

May 11, 1994

Docket Nos. 50-266
and 50-301

Mr. Robert E. Link, Vice President
Nuclear Power Department
Wisconsin Electric Power Company
231 West Michigan Street, Room P379
Milwaukee, Wisconsin 53201

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Dear Mr. Link:

SUBJECT: POINT BEACH NUCLEAR POWER PLANT UNITS 1 AND 2 - CORRECTION TO
AMENDMENT NOS. 147 AND 151 TO FACILITY OPERATING LICENSE NOS.
DPR-24 AND DPR-27 (TAC NOS. M86779 AND M86780)

On April 20, 1994, the Commission issued Amendment Nos. 147 and 151 to
Facility Operating License Nos. DPR-24 and DPR-27 for the Point Beach Nuclear
Plant, Unit Nos. 1 and 2, in response to your application dated February 26,
1993.

In reviewing these Amendments you identified that Technical Specification
15.3.4.D, which had been established by Amendment Nos. 143 and 147 issued on
December 6, 1993, had been inadvertently replaced. Your submittals supporting
Amendment Nos. 143 and 147 and your submittal supporting Amendment Nos. 147
and 151 each proposed a different TS 15.3.4.D. In a May 4, 1994, telephone
conversation, your staff indicated that the changes proposed for TS 15.3.4.D,
15.3.4.E, and 15.3.4.F, in your February 26, 1993, submittal should have been
proposed for TS 15.4.3.E, 15.3.4.F, and 15.3.4.G, respectively.

A corrected safety evaluation, page four, and TS pages 15.3.4-2a, 15.3.4-2b,
and 15.3.4-2c are enclosed. We understand that you are reviewing your
procedures to identify improvements which can be made to prevent such errors
from occurring in the future.

Sincerely,

ORIGINAL SIGNED BY:

Richard J. Laufer, Acting Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

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Enclosures:
As stated

cc w/enclosures:
See next page

LA:PDIII-3:DRPW
MRushbrook
5/10/94

PM:PDIII-3:DRPW
RLaufer
5/11/94

DVC for
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JHannon
5/11/94

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

May 11, 1994

Docket Nos. 50-266
and 50-301

Mr. Robert E. Link, Vice President
Nuclear Power Department
Wisconsin Electric Power Company
231 West Michigan Street, Room P379
Milwaukee, Wisconsin 53201

Dear Mr. Link:

SUBJECT: POINT BEACH NUCLEAR POWER PLANT UNITS 1 AND 2 - CORRECTION TO
AMENDMENT NOS. 147 AND 151 TO FACILITY OPERATING LICENSE NOS.
DPR-24 AND DPR-27 (TAC NOS. M86779 AND M86780)

On April 20, 1994, the Commission issued Amendment Nos. 147 and 151 to Facility Operating License Nos. DPR-24 and DPR-27 for the Point Beach Nuclear Plant, Unit Nos. 1 and 2, in response to your application dated February 26, 1993.

In reviewing these Amendments you identified that Technical Specification 15.3.4.D, which had been established by Amendment Nos. 143 and 147, issued on December 6, 1993, had been inadvertently replaced. Your submittals supporting Amendment Nos. 143 and 147 and your submittal supporting Amendment Nos. 147 and 151, each proposed a different TS 15.3.4.D. In a May 4, 1994, telephone conversation, your staff indicated that the changes proposed for TS 15.3.4.D, 15.3.4.E, and 15.3.4.F, in your February 26, 1993, submittal should have been proposed for TS 15.4.3.E, 15.3.4.F, and 15.3.4.G, respectively.

A corrected safety evaluation, page four, and TS pages 15.3.4-2a, 15.3.4-2b, and 15.3.4-2c are enclosed. We understand that you are reviewing your procedures to identify improvements which can be made to prevent such errors from occurring in the future.

Sincerely,

A handwritten signature in cursive script that reads "Richard J. Laufer".

