



Wisconsin Electric POWER COMPANY
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September 29, 1982

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

Attention: Mr. R. A. Clark, Chief
 Operating Reactor Branch 3

Gentlemen:

DOCKET NOS. 50-266 AND 50-301
ADDITIONAL INFORMATION APPENDIX R EXEMPTION REQUEST
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

On June 30, 1982, Wisconsin Electric Power Company, Licensee for the Point Beach Nuclear Plant, Units 1 and 2, submitted its response to 10 CFR Part 50 Appendix R, "Fire Protection of Safe Shutdown Capabilities". This report provided a review of the safe shutdown systems and their associated circuits for compliance with the Appendix R requirements. A number of requests for exemptions from certain of these requirements were also provided.

On September 16, 1982, we received a telephone call from Messrs. Colburn, Stang, and Warnbock of your staff. Certain additional information was requested of Licensees during that conference call and is provided with this letter.

Mr. Stang requested that we describe further the oil collection system for the reactor coolant pump motor and compare the Point Beach design with other systems. The general arrangement of the Point Beach Nuclear Plant reactor coolant pump lube oil collection system was provided in Enclosure 1 to our January 29, 1982 letter. The system is designed, engineered, and installed to satisfy the seismic requirements of Section III.0 of Appendix R. The oil lift pump and piping enclosure and flange covers on the lube oil cooler and piping provide for protection and collection from all pressurized oil leakage sites. The oil collection tank is suitably protected to prevent fire flashback.

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Enclosure 1 states that the system will meet the intent of Section III.O of Appendix R. Our use of the word "intent" is based on the following specific wording of Section III.C:

"Such collection systems shall be capable of collecting lube oil from all potential pressurized and unpressurized leakage sites in the reactor coolant pump lube oil systems."

In an effort to satisfy the above specific wording, other system designs provide individual devices for oil collection from unpressurized leakage sites. The Point Beach system for oil collection from unpressurized leakage sites, as described in paragraph 1 of Enclosure 1 to the January 29 letter, utilizes the pump shaft housing as a collection sump and an oil deflector cone to keep unpressurized oil leakage from contacting the hot reactor coolant pump body or piping. The technical basis for Section III.O expresses the concern that "oil leaking from some portion of the lube oil system may come in contact with surfaces that are hot enough to ignite the oil". The Point Beach oil collection system prevents this from occurring, and thereby satisfies the technical basis of Section III.O. Therefore, we consider the Point Beach oil collection system to meet the "intent" of the above-listed specific wording by satisfying the requirements of the Section III.O technical basis.

Mr. Stang also requested that sketches or drawings be provided in support of Sections 5.11 and 5.12 of our June 30 submittal. One print of each of the following drawings is enclosed herewith:

1. E-133, E-134, E-144 Sheet 1

These drawings have been marked to show the routing of pressurizer heater cables in Fire Zone 10, Unit 1 Containment Building.

2. E-165, E-166

These drawings have been marked to show the routing of pressurizer pressure and level cables in Fire Zone 10, Unit 1 Containment Building.

3. E-2133, E-2134, E-2144

These drawings have been marked to show the routing of pressurizer heater cables in Fire Zone 11, Unit 2 Containment Building.

Mr. H. R. Denton

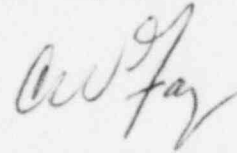
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We are also enclosing herewith Table 5.11-1A which lists pressurizer heater cables and cable trays in Fire Zone 10; Table 5.12 which lists pressurizer heater cables and cable trays in Fire Zone 11; a summary of proposed modifications for Fire Zone 10; and a summary of proposed modifications for Fire Zone 11.

We trust this information will satisfy your requests in this regard and that you may now complete your review of our exemption requests. Please notify us if you need any additional assistance.

