

50-266/301



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

March 6, 1995

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

SUBJECT: AMENDMENT NOS. 161 AND 165 TO FACILITY OPERATING LICENSE NOS.
DPR-24 AND DPR-27 - POINT BEACH NUCLEAR PLANT, UNIT NOS. 1 AND 2
(TAC NOS. M91177 AND M91178)

Dear Mr. Link:

The Commission has issued the enclosed Amendment Nos. 161 and 165 to Facility Operating License Nos. DPR-24 and DPR-27 for the Point Beach Nuclear Plant, Unit Nos. 1 and 2. The amendments revise the Technical Specifications in response to your application dated December 22, 1994, as supplemented by letters dated February 1, 1995, and February 21, 1995.

These amendments revise Point Beach Nuclear Plant Technical Specification (TS) Section 15.3.3, "Emergency Core Cooling System, Auxiliary Cooling Systems, Air Recirculation Fan Coolers, and Containment Spray," TS Section 15.3.4, "Steam and Power Conversion System," TS Section 15.3.5, "Instrumentation System," TS Section 15.3.7, "Auxiliary Electrical Systems," TS Section 15.3.14, "Fire Protection System," and TS Section 15.4.1, "Operation Safety Review." The modifications delete obsolete TSs, provide spring 1995 outage-specific TSs as part of the ongoing diesel upgrade project, update several TSs to be consistent with the upgrade project design changes, and change one monthly testing requirement.

In addition, the bases for Section TS 15.3.7 are modified to be consistent with the TS changes, and the bases for Section TS 15.3.3 are modified to be consistent with Amendment Nos. 159 and 163, which were issued on December 21, 1994.

000020

CP1
NRC FILE CENTER COPY

9503090311 950306
PDR ADOCK 05000266
P PDR

DF01

A copy of the Safety Evaluation is also enclosed. The notice of issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,
Original signed by Allen G. Hansen

Allen G. Hansen, Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket Nos. 50-266
and 50-301

- Enclosures: 1. Amendment No. 161 to DPR-24
- 2. Amendment No. 165 to DPR-27
- 3. Safety Evaluation

cc w/encls: See next page

Distribution w/encls:

Docket File GH11(4)
 PUBLIC EGreenman, RIII
 PD3-3 Reading CGrimes
 JRoe ACRS(4)
 OPA OGC
 OC/LFDCB

DOCUMENT NAME: G:\PTBEACH\PTB91177.AMD

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure
"N" = No copy

OFFICE	LA:PDIII-3	<input checked="" type="checkbox"/>	PM:PDIII-3	<input checked="" type="checkbox"/>	OGC		PD:PDIII-3	<input checked="" type="checkbox"/>
NAME	MRushby <i>MR</i>		AHansen <i>AH</i>		S. Horn		LNorrholm <i>L</i>	
DATE	2/27/95		2/22/95		2/27/95		3/1/95	<i>fa</i>

OFFICIAL RECORD COPY

Mr. Robert E. Link, Vice President
Wisconsin Electric Power Company

Point Beach Nuclear Plant
Unit Nos. 1 and 2

cc:

Ernest L. Blake, Jr.
Shaw, Pittman, Potts & Trowbridge
2300 N Street, N.W.
Washington, DC 20037

Mr. Gregory J. Maxfield, Manager
Point Beach Nuclear Plant
Wisconsin Electric Power Company
6610 Nuclear Road
Two Rivers, Wisconsin 54241

Town Chairman
Town of Two Creeks
Route 3
Two Rivers, Wisconsin 54241

Chairman
Public Service Commission
of Wisconsin
Hills Farms State Office Building
Madison, Wisconsin 53702

Regional Administrator
U.S. NRC, Region III
801 Warrenville Road
Lisle, Illinois 60532-4531

Resident Inspector's Office
U.S. Nuclear Regulatory Commission
6612 Nuclear Road
Two Rivers, Wisconsin 54241



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

WISCONSIN ELECTRIC POWER COMPANY

DOCKET NO. 50-266

POINT BEACH NUCLEAR PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 161
License No. DPR-24

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Wisconsin Electric Power Company (the licensee) dated December 22, 1994, as supplemented February 1, 1995, and February 21, 1995, 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; and
 - 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 this license amendment, and paragraph 3.B of Facility Operating License No. DPR-24 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 161, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective immediately upon issuance. The Technical Specifications are to be implemented within 45 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Allen G. Hansen, Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of issuance: March 6, 1995



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

WISCONSIN ELECTRIC POWER COMPANY

DOCKET NO. 50-301

POINT BEACH NUCLEAR PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 165
License No. DPR-27

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Wisconsin Electric Power Company (the licensee) dated December 22, 1994, as supplemented February 1, 1995, and February 21, 1995, 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; and
 - 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.

