Wisconsin Electric POWER COMPANY
231 W. MICHIGAN, P.O. BOX 2046, MILWAUKEE, WI 53201

August 24, 1979

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. NUCLEAR REGULATORY COMMISSION
Washington, D. C. 20555

Attention: Mr. A. Schwencer, Chief
Operating Reactors Branch 1

Gentlemen:

DOCKET NOS. 50-266 AND 50-301
TECHNICAL SPECIFICATION CHANGE REQUEST NO. 45
ADDITIONAL INFORMATION
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

In response to your request for additional information dated July 3, 1979, we are providing herewith a modification to our license amendment request as submitted by letter dated July 28, 1977. This modification revises the changes we had previously proposed to Point Beach Nuclear Plant Technical Specification Tables 15.3.5-1 and 15.4.1-1. Copies of these revised tables are attached and should be considered with our license amendment request in lieu of the originally proposed tables.

We are also providing the following additional information in response to your specific requests. For your convenience, the specific items from your letter have been repeated below together with our responses.

1. Table 15.3.5-1 (Wisconsin Electric Power Company letter to NRC dated July 28, 1977) has a trip set voltage of 3675 volts for degraded voltage condition. State the time delay associated with this trip setpoint along with tolerances for the time delay and trip voltage in the Technical Specification change.

RESPONSE

Proposed Table 15.3.5-1 has been revised to include additional time delay and tolerance information. Please note that the time delay of 13.6 seconds ±5% for the degraded voltage condition is for 90% of the 3675 volt setting. This is the highest value which can be used to test or calibrate the relays since the time delay for higher voltages is indeterminate. While the relay will trip at voltages between 90 and 100% of the setting, the time delay cannot be accurately determined.

Determination of the time delay for auxiliary bus voltage between 90 and 100% of the relay setting is not significant since any disturbance which would cause the low 345 kV system voltage necessary to depress the auxiliary bus voltage would be of very short duration or would lead rapidly to further voltage reduction and subsequent undervoltage relay operation.

2. Describe how the voltage monitors satisfy the requirements of IEEE 279-1971. Include sufficient information to enable us to verify compliance with the requirements of the standard.

RESPONSE

The voltage monitors used to detect loss of voltage or degraded system voltage are of a type which will go to the trip position and cause a protective action in case of a monitor failure. Each bus associated with each safeguards train is monitored separately by its own set of undervoltage relays. The failure of a relay on any bus cannot affect the proper operation of the redundant power supply train. In addition, the bus stripping function is controlled by 2 of 3 voltage monitors to prevent a relay failure from causing a load shedding operation without subsequent bus reloading. The following table is provided to illustrate the effects of individual undervoltage relay failures for Unit 1. Unit 2 is identical to Unit 1.

BUS	NO. OF RELAYS	FUNCTION	EFFECT OF RELAY FAILURE
1A03 (4160V)	1	Disconnect offsite power feed to bus 1A05 (A Train) for degraded voltage condition.	Disconnect offsite power feed to bus 1A05.
1A04 (4160V)	1	Disconnect offsite power feed to bus 1A06 (B Train) for degraded voltage condition.	Disconnect offsite power feed to bus 1A06.
1A05 (4160V) A Train	2 (1/2 logic)	Disconnect bus 1A05 from offsite power for loss of voltage and start diesel 3D.	Disconnect bus 1A05 from offsite power and start diesel 3D.
1A06 (4160V) B Train	2 (1/2 logic)	Disconnect bus 1A06 from offsite power for loss of voltage and start diesel 4D.	Disconnect bus 1A06 from offsite power and start diesel 4D.
1B03 (480V) A Train	3 (2/3 logic)	Strip bus 1B03 on loss of voltage and block load sequencer until voltage returns.	None - function requires 2 of 3 relays tripped.
1B04 (480V) B Train	3 (2/3 logic)	Strip bus 1B04 on loss of voltage and block load sequencer until voltage returns.	None - function requires 2 of 3 relays tripped.

3. Table 15.4.1-1 (Wisconsin Electric Power Company letter to NRC dated July 28, 1977) shows channel functional tests to be done every refueling cycle. Give the basis for channel functional tests not to be done monthly as recommended by NRC letter, Table 4.3-2, Engineered Safety Feature Actuation System Instrumentation Surveillance Requirements (Safety Evaluation and Statement of Staff Positions Relative to the Emergency Power Systems for Operating Reactors, dated June 2, 1977).