Richard J. Laufer, Acting Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Enclosures:
As stated

cc w/enclosures:
See next page

Mr. Robert E. Link
Wisconsin Electric Power Company

Point Beach Nuclear Plant
Unit Nos. 1 and 2

cc:

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In addition to the crossover steam dump system, the turbine is provided with three different turbine overspeed protection systems which control steam supply to the high pressure turbine. The mechanical overspeed trip mechanism and the Independent Overspeed Protection System (IOPS) prevent an overspeed condition by rapidly closing the turbine stop and governor valves using independent trip mechanisms when an overspeed condition is sensed. The auxiliary governor uses solenoid operated hydraulic dump valves to rapidly close the turbine governor valves when an overspeed condition or a mismatch between MSR pressure and generator output is sensed. Each turbine governor valve must be operable or closed in order for the auxiliary governor overspeed protection function to be operable. Each of the systems described above reduce the probability of generation of a turbine missile with sufficient energy to damage safety-related structures, systems, or components.

The licensee proposes adding the following specification for the crossover steam dump system as TS 15.3.4.E:

The crossover steam dump system shall be operable. If the crossover steam dump system is determined to be inoperable, reduce power to less than 480 MWe (gross) within three hours.

The crossover steam dump system is required to be operable since there is no redundant system which performs its function. The licensee has determined that the turbine will not exceed 132 percent of rated speed following a unit trip when initially operating at less than 480 MWe (gross) regardless of the status of the crossover steam dump system. Therefore, the proposed action is acceptable because it places the plant in a condition where the function of the crossover steam dump is not required. The required time to complete the action is acceptable based on the low probability of a unit trip requiring operation of the crossover steam dump system during that time.

The licensee proposes adding the following specification for the turbine overspeed protection systems as TS 15.3.4.F:

During power operation, at least one of the turbine overspeed protection systems that trips the turbine stop valves or shuts the turbine governor valves shall be operable. If all three systems are determined to be inoperable, isolate the turbine from the steam supply within the next 6 hours.

The licensee also proposed adding the following specification for the turbine stop and governor valves as TS 15.3.4.G:

Should one of the turbine stop valves or governor valves be declared inoperable, restore the inoperable valve to an operable status within 72 hours. If operability cannot be restored, perform one of the following actions:

1. Shut the affected valve within the next 6 hours.
2. Isolate the turbine from the steam supply within the next 6 hours.

2. Single Unit Operation - One of the three operable auxiliary feedwater pumps associated with a unit may be out-of-service for the below specified times. The turbine driven auxiliary feedwater pump may be out-of-service for up to 72 hours. If the turbine driven auxiliary feedwater pump cannot be restored to service within that 72-hour time period, the reactor shall be in hot shutdown within the next 12 hours. Either one of the two motor driven auxiliary feedwater pumps may be out-of-service for up to 7 days. If the motor driven auxiliary feedwater pump cannot be restored to service within that 7-day period the operating unit shall be in hot shutdown within the next 12 hours.
- D. The main steam stop valves (MS-2017 and MS-2018) and the non-return check valves (MS-2017A and MS-2018A) shall be operable. If one main steam stop valve or non-return check valve is inoperable but open, power operation may continue provided the inoperable valve is restored to operable status within 4 hours, otherwise the reactor shall be placed in a hot shutdown condition within the following 6 hours. With one or more main steam stop valves or non-return check valves inoperable, subsequent operation in the hot shutdown condition may proceed provided the inoperable valve or valves are maintained closed. An inoperable main steam stop valve or non-return check valve may however, be opened in the hot shutdown condition to cool down the affected unit and to perform testing to confirm operability.
- E. The crossover steam dump system shall be operable. If the crossover steam dump system is determined to be inoperable, reduce power to less than 480 MWe (gross) within 3 hours.
- F. During power operation, at least one of the turbine overspeed protection systems that trip the turbine stop valves or shut the turbine governor valves shall be operable. If all three systems are determined to be inoperable, isolate the turbine from the steam supply within the next six hours.