Very truly yours,



Assistant Vice President

C. W. Fay

Enclosures

Copy to NRC Resident Inspector

REACTOR COOLANT PUMP LUBE OIL COLLECTION

The major potential for oil leakage occurs during normal operation from unpressurized sites. This leakage can run down the shaft, exit the shaft housing, and ignite upon contact with the hot reactor coolant pump body. At Point Beach Nuclear Plant, we have closed up openings in the pump shaft housing so that the housing provides an approximate 20-gallon capacity oil sump. The housing has been fitted with an overflow pipe so that additional oil leakage will overflow onto the existing oil deflector cone. The existing deflector cone will prevent oil from coming in contact with the hot reactor coolant pump body. A leak-off tray will be added to the deflector cone with drain piping to a collecting tank. Spilled oil will thereby be diverted and collected away from its potential ignition source. We believe that this system will provide suitable oil collection from unpressurized leakage sites.

The oil lift pump is normally operated for a period of less than three minutes during unit start-up. During this period the reactor coolant pump and piping are cold and containment integrity has not been established. The allowable operating range between high and low oil level alarms in the 175-gallon oil reservoir is two inches. A major leak in the pressurized system would rapidly decrease the level in the oil reservoir which would result in a low-level alarm. This would necessitate immediate shut-down, repair, and cleanup before the pump could be restarted and system heatup begun. We do not believe that this type of event would present a fire hazard because there would be no hot surfaces to collect and ignite the oil and because of the timely response from operations and maintenance personnel.

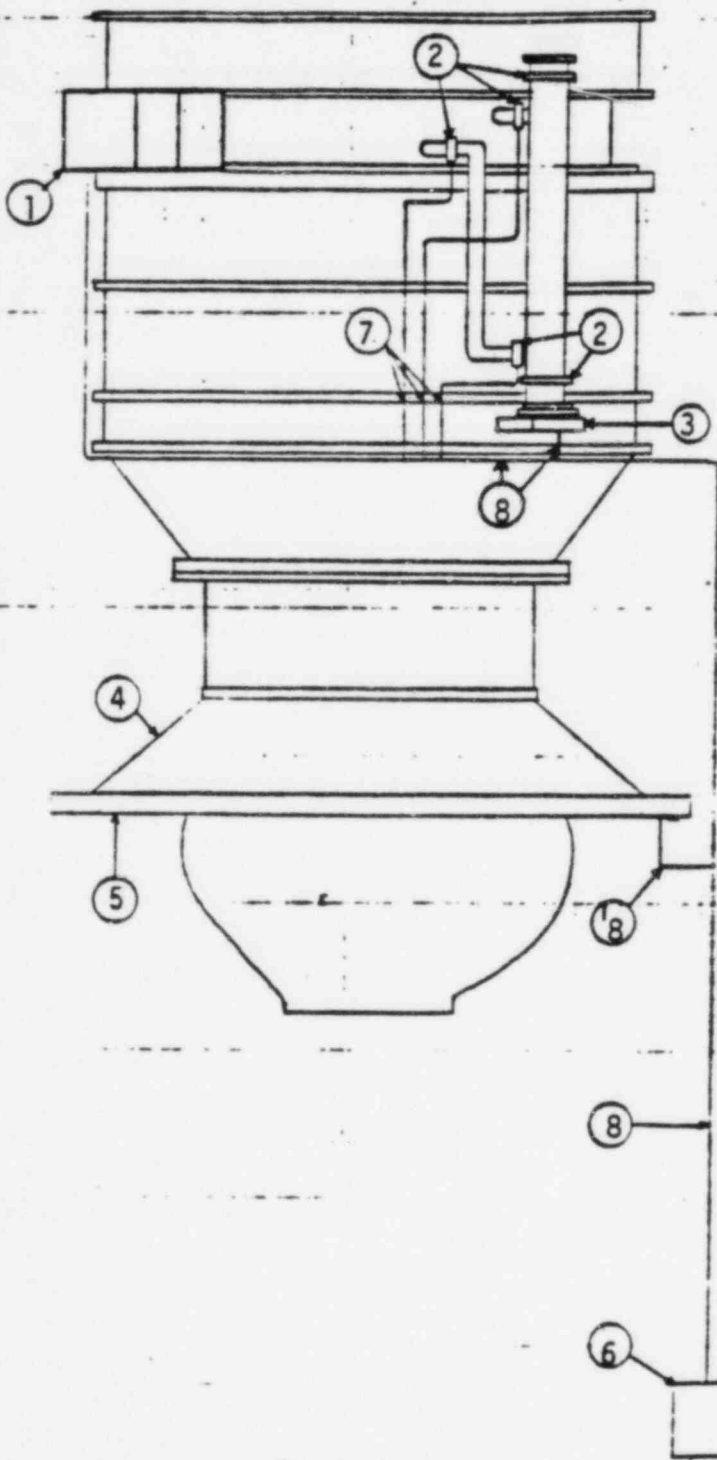
In the normally unpressurized condition, leakage from the high pressure system would be in the form of dripping oil. The combination of our existing and proposed oil collection system provides suitable collection capability for this condition.

