

June 2, 2005

Dennis Koehl  
Site Vice President  
Point Beach Nuclear Plant  
Nuclear Management Company, LLC  
6610 Nuclear Road  
Two Rivers, WI 54241-9516

SUBJECT: POINT BEACH NUCLEAR PLANT UNITS 1 AND 2, EXEMPTION FROM CERTAIN REQUIREMENTS OF 10 CFR PART 50, SECTION 50, APPENDIX R, "FIRE PROTECTION PROGRAM FOR NUCLEAR POWER FACILITIES OPERATING PRIOR TO JANUARY 1, 1979." (TAC NOS. MC2267 AND MC2268)

Dear Mr. Koehl:

The Commission has approved the enclosed exemption from specific requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix R, for the Point Beach Nuclear Plant, Units 1 and 2. This action is in response to your letter of March 5, 2004, as supplemented by the letter dated November 8, 2004, that submitted a request for permanent exemption from certain requirements of 10 CFR Part 50, Appendix R, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979."

A copy of the exemption has been forwarded to the Office of the Federal Register for publication.

Sincerely,

**/RA/**

Harold K. Chernoff, Project Manager, Section 1  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-266 and 50-301

Enclosure: As stated

cc w/enclosure: See next page

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
NUCLEAR MANAGEMENT COMPANY, LLC  
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2  
DOCKET NOS. 50-266 AND 50-301  
EXEMPTION

1.0 BACKGROUND

Nuclear Management Company, LLC (NMC, the licensee), is the holder of Facility Operating License Nos. DPR-24 and DPR-27 which authorizes operation of the Point Beach Nuclear Plant, Units 1 and 2. The licenses provide, among other things, that the facility is subject to all rules, regulations, and orders of the US Nuclear Regulatory Commission (NRC, the Commission) now or hereafter in effect.

The facility consists of two pressurized-water reactors (PWR) located in Manitowoc County, Wisconsin.

2.0 REQUEST/ACTION

Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix R, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979," established fire protection (FP) requirements to satisfy 10 CFR 50, Appendix A, General Design Criterion 3, "Fire Protection."

Appendix R, Section III.G.1.a of 10 CFR Part 50 requires: "one train of systems necessary to achieve and maintain hot shutdown from either the control room or emergency control station(s) is free of fire damage..."

By letter dated March 5, 2004, the licensee requested a permanent exemption from the requirements of 10 CFR Part 50, Appendix R, Section III.G.1.a for a repair consisting of powering a dedicated air compressor from one of two pre-planned 480 volt power sources using pre-staged power cords and connecting the air compressor to nitrogen bottle manifolds on one or both reactor units using a pre-staged pneumatic hose with quick connect fittings.

The licensee stated:

“The existing Safe Shutdown Analysis (SSA) for Point Beach credits a hard-piped nitrogen bottle bank to provide the first several hours of charging pump control air during hot shutdown. However, if the normal source of instrument air is not restored prior to depletion of this bottle bank, a dedicated air compressor is available to provide continued support for long term hot shutdown (and/or subsequent transition to cold shutdown) operation. This air compressor must be connected to a suitable power supply by means of electrical cables and to the charging pump backup control air manifolds by portable hoses.”

### 3.0 DISCUSSION

Pursuant to 10 CFR 50.12, the Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR Part 50 when (1) the exemptions are authorized by law, will not present an undue risk to public health or safety, and are consistent with the common defense and security; and (2) when special circumstances are present. Section 50.12(a)(2)(ii) of 10 CFR states that special circumstances are present whenever “application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule...”