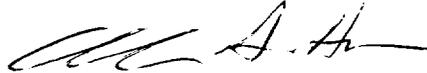
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-27 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 165, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective immediately upon issuance. The Technical Specifications are to be implemented within 45 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Allen G. Hansen, Project Manager
Project Directorate III-3
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of issuance: March 6, 1995

ATTACHMENT TO LICENSE AMENDMENT NOS. 161 AND 165
TO FACILITY OPERATING LICENSE NOS. DPR-24 AND DPR-27
DOCKET NOS. 50-266 AND 50-301

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

REMOVE

TS 15.3.3-6
TS 15.3.3-8
TS 15.3.4-2a
TS Table 15.3.5-3, page 2 of 2
TS 15.3.7-1 through
TS 15.3.7-3 (3 pages)
TS 15.3.7-8
TS Table 15.3.14-1
TS Table 15.4.1-1, page 2 of 6

INSERT

TS 15.3.3-6
TS 15.3.3-8
TS 15.3.4-2a
TS Table 15.3.5-3, page 2 of 2
TS 15.3.7-1 through
TS 15.3.7-3 (3 pages)
TS 15.3.7-8
TS Table 15.3.14-1
TS Table 15.4.1-1, page 2 of 6

- a. Four service water pumps are operable, two from each train.*
 - b. All necessary valves, interlocks and piping required for the functioning of the Service Water System during accident conditions are also operable.
2. During power operation, the requirements of 15.3.3.D-1 may be modified to allow one of the following components to be inoperable at any one time. If the system is not restored to meet the conditions of 15.3.3.D-1 within the time period specified, both reactors will be placed in the hot shutdown condition within six hours and in cold shutdown within 36 hours.
- a. One of the four required service water pumps may be out of service provided a pump is restored to operable status within 24 hours.
 - b. One of the two loop headers may be out of service for a period of 24 hours.
 - c. A valve or other passive component may be out of service provided repairs can be completed within 48 hours.

Basis

The normal procedure for starting the reactor is, first, to heat the reactor coolant to near operating temperature, by running the reactor coolant pumps. The reactor is then made critical by withdrawing control rods and/or diluting boron in the coolant.⁽¹⁾ With this mode of start-up, the energy stored in the reactor coolant during the approach to criticality is substantially equal to that during power operation and therefore to be conservative most engineered safety system components and auxiliary cooling systems, shall be fully operable. During low temperature physics tests there is a negligible amount of stored energy in the reactor coolant, therefore an accident comparable in severity to the Design Basis Accident is not possible, and the engineered safety systems are not required.

* During the Unit 1 1995 refueling outage, one train A service water pump operating with power supplied by the Alternate Shutdown System, B08/B09 480 volt buses, may be considered operable from a normal (offsite) power supply, under the provisions of Technical Specification 15.3.0.C.

Assuming the reactor has been operating at full rated power for at least 100 days, the magnitude of the decay heat decreases as follows after initiating hot shutdown.*

<u>Time After Shutdown</u>	<u>Decay Heat % of Rated Power</u>
1 min.	3.6
30 min.	1.55
1 hour	1.25
8 hours	0.7
48 hours	0.4

*Based on ANS 5.1-1979, "Decay Heat Power in Light-Water Reactors"

Thus, the requirement for core cooling in case of a postulated loss-of-coolant accident while in the hot shutdown condition is significantly reduced below the requirements for a postulated loss-of-coolant accident during power operation. Putting the reactor in the hot shutdown condition significantly reduces the potential consequences of a loss-of-coolant accident, and also allows more free access to some of the engineered safety system components in order to effect repairs.

When the failures involve the residual heat removal system, in order to insure redundant means of decay heat removal, the reactor system may remain in a condition with reactor coolant temperatures greater than 350°F so that the reactor coolant loops and associated steam generators may be utilized for redundant decay heat removal. However, when the remaining RHR loop must be relied upon for redundant decay heat removal capability, reactor coolant temperatures shall be maintained between 350°F and 140°F.

With respect to the core cooling function, there is some functional redundancy for certain ranges of break sizes.⁽²⁾

The operability of the Refueling Water Storage Tank (RWST) as part of the ECCS ensures that a sufficient supply of borated water is available for injection by the ECCS in the event of either a LOCA or a steamline break. The limits on RWST

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.