It is conceivable that some quantity of oil could be sprayed out of a small leak in the high pressure system during the less than three minutes of lift pump operation. The quantity of oil spilled would have to be small to avoid low-level alarm annunciation. However, we recognize that this could be a fire hazard. Therefore, an enclosure will be provided around the oil lift pump and piping, oil cooler oil piping will be equipped with flange covers, and an oil cooler drip pan will be provided to contain oil leakage from high pressure sources.

The general arrangement of the reactor coolant pump lube oil collection system is shown on Figure 1. The protective components of this system will collect potential oil leakage from pressurized and unpressurized sources and drain it away from hot potential ignition sources. The system will meet the intent of Section III.O of Appendix R.

ENCLOSURE 1

FIGURE 1



COMPONENTS

1. Oil lift pump and piping enclosure.
2. Oil cooler oil piping flange cover.
3. Oil cooler drip tray.
4. Existing oil deflector cone assembly.
5. Oil deflector cone leak-off tray.
6. Oil collection tank.
7. 3/4" diameter drain pipe.
8. 1" diameter drain pipe.

POINT BEACH NUCLEAR PLANT
REACTOR COOLANT PUMP LUBE OIL COLLECTION SYSTEM

TABLE 5.11-A
 UNIT 1 CABLE TRAYS AND CONDUIT
 NECESSARY FOR HOT SAFE SHUTDOWN
 FIRE AREA 10: UNIT 1 CONTAINMENT BUILDING

DIVISION A

<u>CABLE TRAY</u>	<u>CABLE SCHEME NO.</u>	<u>PURPOSE</u>
WT01, 02, 03, 04, 05, 06, 07	PP1401S	Pressurizer Heater Group C
	PP1402S	Pressurizer Heater Group C
	PP1403S	Pressurizer Heater Group C
	PP1404S	Pressurizer Heater Group C
	PP1405S	Pressurizer Heater Group C
WT08	PP1401S	Pressurizer Heater Group C
	PP1402S	Pressurizer Heater Group C
WX01, 02	PP1403S	Pressurizer Heater Group C
	PP1404S	Pressurizer Heater Group C
	PP1405S	Pressurizer Heater Group C
WY01, 02	PP1401S	Pressurizer Heater Group C
	PP1402S	Pressurizer Heater Group C
VA 05, 06, 07 08, 09, 10	PP1403S	Pressurizer Heater Group C
	PP1404S	Pressurizer Heater Group C
	PP1405S	Pressurizer Heater Group C
VB01, 02	PP1403S	Pressurizer Heater Group C
	PP1404S	Pressurizer Heater Group C
	PP1405S	Pressurizer Heater Group C
VG01, 02, 03, 04, 05, 06	PP1401S	Pressurizer Heater Group C
	PP1402S	Pressurizer Heater Group C

DIVISION B

<u>CONDUIT</u>	<u>CABLE SCHEME NO.</u>	<u>PURPOSE</u>
1S657	PP1301S	Pressurizer Heater Group D
	PP1302S	
	PP1303S	
	PP1304S	
<u>CABLE TRAY</u>	<u>CABLE SCHEME NO.</u>	<u>PURPOSE</u>
WT01	PP1301S	Pressurizer Heater Group D
	PP1302S	
	PP1303S	
	PP1304S	
	PP1305S	
WT02, 03, 04, 05, 06, 07, 08	PP1305S	Pressurizer Heater Group D