10 CFR Part 50, Appendix R, Section III.G.1.a requires that, "one train of systems necessary to achieve and maintain hot shutdown conditions from either the control room or emergency control station(s) is free of fire damage." Appendix R, Section III.L.1, of 10 CFR Part 50 requires that an alternative or dedicated shutdown capability shall be able to, among other things, "(c) achieve and maintain hot standby conditions for a PWR; and (d) achieve cold shutdown conditions within 72 hours." NRC Inspection Report 50-266/2003-007; 50-301/2003-007, dated February 4, 2004, documents a Non-Cited Violation of Appendix R, Section III.L.1.c, in that NMC, "failed to ensure, without the need for 'hot standby repairs,' adequate control air to the speed controllers for the charging pumps during a postulated fire requiring an alternative shutdown method." The installed backup nitrogen gas bottle bank (for the charging pump speed controllers) meets the requirements of the regulation, with the exception that it is of limited capacity. This means that the hot shutdown conditions could not be maintained indefinitely while relying only on the installed bottle bank. However, the 8 to 14 hour capacity of the bottle banks is ample time to extinguish the fire, achieve stable plant conditions in hot shutdown, augment staff with personnel from the emergency response organization, and connect dedicated power cabling and hoses to the dedicated compressor using the furnished plugs and quick connect fittings (i.e., no tools required).

Because the bottle banks, hoses, cables, and compressor are all located in areas that would not be affected by the fires of concern, none would be damaged. The installed backup bottle banks are normally isolated from the charging pump pneumatic controls by the bottle stop-cocks, a manual valve on the bottle manifold, and an in-line manual isolation valve. These valves must be opened to bring the backup nitrogen on line. In contrast, the (staged) dedicated air compressor must be connected to its power supply by retrieving the staged cable and hose(s) from their storage locations in the same fire area (Turbine Hall), laying them out from the compressor to the selected power supply and to the affected unit's backup bottle bank

manifold, and then connecting the cable and hoses using the installed plugs and quick connect fittings before starting the compressor.

Although this activity could be considered a "hot standby repair," connection of these undamaged components to support continued hot shutdown conditions within 8 hours of the initiating event is reasonably achievable. This can be performed without invoking extraordinary action and without perturbing the stable plant conditions. Therefore, strict application of the interpretation proscribing any hot standby repair is not necessary to achieve and maintain hot shutdown conditions while relying only on the operating shift personnel, without undue encumbrances, and without having to resort to significant time consuming "repairs." The NRC staff concludes that application of Section III.G.1.a under these circumstances is not necessary to achieve the underlying purpose of the rule.

The NRC staff examined the licensee's rationale to support the exemption request and concluded that sufficient time (8 hours) is available to make the necessary connections to operate the backup air compressor. The NRC staff is satisfied that on-site and augmented response resources will be available to complete the repair. The appropriate equipment for this evolution is pre-staged. The NRC staff considered the location of the air compressor, the transformer, the pre-staging locations and routing of the electrical cables, and the pre-staging locations and routing of the pneumatic hoses. Equipment is pre-staged such that no single fire will affect permanent plant equipment and the repair equipment. The repair steps are feasible and reliable. The actions requested, hooking up power cables and connecting pneumatic fittings for the air compressor, are repairs as commonly implemented by Appendix R [but would not meet the requirements of] Section III.G.1.a (achieving and maintaining hot standby). The NRC staff agrees, therefore, that an exemption is appropriate to meet the underlying purpose of Section III.G.1.a, and that the 10 CFR 50.12.(a)(2)(ii) criterion applicable to this request.

#### 4.0 CONCLUSION

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12(a), the exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security. Also, special circumstances are present. Therefore, the Commission hereby grants NMC an exemption from the requirements of 10 CFR Part 50, Appendix R, Part III.G.1.a, for Point Beach Nuclear Plant, Units 1 and 2.

Pursuant to 10 CFR 51.32, the Commission has determined that the granting of this exemption will not have a significant effect on the quality of the human environment (70 FR 30819).

This exemption is effective upon issuance.

Dated at Rockville, Maryland, this 2nd day of June 2005.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

Ledyard B. Marsh, Director  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

June 2, 2005

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Site Vice President  
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Sincerely,

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Harold K. Chernoff, Project Manager, Section 1  
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