TABLE 15.3.5-3 (continued)
ENGINEERED SAFETY FEATURES

NO.	FUNCTIONAL UNIT	1 NO. OF CHANNELS	2 NO. OF CHANNELS TO TRIP	3 MINIMUM OPERABLE CHANNELS	4 PERMISSIBLE BYPASS CONDITIONS	OPERATOR ACTION IF CONDITIONS OF COLUMN 3 CANNOT BE MET
b.	Start Turbine-Driven Pump					
i.	Undervoltage on 4KV Buses (A01 & A02)	2/each bus	1/each bus	1/each bus		Be in hot shutdown in 8 hours*
ii.	Low Low Steam Gen. Water Level	3/SG	2/each SG	2/SG**		Be in hot shutdown in 8 hours*
4.	SAFETY-RELATED ELECTRICAL LOADS					
a.	4.16KV Buses (A05, A06)					
i.	Degraded Voltage	3/bus	2/bus	2/bus**		***
ii.	Loss of Voltage *****	2/bus 3/bus	1/bus 2/bus	1/bus 2/bus		*** ***
b.	480V Buses (B03, B04)					
i.	Loss of Voltage	3/bus	2/bus	2/bus**		Be in hot shutdown in 8 hours*
*	If minimum conditions are not met within 24 hours after reaching hot shutdown, the unit shall be in cold shutdown within 48 hours of the event causing the unit shutdown.					
**	If a channel is determined to be inoperable, resulting in one less than the total number of channels being operable, power operation may continue if the following conditions are met:					
	1. The minimum number of operable channels is still satisfied.					
	2. The affected channels placed in trip within 1 hour.					
***	Declare the associated standby emergency power supply inoperable for the affected bus. The applicable Limiting Condition for Operation (LCO) shall be entered. Separate LCOs may be entered for the Degraded Voltage and Loss of Voltage functions.					
****	Both switches must be activated simultaneously.					
*****	Use the 3/bus specification for each A05 and A06 bus that has been modified to the 2 out of 3 logic for the loss of voltage protection function.					

15.3.7 AUXILIARY ELECTRICAL SYSTEMS

Applicability

Applies to the availability of off-site and on-site electrical power for plant power operation and for the operation of plant auxiliaries.

Objective

To define those conditions of electrical power availability necessary (1) to provide for safe reactor operation, and (2) to provide for the continuing availability of engineered safeguards.

Specification

- A.1 Under normal conditions neither one nor both reactors shall be made critical unless the following conditions are met:
- a. At least two 345 KV transmission lines are in service.
 - b. The 345/13.8 KV and the 13.8/4.16 KV station auxiliary transformers associated with the reactor(s) to be taken critical are in service; or one 345/13.8 KV station auxiliary transformer and the associated 13.8/4.16 KV station auxiliary transformer(s) are in service with the gas turbine operating.
 - c. 4160 Volt unit supply buses A03 and A04 for the unit to be taken critical are energized from their normal supply.
 - d. Both units' B03/B04 bus tie-breakers are open with control power removed.
 - e. A fuel supply of 11,000 gallons is available in each tank which is being relied upon to supply any operable emergency diesel generator(s).
 - f. Four of the five safety-related station batteries and all four of the main DC distribution systems are operable.
 - g. Four battery chargers are operable with one charger carrying the DC loads on each main DC distribution bus: D01, D02, D03 and D04.
 - h. 120 VAC Vital Instrument Buses Y01, Y02, Y03, Y04, Y101, Y102, Y103, and Y104 for the unit(s) to be taken critical are energized from a safety-related inverter.
 - i. For both units to be made critical, the normal power supply and a standby emergency power supply to all the 4160/480 Volt safeguards buses shall be operable and the buses are energized from their normal supply.

- j. For Unit 1 to be made critical, the normal power supply and a standby emergency power supply to the 4160/480 Volt safeguards buses Unit 1 A05/B03, Unit 1 A06/B04, and Unit 2 A06/B04 shall be operable and the buses are energized from their normal supply.
- k. For Unit 2 to be made critical, the normal power supply and a standby emergency power supply to the 4160/480 Volt safeguards buses Unit 2 A05/B03, Unit 2 A06/B04, and Unit 1 A05/B03 shall be operable and the buses are energized from their normal supply.

B.1 During power operation of one or both reactors, the requirements of 15.3.7.A.1 may be modified to allow the following arrangements of systems and components:

- a. If the 345 KV lines are reduced to only one, any operating reactor(s) must be promptly reduced to, and limited to, 50% power. If all 345 KV lines are lost, any operating reactor(s) will be reduced to supplying its auxiliary load, until one or more 345 KV transmission lines are again available.
- b. If both 345/13.8 KV auxiliary transformers are out of service and only the gas turbine is operating, only one reactor will remain operating and it will be limited to 50% power. The second reactor will be placed in the hot shutdown condition.
- c. If the 13.8/4.16 KV auxiliary transformers are reduced to only one, the reactor associated with the out of service transformer must be placed in the hot shutdown condition.
- d. With a unit in cold or refueling shutdown or defueled, B03 and B04, for that shutdown unit, may be tied together through their common tie breaker for up to 8 hours provided the required redundant decay heat removal in the shutdown unit and the required redundant shared engineered safety features for the other unit are operable. If the tie breaker cannot be opened or the conditions of 15.3.7.B.1.e met within 8 hours, the operating unit shall be placed in the hot shutdown condition within 6 hours and in cold shutdown within the following 30 hours.
- e. With a unit defueled, B03 and B04, for that shutdown unit, may be tied together through their common tie-breaker in excess of 8 hours provided:
 - 1) An evaluation is performed to show that the loads that remain or can be energized by the buses will not cause a potential overload of the

associated diesel generator. The applicable Limiting Conditions for Operation of the equipment removed from service shall be entered for the operating unit.