<u>CABLE TRAY</u>	<u>CABLE SCHEME NO.</u>	<u>PURPOSE</u>
WS01	PP1301S PP1302S PP1303S PP1304S	Pressurizer Heater Group D
WY01	PP1301S PP1302S PP1303S PP1304S PP1305S	Pressurizer Heater Group D
WY02	PP1301S PP1302S PP1303S PP1304S PP1305S PP1201S PP1202S PP1203S PP1204S PP1205S	Pressurizer Heater Group D Pressurizer Heater Group D Pressurizer Heater Group D Pressurizer Heater Group D Pressurizer Heater Group D Pressurizer Heater Group E Pressurizer Heater Group E Pressurizer Heater Group E Pressurizer Heater Group E Pressurizer Heater Group E
VG01, 02, 03, 04, 05, 06	PP1301S PP1302S PP1305S PP1201S PP1202S PP1203S PP1204S PP1205S	Pressurizer Heater Group D Pressurizer Heater Group D Pressurizer Heater Group D Pressurizer Heater Group E Pressurizer Heater Group E Pressurizer Heater Group E Pressurizer Heater Group E Pressurizer Heater Group E
VA01, 02, 03	PP1201S PP1202S PP1203S PP1204S PP1205S	Pressurizer Heater Group E Pressurizer Heater Group E Pressurizer Heater Group E Pressurizer Heater Group E Pressurizer Heater Group E
VA05, 06, 07, 08, 09	PP1201S PP1202S PP1203S PP1204S PP1205S PP1303S PP1304S	Pressurizer Heater Group E Pressurizer Heater Group E Pressurizer Heater Group E Pressurizer Heater Group E Pressurizer Heater Group E Pressurizer Heater Group D Pressurizer Heater Group D
VB01, 02	PP1303S PP1304S	Pressurizer Heater Group D Pressurizer Heater Group D

TABLE 5.12-1
UNIT 2 CABLE TRAYS AND CONDUIT
NECESSARY FOR HOT SAFE SHUTDOWN
FIRE AREA 11: UNIT 2 CONTAINMENT BUILDING

DIVISION A

<u>CABLE TRAY</u>	<u>CABLE SCHEME NO.</u>	<u>PURPOSE</u>
WJ01, 02, 03 04, 05, 06	PP1801S	Pressurizer Heater Group C
	PP1802S	Pressurizer Heater Group C
	PP1803S	Pressurizer Heater Group C
	PP1804S	Pressurizer Heater Group C
	PP1805S	Pressurizer Heater Group C
VM01, 02	PP1801S	Pressurizer Heater Group C
	PP1802S	Pressurizer Heater Group C
	PP1803S	Pressurizer Heater Group C
	PP1804S	Pressurizer Heater Group C
	PP1805S	Pressurizer Heater Group C
VL03, 04	PP1801S	Pressurizer Heater Group C
	PP1802S	Pressurizer Heater Group C
	PP1803S	Pressurizer Heater Group C
	PP1804S	Pressurizer Heater Group C
	PP1805S	Pressurizer Heater Group C

DIVISION B

<u>CABLE TRAY</u>	<u>CABLE SCHEME NO.</u>	<u>PURPOSE</u>
WT01	PP1901S	Pressurizer Heater Group D
	PP1902S	Pressurizer Heater Group D
	PP1903S	Pressurizer Heater Group D
	PP1904S	Pressurizer Heater Group D
	PP1905S	Pressurizer Heater Group D
VV02	PP1901S	Pressurizer Heater Group D
	PP1902S	Pressurizer Heater Group D
	PP1903S	Pressurizer Heater Group D
	PP1904S	Pressurizer Heater Group D
	PP1905S	Pressurizer Heater Group D
VP01	PP1901S	Pressurizer Heater Group D
	PP1902S	Pressurizer Heater Group D
	PP1903S	Pressurizer Heater Group D
	PP1904S	Pressurizer Heater Group D
	PP1905S	Pressurizer Heater Group D
VU01, 02, 03	PP1901S	Pressurizer Heater Group D
	PP1902S	Pressurizer Heater Group D
	PP1903S	Pressurizer Heater Group D
	PP1904S	Pressurizer Heater Group D
	PP1905S	Pressurizer Heater Group D

