore components after test or maintenance are included in the system model,

(3) Loss of AFW pump room cooling from the turbine building fans would not fail the AFW pumps because room heatup calculations show that room temperatures would not exceed equipment qualification limits during the mission time, and

(4) Nitrogen backup to instrument air for certain AFW injection valves (CV-0727 and CV-0749) is available to control flow to the steam generators.

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[1] NUREG-0737, "Clarification of TMI Action Plan Requirements," was published November 1980. NUREG-0611, "Generic Evaluation of Feedwater Transient and Small Break Loss-of-Coolant Accidents in Westinghouse-Designed Operating Plants," was published January 1980. NUREG-0635, "Generic Evaluation of Feedwater Transients and Small Break Loss-of-Coolant Accidents in Combustion Engineering-Designed Operating Plants," was published January 1980.

The NRC staff finds these assumptions and features to be reasonable for calculating realistic, best estimates of AFW system reliability for the three transient events.

The NRC staff reviewed the results of the reliability assessments and found that the AFW system reliability without the backup steam supply line continues to meet the criterion of SRP Section 10.4.9, Paragraph IV, Item 5 for a loss of main feedwater event. Additionally, the decrease in AFW system reliability due to the absence of the backup steam supply line was about 10 percent for all three transient event scenarios. These assessment results support the conclusion that there is no significant reduction in the overall reliability of the AFW system without the backup steam supply line to the turbine-driven AFW pump P-8B.

The licensee's application for license amendment indicates that the degraded underground steam pipe would be isolated from the main steam supply header by closing at least one manual isolation valve on the steam supply side, and that the P-8B steam turbine would be isolated from the degraded pipe by using a pipe cap or flanged connection.[2] The staff considers these measures to be acceptable for preserving the integrity of the P-8B steam turbine and the main steam header.

The change to CTS Surveillance Requirement 4.9a.2 modifies the existing surveillance from a requirement to demonstrate the operability of P-8B by alternately using both the normal and the backup steam supplies, to a requirement to demonstrate operability by using only the above-ground (normal) steam supply. This change is appropriate because of the modification eliminating the backup steam supply for P-8B. With the P-8B pump itself inoperable in Modes 1, 2, or 3, the CTS specifies a 72-hour AOT. If the single remaining (above ground) steam supply line to P-8B should be found to be inoperable, this would, in fact, render P-8B inoperable. Consequently, 72-hours is an appropriate AOT for the revised CTS. Therefore, the NRC staff finds the change to CTS 4.9a.2 to be appropriate and acceptable.

The licensee's February 18, 2000, application also included proposed changes to the ITS, which were approved by Amendment 189, dated November 30, 1999. The ITS are scheduled to be implemented by the licensee on or before October 31, 2000. With the elimination of the backup steam supply line, the 7-day AOT for inoperability of one of two steam supply lines for P-8B (i.e., Condition A of ITS 3.7.5) is no longer applicable and, therefore, this AOT should be deleted from the Palisades ITS as proposed. The second completion time (10 days from discovery of failure to meet the LCO) currently specified in Condition B of ITS 3.7.5 should also be eliminated, as proposed. This is appropriate because, with the removal of Condition A, the 10-day completion time is an unnecessary limitation. Similarly, because the backup supply line is removed from service, the change to ITS 3.7.5.1 to eliminate reference to it is also appropriate. Accordingly, the NRC staff finds that the proposed changes to the ITS are appropriate in view of the plant modification eliminating the underground line, are consistent with the proposed changes to the CTS and, therefore, are acceptable.

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[2] The licensee subsequently installed a blind flange in the backup steam supply line. The blind flange is located inside the P-8B AFW pump room between a check valve and the wall penetration.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Michigan State official was notified of the proposed issuance of the amendment. The Michigan State official had no comments.

5.0 EXIGENT CIRCUMSTANCES

The Commission's regulations, as stated in 10 CFR 50.91, contain exceptions for issuance of amendments when the usual 30-day public notice period cannot be met. One type of special exception is an exigency. An exigency is a case where the staff and licensee need to act promptly and time does not permit the staff to publish a *Federal Register* notice allowing 30 days for prior public comment before issuance of the amendment. The staff also determines that the amendment involves no significant hazards considerations.