- 2) A single train of spent fuel cooling is adequate to cool the spent fuel pool.
 - 3) The required redundant shared engineered safety features for the other unit are operable.
- f. The normal power supply or standby emergency power supply to Unit 1 A05/B03 or Unit 2 A06/B04 may be out of service for a period not exceeding 7 days provided the required redundant engineered safety features are operable and the required redundant standby emergency power supplies are started within 24 hours before or after entry into this LCO and every 72 hours thereafter. If the normal power supply is out of service, an operable emergency diesel generator is supplying the affected 4160/480 Volt buses. After 7 days, both units will be placed in hot shutdown within the following 6 hours and cold shutdown within 36 hours.
- g. The normal power supply or standby emergency power supply to Unit 1 A06/B04 or Unit 2 A05/B03 or both may be out of service for a period not exceeding 7 days provided the required redundant engineered safety features are operable and the required redundant standby emergency power supplies are started within 24 hours before or after entry into this LCO and every 72 hours thereafter. If the normal power supply is out of service, an operable emergency diesel generator is supplying the affected 4160/480 Volt buses. After 7 days, the affected unit or units will be placed in hot shutdown within the following 6 hours and cold shutdown within 36 hours.
- h. The normal power supply or standby emergency power supply to Unit 1 A05/B03 and Unit 2 A05/B03, or Unit 1 A06/B04 and Unit 2 A06/B04 may be out of service for a period not exceeding 7 days provided the required redundant engineered safety features are operable and the required redundant standby emergency power supplies are started within 24 hours before or after entry into this LCO and every 72 hours thereafter. If the normal power supply is out of service, an operable emergency diesel

tank provides sufficient fuel to operate one EDG at design load for more than 48 hours.], 2) the EDG day tank for that EDG is operable and for G-01 and G-02 the associated motor-operated fill valve is operable, 3) for G-01 and G-02, at least one of the two base-mounted sump tank fuel oil transfer pumps is operable, and 4) the fuel oil transfer system associated with the EDG is operable. However, the fuel oil transfer system is allowed to be out-of-service for four hours for G01 and G-02 due to a combined four-hour supply of fuel oil in the diesel base and day tanks which do not require a fuel oil transfer pump for flow to the associated EDG. The fuel oil transfer system is allowed to be out-of-service for two hours for G-03 and G-04 due to a two-hour supply of fuel oil in the day tank. The transfer system may be out-of-service for longer periods if an appropriate alternate source of fuel is made available to the diesel generators.

The EDG ventilation system is considered operable when diesel room temperature can be maintained $\leq 120^{\circ}\text{F}$ with the diesel engine operating at full load. Temperature will be maintained $\leq 120^{\circ}\text{F}$ if 1) all gravity-operated louvers are operable, and 2) both diesel room exhaust fans are operable OR for G-01 and G-02; one diesel room exhaust fan is operable and outside air temperature is $\leq 80^{\circ}\text{F}$; OR for G-03 and G-04, only the large capacity fan (W-183C for G-03, W-184B for G-04) is operable and outside air temperature is $< 84^{\circ}\text{F}$ or if the small capacity fan (W-183B for G-03, W-184C for G-04) is operable and outside air temperature is $\leq 36^{\circ}\text{F}$.

Normal DC control power must energize all DC circuits for the associated EDG to be operable.

The original AEC Safety Evaluation for PBNP states, "Onsite fuel storage capacity is sufficient for a minimum of seven days' operation of the required safety feature loads which is acceptable." Therefore, to satisfy this requirement, at least 34,500 gallons of fuel oil will be maintained available for the emergency diesel generators at Point Beach at all times when EDG operability is required.