CABLE TRAYCABLE SCHEME NO.PURPOSE

VM01

PP1901S
PP1902S
PP1903S
PP1904S
PP1905S
PP1701S
PP1702S
PP1703SPressurizer Heater Group D
Pressurizer Heater Group D
Pressurizer Heater Group D
Pressurizer Heater Group D
Pressurizer Heater Group D
Pressurizer Heater Group E
Pressurizer Heater Group E
Pressurizer Heater Group E

WN01

PP1901S
PP1902S
PP1903S
PP1904S
PP1905S
PP1701S
PP1702S
PP1703SPressurizer Heater Group D
Pressurizer Heater Group D
Pressurizer Heater Group D
Pressurizer Heater Group D
Pressurizer Heater Group D
Pressurizer Heater Group E
Pressurizer Heater Group E
Pressurizer Heater Group E

VL01, 02, 03

PP1701S
PP1702S
PP1703S
PP1704S
PP1705SPressurizer Heater Group E
Pressurizer Heater Group E
Pressurizer Heater Group E
Pressurizer Heater Group E
Pressurizer Heater Group E

VL04

PP1704S
PP1705SPressurizer Heater Group E
Pressurizer Heater Group E

FIRE AREA 10

SUMMARY OF PROPOSED MODIFICATIONS

1. Pressurizer Heater Cables

Reference Drawings E-133, E-134, E-144 Sheet 1.

A. Plume Impingement Barriers

Install plume impingement barriers on the following cable tray sections:

1. VG01, VG02, VG03, VG04, VG05, VG06
2. VB01, VB02
3. VA03, VA04, VA05, VA06, VA07

B. Radiant Energy Shields

Install radiant energy shields on cable tray sections WX02 and XY02 up to the ceiling.

C. Fire Stops

Install fire stops in cable tray sections WX02 and WY02 at the ceiling and in tray section VA03 at the connection to tray section VA02.

D. Conclusion

The above-listed modifications will protect all pressurizer heater cables from an exposure fire on the 21'-0" elevation. The fire stops in tray sections WX02 and WY02 will prevent fire propagation down from the 46'-0" elevation. Group E pressurizer heater cables are located entirely on the 21'-0" elevation. The fire stop between tray sections VA02 and VA03 will prevent fire propagation into tray sections which contain pressurizer heater cables. Therefore, the integrity of at least one group of pressurizer heater cables is protected.

2. Pressurizer Pressure and Pressurizer Level Cables

Reference Drawings E-165, E-166.

A. Conduit Protection

Install a suitable conduit wrap on the most accessible of conduits 1C57A or 1C57D for a distance required to achieve 20-foot horizontal separation.

B. Conclusion

The routing of conduit 1C57A will be verified to establish the actual proximity to conduit 1C57D. The accessibility of each conduit for wrapping will be determined. The wrapping of one conduit to provide 20-foot horizontal separation will provide protection in compliance with Section III.G.2.

FIRE AREA 11

SUMMARY OF PROPOSED MODIFICATIONS

1. Pressurizer Heater Cables

Reference Drawings E-2133, E-2134, E-2144.

A. Plume Impingement Barriers

Install plume impingement barriers on the following cable tray sections:

1. VL01, VL02, VL03.
2. VN01.
3. VS01 above VL04.
4. VU03 to the top of the rising section.

B. Radiant Energy Shields

Install a radiant energy shield on cable tray sections VM01 and VM02 up to the ceiling.

C. Fire Stops

Install fire stops in cable tray sections VL01 and VU05 north of penetration number 42, VU03 at the top of the rising section, and VM02 at the ceiling.

D. Conclusion

The above-listed modifications will protect all pressurizer heater cables from an exposure fire on the 21'-0" elevation. The fire stop in tray VM02 will prevent fire propagation down from the 46'-0" elevation. Group E pressurizer heater cables are located entirely on the 21'-0" elevation. The other fire stop will prevent fire propagation into tray sections which contain group E cables. Therefore, the integrity of at least one group of pressurizer heater cables is protected.