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Nuclear Management Company, LLC
Point Beach Nuclear Plant
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NRC 2002-0103

10 CFR 50.48

November 22, 2002

Document Control Desk
U.S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, DC 20555

Ladies/Gentlemen

Dockets 50-266 and 50-301
Point Beach Nuclear Plant, Units 1 and 2
Combustible Loading Calculation Rebaselining

During an extensive rebaselining of the 10 CFR 50, Appendix R evaluations for the Point Beach Nuclear Plant, the combustible loading in the plant fire zones was formally calculated. We have identified several discrepancies between these calculated combustible loading values and the combustible loading values included in previous submittals related to Appendix R for three of these fire zones. Attachment A provides a summary of the identified combustible loading discrepancies.

These differences in combustible loading values have been determined to result from differences in calculation methodology. Specifically, the bases used to establish the cable combustible loading values in the previous submittals could not be definitively determined. When the current calculations of combustible loading were performed, we used industry- established combustible loading practices and formal calculation procedures. Although there have been minor changes to the cable loading in these areas due to design changes, the differences in combustible loading values for Fire Zones 156 and 237 result primarily from this difference in methodology and are not directly representative of changes in the plant design or physical configuration. The discrepancy in the combustible loading values for Fire Zone 162 are not traceable to methodology differences or design changes and appear to have been errors in previous submittals.

Note that although the combustible loading in these fire zones has changed, the characterization of the combustible loading, based on actual configuration of the room and the type and location of combustibles, remains classified as low in accordance with the PBNP Fire Protection Evaluation Report and the NFPA Fire Protection Handbook.

If you have any questions concerning the information provided in this attachment, please contact Norm Hoefert at 920-755-7590.

Sincerely,

A. J. Cayia
Site Vice President

JKL/jk

cc: NRC Regional Administrator
NRC Resident Inspector
NRC Project Manager
PSCW

A006

ATTACHMENT A

SUMMARY OF COMBUSTIBLE LOADING

CALCULATION DIFFERENCES

ATTACHMENT A

The fire loading in the plant fire zones was calculated during the Appendix R combustible loading rebaselining effort. For three fire zones, discrepancies between the calculation results and the combustible loading information previously submitted were noted during this effort. The details of the discrepancies are provided below.

Fire Zone 156 - Unit 1 MCC Room (Formerly Identified as Fire Zone 1)

Previous combustible loading information:

- Fire Protection Review[1], Section 3.4.1.3.4 states that the fire loading in this room is 6.0 lb/sqft [48,000 Btu/sq ft] due largely to cable insulation.
- Fire Protection Review [1], Table 3-1, indicates that the fire hazard in this room is:
  Electrical cable – 5,500 lbs insulation –
  6 lb/sq ft equivalent wood [48,000 Btu/sq ft]
- Fire Protection of Safe Shutdown Capability[2], Section 5.2 states that the fixed combustible loading in this zone is due almost entirely to cable insulation and results in a fire loading of 6.0 lb/ft^2 equivalent wood [48,000 Btu/sq ft].
- Fire Protection of Alternate Shutdown Capability[4], Section 6.4.2.2 and Table 6-1 state that the combustible loading in this room is 48,000 Btu/sq ft.

Current combustible loading information:

- 5,686 lbs cable insulation - 53,642 Btu/sq ft [3]

Fire Zone 162 – Valve Gallery/Pipe Way 4

Previous combustible loading information:

- Fire Protection Review [1], Table 3-1, indicates that the fire hazard in this room is:
  Electrical cable – 1,300 lbs insulation
  17.7 lb/sq ft equivalent wood[6]
- Fire Protection of Alternate Shutdown Capability[4], Section 6.4.2.5 and Table 6-1 state that the combustible loading in this room is 8,000 Btu/sq ft[4]

Current combustible loading information:

- 1,602 lbs cable insulation – 41,257 Btu/sq ft [3]

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[1] Point Beach Nuclear Plant Fire Protection Review, June 1977
[2] Point Beach Nuclear Plant Units 1 & 2, Response to 10CFR50 Appendix R "Fire Protection of Safe Shutdown Capability", June 1982.
[3] Calculation 2002-0039, Fire Loading Calculation, Revision 0, November 2002
[4] Point Beach Nuclear Plant Units 1 & 2, Response to 10CFR50 Appendix R "Alternate Shutdown Capability", October 1983.
[5] Letter dated June 11, 1986, from S. Burstein (WE) to HR Denton (NRC), 10CFR50 Appendix R Exemption Requests, Point Beach Units 1 and 2.
[6] The Fire Protection Review value of 17.7 lb/sqft equivalent wood value is believed to represent a typographical error.

ATTACHMENT A

Fire Zone 237 – CCW Heat Exchanger and Boric Acid Tank Room

Previous combustible loading information:

- Fire Protection Review[1], Section 3.4.1.5.2 states that the 7000 lbs of cable insulation in this room is almost entirely responsible for the 2.8 lb/sq ft fire loading.
- Fire Protection Review [1], Table 3-1, indicates that the fire hazard in this room is:
  Electrical cable – 7,000 lbs insulation
  2.8 lb/sq ft equivalent wood [22,400 Btu/sq ft]
- Letter dated June 11, 1986[5], Enclosure 1, states that the combustible in the zone is cable insulation comprising an approximate fuel load of 22,500 Btu/sq ft

Current combustible loading information:

- 7,148 lbs cable insulation – 23,398 Btu/sq ft [3]

[1] Point Beach Nuclear Plant Fire Protection Review, June 1977
[2] Point Beach Nuclear Plant Units 1 & 2, Response to 10CFR50 Appendix R "Fire Protection of Safe Shutdown Capability", June 1982.
[3] Calculation 2002-0039, Fire Loading Calculation, Revision 0, November 2000
[4] Point Beach Nuclear Plant Units 1 & 2, Response to 10CFR50 Appendix R "Alternate Shutdown Capability", October 1983.
[5] Letter dated June 11, 1986, from S. Burstein (WE) to HR Denton (NRC), 10CFR50 Appendix R Exemption Requests, Point Beach Units 1 and 2.