If only one 345 KV transmission line is in service to the plant switchyard, a temporary loss of this line would result in a reactor trip(s) if the reactor(s) power level were greater than 50%. Therefore, in order to maintain

TABLE 15.3.14-1
SAFE SHUTDOWN AREA FIRE PROTECTION

AREA	ELEVATION	AUTOMATIC SUPPRESSION		MANUAL SUPPRESSION	
		WATER SPRINKLER SYSTEM	GAS SUPPRESSION SYSTEM	FIRE HOSE STATION	FIRE DETECTION
1. Auxiliary Building South	8'	(X) Partial		X	15
2. Auxiliary Building Center A. Safety Injection Pumps B. Component Cooling Water Pump	8'	X X		X	13
3. Auxiliary Building North	8'	(X) Partial		X	9
4. Auxiliary Building West	8' & Below			X	16
5. Auxiliary Building South	26'			X	3
6. Auxiliary Building Center	26'			X	17
7. Auxiliary Building North	26'			X	7
8. Auxiliary Building Center	46'			X	6
9. Auxiliary Feedwater Pump Room	8'		X	X	11
10. Vital Switchgear & Battery Room	8'		X	X	8
11. G01 Diesel Generator Room	8'	X		X	4
12. G02 Diesel Generator Room	8'	X		X	4
13. Cable Spreading Room	26'		X	X	17
14. Circulating Water Pumphouse A. Service Water Pumps	8'	X		X	15
15. G03 Diesel Generator Room	28'	X		X*	3
16. G04 Diesel Generator Room	28'	X		X*	3
17. G03 Vital Switchgear Room	28'			X*	2
18. G04 Vital Switchgear Room	28'			X*	2
19. G03 Fuel Oil Day Tank Room	28'	X		X*	1
20. G04 Fuel Oil Day Tank Room	28'	X		X*	1
21. G01/G02 Fuel Oil Transfer Pump Room	28'	X		X*	1

*Diesel Generator Building fire hose stations are located in Mechanical Equipment Room.

Unit 1 - Amendment No. ~~118, 152~~, 161

Unit 2 - Amendment No. ~~121, 156~~, 165

TABLE 15.4.1-1 (continued)

<u>NO.</u>	<u>CHANNEL DESCRIPTION</u>	<u>CHECK</u>	<u>CALIBRATE</u>	<u>TEST</u>	<u>PLANT CONDITIONS WHEN REQUIRED</u>
9.	Steam Generator Flow Mismatch	S(22)	R	Q(1)	ALL
10.	Steam Generator Pressure	S(16)	R	Q(1)	ALL
11.	4KV Bus Undervoltage (A01 & A02)				
	-AFW pump actuation	-	R	M(1)	ALL
	-Reactor Protection actuation	-	R	M(1,2)	ALL
12.	4KV Bus Underfrequency (A01 & A02)				
	-to Reactor Coolant Pump trip	-	R	-	ALL
13.	Safeguards Bus Voltage				
	-Loss of 4KV	S	R	M	ALL
	-Degraded 4KV	S	R	M	ALL
	-Loss of 480V	S	R	M	ALL
14.	120 Vac Instrument Buses	W(6)	-	-	ALL
15.	Reactor Trip Signal From Turbine				
	-Turbine Autostop	-	-	M(1)	ALL
	-Turbine Stop Valve	-	-	M(1)	ALL
16.	Reactor Trip Signal From SI	-	-	M(1)	ALL
17.	Feedwater Isolation on SI				
	-MFP Trip on Safety Injection	-	-	R	ALL
	-MFRV Shutting on Safety Injection	-	-	R	ALL
18.	Accumulator Level and Pressure	S	R	-	ALL
19.	Analog Rod Position	S(8,22)	R	M(1)	ALL
	-with step counters	S(22)	-	-	ALL
	-Monitoring by On-Line Computer	(18)	-	-	PWR, HOT S/D



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NOS. 161 AND 165 TO
FACILITY OPERATING LICENSE NOS. DPR-24 AND DPR-27

WISCONSIN ELECTRIC POWER COMPANY
POINT BEACH NUCLEAR PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-266 AND 50-301

1.0 INTRODUCTION

By letter dated December 22, 1994, Wisconsin Electric Power Company (WEPCO), the licensee, requested an amendment to Facility Operating License Nos. DPR-24 and DPR-27 for PBNP Units 1 and 2, respectively. Supplemental information was provided by letters dated February 1, 1995, and February 21, 1995. The submittal proposed changes to Technical Specification (TS) Sections 15.3.3, "Emergency Core Cooling System, Auxiliary Cooling Systems, Air Recirculation Fan Coolers, and Containment Spray;" 15.3.4, "Steam and Power Conversion System;" 15.3.5, "Instrumentation System;" 15.3.7, "Auxiliary Electrical Systems;" 15.3.14, "Fire Protection System;" and 15.4.1, "Operational Safety Review." The proposed changes would allow a one-time exception for one Train A service water pump, operating with power supplied by the alternate shutdown system B08/B09 480-volt buses, to be considered operable during the Unit 1 1995 refueling outage, and to remove or revise some one-time exceptions that are no longer necessary or appropriate. In addition, the bases for TS Section 15.3.7 would be modified to be consistent with the TS changes, and the bases for TS Section 15.3.3 would be modified to be consistent with Amendment Nos. 159 and 163, which were issued on December 21, 1994.