Unit 1 - Amendment No. 133, 143, 147
Unit 2 - Amendment No. 137, 147, 151

Correction letter dated May 11, 1994

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15.3.4-2a

G. Should one of the turbine stop valves or governor valves be declared inoperable, restore the inoperable valve to an operable status within 72 hours. If operability cannot be restored, perform one of the following actions:

1. Shut the affected valve within the next six hours.
2. Isolate the turbine from the steam supply within the next six hours.

Basis

A reactor shutdown from power requires removal of core decay heat. Immediate decay heat removal requirements are normally satisfied by the steam bypass to the condenser. Therefore, core decay heat can be continuously dissipated via the steam bypass to the condenser as feedwater in the steam generator is converted to steam by heat absorption. Normally, the capability to return feedwater flow to the steam generators is provided by operation of the turbine cycle feedwater system.

The eight main steam safety valves have a total combined rated capability of 6,664,000 lbs/hr. The total full power steam flow is 6,620,000 lbs/hr, therefore eight (8) main steam safety valves will be able to relieve the total full-power steam flow if necessary.

In the unlikely event of complete loss of electrical power to the station, decay heat removal would continue to be assured for each unit by the availability of either the steam-driven auxiliary feedwater pump or one of the two motor-driven auxiliary steam generator feedwater pumps, and steam discharge to the atmosphere via the main steam safety valves or atmospheric relief valves. One motor-driven auxiliary feedwater pump can supply sufficient feedwater for removal of decay heat from a unit. The minimum amount of water in the condensate storage tanks ensures the ability to maintain each unit in a hot shutdown condition for at least one hour concurrent with a loss of all AC power.

An unlimited supply is available from the lake via either leg of the plant service water system for an indefinite time period.

Unit 1 - Amendment No. 143, 147
Unit 2 - Amendment No. 147, 151

Correction letter dated May 11, 1994

Each of the AFW pumps possesses a low suction pressure trip that will protect it should a loss of feedwater occur. Additionally, should a steam generator tube rupture occur, the motor-operated steam admission valves for the turbine-driven AFW pumps serve as isolation boundaries for the affected steam generator.

The crossover steam dump system is designed to prevent the turbine from exceeding 132% of rated speed following a unit trip. The system is armed at approximately 430 MWe. The system receives input from, and is actuated when the turbine auxiliary governor and/or the Independent Overspeed Protection System (IOPS) senses an overspeed condition. The system consists of four pilot-operated dump valves, with only three valves being necessary to achieve the required overspeed protection. However, in order to meet single failure criteria, the crossover steam dump system shall be declared inoperable if any one of the four dump valves is declared inoperable.

In addition to the crossover steam dump system, there are three other systems that protect the turbine from an overspeed condition. The first feature is the mechanical overspeed trip mechanism which consists of an eccentric weight located in the turbine rotor extension shaft. The second feature uses the turbine auxiliary governor to sense turbine overspeed using the auxiliary speed tachometer. The third feature is IOPS. This system monitors turbine speed electrically and consists of three independent speed channels. The actuation of two of three channels will generate a trip signal. The mechanical overspeed trip mechanism and IOPS cause the turbine stop valves to trip and the turbine governor valves to shut, while the auxiliary governor causes only the governor valves to shut. A turbine stop valve shall be declared inoperable if it does not trip shut following a valid overspeed signal. A turbine governor valve shall be declared inoperable if it does not respond properly following a valid overspeed signal.

The atmospheric steam dump lines are required to be operable because they are relied upon, following a steam generator tube rupture coincident with a loss of A.C. power, to cool down the Reactor Coolant System to RHR entry conditions. An atmospheric steam dump line is considered operable if it is capable of providing the controlled relief of main steam flow necessary to perform the RCS cooldown. Isolating an atmospheric steam dump line does not render it inoperable if the line can be unisolated and the RCS can still be cooled down to RHR entry conditions, through local or remote operation, within the time period required by the applicable FSAR accident analyses.