RESPONSE

Proposed Table 15.4.1-1 has been revised to require monthly functional tests for the undervoltage channels as recommended by NRC.

We are confident that the additional information provided by this letter and the revisions to the previous proposed changes to Tables 15.3.5-1 and 15.4.1-1 will enable you to complete your review of the degraded grid voltage generic issue as it may apply to the Point Beach Nuclear Plant. We trust you may then issue the necessary license amendments to incorporate both the changes to the Technical Specifications originally requested on July 28, 1977, and the revisions to that request as presented herein.

Very truly yours,

Sol Burstein

Executive Vice President

Enclosures

Subscribed and sworn to before me
this 28th day of August, 1979.

Notary Public, State of Wisconsin

My Commission expires June 24, 1983

TABLE 15.4.1-1 (CONTINUED)

	Channel Description	Check	Calibrate	Test	Remarks
24.	Containment Pressure	S	R	M**	Narrow range containment pressure (-3.0, +3 psig excluded)
25.	Steam Generator Pressure	S***	R	M***	
26.	Turbine First Stage Pressure	S**	R	M**	
27.	Emergency Plan Radiation Instruments	M	R	M	
28.	Environmental Monitors	M	N.A.	N.A.	
29.	Degraded 4.16KV Voltage	S	R	M**	
30.a	Loss of Voltage (4.16KV)	S	R	M**	
b	Loss of Voltage (480V)	S	R	M**	
31.	4160 V. Frequency	N.A.	R	N.A.	

S - Each Shift

D - Daily

W - Weekly

B/W - Biweekly

M - Monthly

P - Prior to each startup if not done previous week

R - Each Refueling Shutdown (But not to exceed 20 months, except for first core cycle)

NA - Not applicable

** Not required during periods of refueling shutdown, but must be performed prior to starting up if it has not been performed during the previous surveillance period.

*** Not required during periods of refueling shutdown if steam generator vessel temperature is greater than 70°F.

TABLE 15.3.5-1 (CONTINUED)

NO.	FUNCTIONAL UNIT	CHANNEL	SETTING LIMIT
7	Degraded Voltage (4.16KV)	Disconnection of affected bus from offsite power	3675 volts ±3% Time delay: 2.6 sec. ±5% at 0 volts 13.6 sec. ±5% at 90% of voltage setting
8	Loss of Voltage		
	a. 4.16 KV	Disconnection of affected bus from offsite power start Diesel	a. 2450 volts ±3% Time delay: 0.3 sec. ±5% at 0 volts 1.2 sec. ±5% at 90% of voltage setting
	b. 480V	Load Shedding	b. 256 volts ±3% Time delay: 0.75 sec. ±5% at 0 volts 3.5 sec. ±5% at 90% of voltage setting

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TABLE 15.4.1-1

MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND

TEST OF INSTRUMENT CHANNELS

	Channel Description	Check	Calibrate	Test	Remarks
1.	Nuclear Power Range	S(1)** M*(3)**	D (1)** Q*(3)**	B/W (2)**	1) Heat Balance 2) Signal to ΔT; bistable action (permissive, rod stop, trips) 3) Upper and lower chambers for axial off-set
2.	Nuclear Intermediate Range	S (1)**	N.A.	P (2)	1) Once/shift when in service 2) Log level; bistable action (permissive, rod stop, trips)
3.	Nuclear Source Range	S (1)	N.A.	P (2)	1) Once/shift when in service 2) Bistable action (alarm, trips)
4.	Reactor Coolant Temperature	S	R	B/W (1)** (2)	1) Overtemperature-Delta T 2) Overpower - Delta T
5.	Reactor Coolant Flow	S**	R	M**	
6.	Pressurizer Water Level	S**	R	M**	
7.	Pressurizer Pressure	S**	R	M**	
8.	4 Kv Voltage	N.A.	R	M**	Reactor protection circuits only
9.	Analog Rod Position	S (I)**	R	M**	1) With step counters

* By means of the movable in-core detector system.

** Not required during periods of refueling shutdown, but must be performed prior to starting up if it has not been performed during the previous surveillance period.