2.0 BACKGROUND

The Point Beach Nuclear Plant (PBNP) is a two-unit site and was originally designed and provided with a total of two emergency diesel generators (EDGs), one for each train of the engineered safety features. Consequently, any time an EDG was out of service, a dual unit Limiting Condition of Operation (LCO) would be imposed. The licensee is in the process of modifying the emergency electrical power distribution system including the installation of two additional EDGs. This modification of the distribution system will allow the removal of one EDG from service without entering an LCO. This new electrical system design was previously reviewed and approved by the NRC staff.

The connection of the output of one of the additional emergency diesel generators into the existing electrical system took place during the fall 1994 Unit 2 refueling outage. During the Unit 1 spring 1995 refueling outage, additional modifications to the electrical systems and connection of the second EDG will take place.

9503090317 950306
PDR ADOCK 05000266
P PDR

In addition, during the next two refueling outages (Unit 1 spring 1995 and Unit 2 fall 1995) WE is planning to perform modifications that will change the logic of the 4160-volt safeguards bus loss of voltage protection from 1-out-of-2 to 2-out-of-3. Therefore, the TSs will be modified to account for this new design. If a problem occurs such that these modifications cannot be completed during these outages as planned, the proposed specifications are stated in such a manner that it will allow the completion in future outages.

2.0 EVALUATION

TS Section 15.3.3, "Emergency Core Cooling System, Auxiliary Cooling Systems, Air Recirculation Fan Coolers, and Containment Spray"

The licensee proposed to revise the footnote associated with TS Section 15.3.3.D.1.a regarding service water system (SWS) pump operability. The footnote referred to was removed by Amendment Nos. 159 and 163 for Units 1 and 2, respectively, dated December 21, 1994, as it only applied to the fall 1994 refueling outage. The contents of this footnote, and the proposed revision, are discussed below.

The SWS at PBNP consists of 6 pumps (designated as P32A, B, C, D, E, and F) shared by both units. The emergency power supplies for these SWS pumps are arranged in the following configuration:

For Unit 1:

Train A emergency diesel generators (EDGs) provide power to the 4160-volt bus 1A05, which in turn provides power to 480-volt bus 1B03 that in turn powers two SWS pumps, P32A and P32B.

Train B EDGs provide power to the 4160-volt bus 1A06, which in turn provides power to 480-volt bus 1B04 that in turn powers one SWS pump, P32C.

For Unit 2:

Train B EDGs provide power to the 4160-volt bus 2A06, which in turn provides power to 480-volt bus 2B04 that in turn powers two SWS pumps, P32D and P32E.

Train A EDGs provide power to the 4160-volt bus 2A05, which in turn provides power to 480-volt bus 2B03 that in turn powers one SWS pump, P32F.

For Unit 1 to be made critical, TS Section 15.3.7.A.1.j requires that the 4160/480-volt buses 1A05/1B03, 1A06/1B04, and 2A06/2B04 are operable and the buses are energized from their normal power supply. For Unit 2 to be made critical, TS Section 15.3.7.A.1.k requires that the 4160/480-volt buses 2A05/2B03, 2A06/2B04, and 1A05/1B03 are operable and the buses are energized from their normal power supply.

For either unit to be made critical, TS Section 15.3.3.D.1.a requires that four SWS pumps are operable. However, TS Section 15.3.3.D.2.a allows one of the four required SWS pumps to be out-of-service provided a pump is restored to operable status within 24 hours.

The first additional EDG (G-04) was connected into the existing emergency electrical distribution system during the Unit 2 refueling outage in the fall of 1994, while Unit 1 was in power operation. That resulted in Train B SWS pumps (P32D and P32E) not having a safety-related emergency power supply during the period of the emergency electrical power system modification, which lasted longer than the above cited TS allowable outage time of 24 hours for the SWS pumps. The work performed to connect the EDG into the existing emergency electrical distribution system was expected to last more than four days. Therefore, prior to this effort, the following footnote was proposed to be added to TS Section 15.3.3.D.1.a:

"During the Unit 2, 1994 refueling outage, one Train B service water pump operating with power supplied by the alternate shutdown system, B08/B09 480 volt buses, may be considered operable from a normal (offsite) power supply under the provisions of Technical Specification 15.3.0.C."

This footnote was necessary in order to allow the safe continued operation of Unit 1 without entering an LCO while the work performed to connect EDG G-04 was taking place. Without this one-time exception, the scheduled modification would require a dual unit outage. The staff (stated in a Safety Evaluation dated September 23, 1994) found the above one-time exception to TS Section 15.3.3.D.1.a acceptable.