The licensee submitted the request for amendment on February 18, 2000. It was noticed in the *Federal Register* on March 1, 2000 (65 FR 11089), at which time the staff provided an opportunity for hearing and proposed a no significant hazards consideration determination. The public was allowed 14 days after the date of publication of that notice to provide comments. No comments were received.

During a 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 AFW pump P-8B. The licensee states 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. The licensee subsequently excavated the area immediately surrounding the leak and removed and replaced the leaking pipe section. Since the apparent cause of the leak was corrosion originating from the exterior of the pipe, the licensee concluded that the integrity of the remainder of the line, which has not been completely inspected, cannot be quantitatively proven and cannot easily be demonstrated to be in compliance with the requirements of the American Society of Mechanical Engineers' *Boiler and Pressure Vessel Code* for the entire length of underground pipe. Therefore, the licensee decided on February 13, 2000, to consider this manual backup steam supply line inoperable. The plant was scheduled to start up on February 16, 2000. The licensee requested in a letter and telephone call on February 16, 2000, that the Commission grant enforcement discretion to permit plant startup and subsequent operation until a TS change request could be processed. During the phone call, and in a subsequent letter to the licensee dated February 18, 2000, the Commission noted its intention to exercise enforcement discretion for the period of time necessary to process a license amendment to change the TS. In its letter granting enforcement discretion, the Commission stated that the license amendment application was to be submitted no later than 12:50 p.m. on February 18, 2000. Thus, the licensee's application for amendment, dated February 18, 2000, is in response to the degraded condition of the underground pipe that is not needed for any safety function and to the Commission's actions in granting enforcement discretion.

6.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission's regulations in 10 CFR 50.92 provide that the Commission may make a final determination that a license amendment involves no significant hazards considerations if operation of the facility in accordance with the amendment would not: (1) involve a significant

increase in the probability or consequences of an accident previously evaluated; (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

1. Does the change involve a significant increase in the probability or consequence of an accident previously evaluated?

   The proposed Technical Specifications changes would allow plant operation without requiring the manual backup steam supply to the turbine driven auxiliary feedwater pump.

   The connections to the former underground backup steam supply for Pump P-8B turbine will be isolated from the main steam piping using at least one manual isolation valve, and from the P-8B turbine driver with a pipe cap or flanged connection prior to leaving Cold Shutdown from the current outage. Since the backup underground steam supply is not credited in any plant safety analyses nor required for any design or license basis events, adequate redundancy in other required sources of supplying auxiliary feedwater exists such that no increase in consequences of an accident will result. Probabilistic Safety Analysis, comparing plant operation with and without the manual backup steam supply, has shown there to be no significant change in risk. Therefore, operation of the plant in accordance with the proposed Technical Specifications would not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

   Operation of the plant in accordance with the proposed Technical Specifications would not add any new equipment, settings, or alter any plant operating methodology. The only change is the elimination of a testing requirement for a removed plant component. Functioning of that plant component is not assumed in any safety analyses. Since there will be no change in operating plant equipment, settings, or normal operating methodology, operation in accordance with the proposed Technical Specifications would not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the change involve a significant reduction in a margin of safety?

   The proposed Technical Specifications change would allow operation of the plant without the manual backup steam supply to the turbine driven auxiliary feedwater pump. There are no analyzed accidents which require the manual backup steam supply to mitigate the effects of the accident. A Probabilistic Safety Analysis, comparing plant operation with and without the manual backup steam supply, has shown there to be no significant change in risk.

   Therefore, operation of the plant in accordance with the proposed Technical Specifications would not involve a significant reduction in the margin of safety.

Accordingly, on the basis of this analysis and this Safety Evaluation, the NRC staff concludes, pursuant to 10 CFR 50.92, that operation in accordance with this license amendment involves no significant hazards considerations.

7.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has made a final finding that the amendment involves no significant hazards consideration. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

8.0 CONCLUSION

The Commission has concluded, based upon the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: J. Tatum
S. Wong
C. Harbuck

Date: March 14, 2000