The connection of the second additional EDG (G-03) into the existing emergency electrical distribution system is scheduled to take place during the Unit 1 refueling outage in the spring of 1995. Therefore, the licensee proposed to revise the above footnote to read:

"During the Unit 1, 1995 refueling outage, one Train A service water pump operating with power supplied by the alternate shutdown system, B08/B09 480 volt buses, may be considered operable from a normal (offsite) power supply under the provisions of Technical Specification 15.3.0.C."

Three train B service water pumps powered by the 1B04 and 2B04 buses will remain unaffected by the reconfiguration and bus-tie work. The one service water pump powered from 2B03 bus will be unaffected, except that the standby emergency power source will be considered inoperable. One of the two service water pumps powered from 1B03 will be removed from service to prevent potential overload, and the other will be powered by the alternate shutdown system buses. The footnote added to TS Section 15.3.3.D.1.a is only for clarification of the existing TS, since the service water pump supplied by the alternate shutdown system would be considered operable under existing TS Section 15.3.0.C. This Section states that the component is "considered operable for the purpose of satisfying the requirements of the applicable

Limiting Conditions of Operation, provided...the alternate power source (normal or emergency) is operable."

Based on its review of the above rationale, which is similar to that stated in the previous Safety Evaluation (dated September 23, 1994), the staff concludes that the proposed footnote associated with TS Section 15.3.3.D.1.a poses no undue risk to public health and safety, and involves no significant increase in the consequences of an accident previously evaluated. Therefore, the staff finds it acceptable.

By letter dated February 1, 1995, the licensee proposed to change the bases to TS Section 15.3.3 to make them consistent with Amendment Nos. 159 and 163, issued on December 21, 1994. The new text would state:

"When the failures involve the residual heat removal system, in order to insure redundant means of decay heat removal, the reactor system may remain in a condition with reactor coolant temperatures greater than 350°F so that the reactor coolant loops and associated steam generators may be utilized for redundant decay heat removal."

The bases currently state "... temperatures between 500 and 350°F ...," which corresponds to the TS prior to Amendment Nos. 159 and 163. The staff agrees with the licensee that the proposed change accurately reflects the current TSs. Therefore, this change is acceptable.

TS Section 15.3.4, "Steam and Power Conversion System"

The licensee proposed to delete the following footnote associated with TS Section 15.3.4.C.2 regarding motor driven auxiliary feedwater pump operability:

"During the Unit 2, 1994 refueling outage, P-38B, the Train B motor driven auxiliary feedwater pump, may be out-of-service for up to 12 days."

This proposed change will remove a one-time exception from the TSs that is no longer applicable. Since this change is administrative, the staff finds it acceptable.

TS Table 15.3.5-3, "Engineered Safety Features"

The existing design of the loss of voltage protection (which causes the opening of the normal safeguards power supply breaker, starting of the associated EDG, and providing a permissive for the closure of the EDG output breaker to repower the buses that have lost voltage) uses two channels per bus with the trip of one channel causing the protection actions (1-out-of-2).

The licensee has proposed to change Table 15.3.5-3, Specification 4.a.ii to include requirements for 2-out-of-3 logic for the loss of voltage function. This is being done by specifying the following for the 2-out-of-3 logic row:

Column 1	No. of Channels	3/bus
Column 2	No. of Channels to trip	2/bus
Column 3	Min. Operable Channels	2/bus
Column 4	Permissible Bypass Conditions	None
Operator Action if Conditions of Col. 3 cannot be met		***

In addition, the licensee has proposed to add a new note associated with "*****" for the loss of voltage relay protection function as follows:

***** - Use the 3/bus specification for each A05 or A06 bus that has been modified to the 2-out-of-3 logic for the loss of voltage protection function."

This note requires the appropriate row for 1-out-of-2 and 2-out-of-3 protection logic to be used for determining if an LCO should be entered.

The licensee also proposed to change the note associated with "***" as follows:

*** - Declare the standby emergency power supply inoperable for the affected bus. The applicable Limiting Condition for Operation (LCO) shall be entered. Separate LCOs may be entered for the Degraded Voltage and Loss of Voltage functions."

This change is necessary to incorporate the revised nomenclature for emergency diesel generators which is "standby emergency power supply."

This design is being changed to three channels per bus with the trip of two channels causing the protection actions (2-out-of-3). This change to the design meets the existing design requirements as defined in the Point Beach FSAR. In addition, it improves the design with respect to inadvertent actuations. When any single channel is taken out of service for testing, maintenance, or calibration, that channel can be placed in the trip condition and the remaining logic is such that actuation of the protection function can still occur on the trip of either of the remaining operable channels. Therefore, during this time period the logic can still meet the single failure criterion and a limiting condition for operation does not have to be entered.

The proposed TS changes for this protection function will require that at least two channels are operable. If less than two channels are operable, the applicable limiting condition for operation for the standby emergency power supply for that bus shall be entered. These requirements are appropriate for this protection logic and consistent with TS requirements for other 2-out-of-3 protection logic systems. Therefore, the staff finds these changes acceptable.

TS Section 15.3.7, "Auxiliary Electrical Systems"

The licensee has proposed to delete Specification 15.3.7.A.1.d that states, "Both units' A05/A06 bus tie-breakers are removed from their cubicles." Also

proposed is the deletion of the references to the A05 and A06 tie-breakers in Specifications 15.3.7.B.1.d and e. These changes are necessary because the installation of additional EDGs will eliminate the A05/A06 tie-breaker capability.

The main purpose of the A05/A06 bus tie capability at Point Beach was for maintaining electrical power to either safeguards bus while the normal power supply for either bus was out-of-service for maintenance. The bus tie capability in the 480-volt safeguards buses remains and is sufficient for maintaining continuity of electrical service to the desired loads during periods when electrical power to either safeguards bus is out-of-service for maintenance. With the removal of the bus tie capability for the 4160-volt safeguards buses, the deletion of the associated Technical Specifications is appropriate, and is therefore acceptable.

The licensee proposed to delete the following footnote associated with TS Section 15.3.7.B.1.h regarding the allowed out-of-service time for power supplies:

"During the Unit 2, 1994 refueling outage, standby emergency power to Unit 1 A06/B04 and Unit 2 A06/B04 may be out-of-service for up to 12 days."

This proposed change will remove a one-time exception from the TSs that is no longer applicable. Since this change is administrative, the staff finds it acceptable.

The licensee proposed to add the following new EDG (G-03 and G-04) ventilation system limitations to the bases of TS Section 15.3.7:

"OR for G-03 and G-04, only the large capacity fan (W-183C for G-03, W-184B for G-04) is operable and outside air temperature is $<84^{\circ}\text{F}$ or if the small capacity fan (W-183B for G-03, W-184C for G-04) is operable and outside air temperature is $\leq 36^{\circ}\text{F}$."

This proposed change provides conservative limitations for operability of the new EDGs with either the large capacity or small capacity fan out-of-service. Since this is conservative, enhancing safety, the staff finds it acceptable.

TS Table 15.3.14-1, "Safe Shutdown Area Fire Protection"

The licensee proposed to add Line Item 21 to Table 15.3.14-1 to include the G01/G02 fuel oil transfer pump room in the new EDG building in the shutdown area fire protection table.

The licensee stated that this proposed change is necessary because the fuel oil transfer system for the G01 and G02 EDGs is being changed to use the new fuel oil transfer system as part of the modification to install additional EDGs. The staff finds this proposed change appropriate and consistent with the design. Therefore, it is acceptable.

TS Table 15.4.1-1, "Minimum Frequencies for Checks, Calibrations, and Tests of Instrument Channels"

The licensee has proposed to change TS Table 15.4.1-1, Number 13, to remove the "(1)" from the monthly test requirements. This TS currently allows an exception from performing the required testing of the degraded voltage and loss of voltage protection relays during periods of refueling. This exception is not considered to be appropriate because this testing should be continued to verify operability of shared equipment that supports operation of the operating unit. The removal of these exceptions is an improvement in the safe operation of Point Beach because it will provide the appropriate requirements for testing of these shared protection features. Therefore, this change is acceptable.

Additional Comments

This amendment request, which allows a one-time exception for one Train A service water pump, operating with power supplied by the alternate shutdown system B08/B09 480-volt buses, to be considered operable during the Unit 1 1995 refueling outage, and which removes some exceptions that are no longer necessary or appropriate, is a plant specific issue based on design and operational characteristics of the Point Beach Nuclear Plant.

Based on its review, the staff agrees with the licensee that the proposed changes will not create a significant increase in the probability or consequences of an accident previously evaluated. The modifications and changes do not create new or different accident initiators or sequences, or a significant reduction in a margin of safety. The modification to change the loss of voltage protection function from 1-out-of-2 logic to 2-out-of-3 logic on each bus continues to meet the original plant design bases and provides some improvement over the original design. Therefore, the proposed changes are acceptable.

3.0 STATE CONSULTATION

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

4.0 ENVIRONMENTAL CONSIDERATION

These amendments change 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 staff has determined that the amendments involve 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 previously published a proposed finding that these amendments involve no significant hazards consideration and there has been no public comment on such finding (60 FR 6316). Accordingly, these amendments meet 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 these amendments.

5.0 CONCLUSION

The staff has concluded, based on 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: S. Saba
D. Shum

Date: March 6, 1995