

August 29, 2002

Mr. Fred J. Cayia  
Acting Site Vice President  
Point Beach Nuclear Plant  
Nuclear Management Company, LLC  
6610 Nuclear Road  
Two Rivers, WI 54241

SUBJECT: POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2 - ISSUANCE OF  
AMENDMENTS RE: SERVICE WATER SYSTEM OPERABILITY  
(TAC NOS. MB4630 AND MB4631)

Dear Mr. Cayia:

The Commission has issued the enclosed Amendment No. 205 to Facility Operating License No. DPR-24 and Amendment No. 210 to Facility Operating License No. DPR-27 for the Point Beach Nuclear Plant, Units 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated March 20, 2002.

These amendments revise TS 3.7.8, "Service Water (SW) System," to allow the SW system to be operable with five operable SW pumps, provided one unit is in Mode 5 or 6, or defueled, and the SW system is capable of providing the required cooling water flow to required equipment.

A copy of our related safety evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

*/RA/*

Deirdre W. Spaulding, Project Manager, Section 1  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-266 and 50-301

Enclosures: 1. Amendment No. 205 to DPR-24  
2. Amendment No. 210 to DPR-27  
3. Safety Evaluation

cc w/encls: See next page

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cc w/encls: See next page

DISTRIBUTION

PUBLIC OGC SWeerakkody  
PDIII-1 Reading ACRS  
LRaghavan WBeckner  
DSpaulding GHill(2)  
RBouling RLanksbury, RGN-III

\*Provided SE input by memo

\*\*Previously Concurred

ADAMS Accession No. ML022200314

OFFICE	PDIII-1/PM	PDIII-1/LA	SPLP/SC*	OGC**	PDIII-1/SC
NAME	DSpaulding	RBouling	SWeerakkody	AHodgdon	LRaghavan
DATE	08/29/02	08/29/02	05/24/02	08/29/02	08/29/02

OFFICIAL RECORD COPY

Point Beach Nuclear Plant, Units 1 and 2

cc:

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March 2002

NUCLEAR MANAGEMENT COMPANY, LLC

DOCKET NO. 50-266

POINT BEACH NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 205  
License No. DPR-24

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Nuclear Management Company, LLC (the licensee), dated March 20, 2002, 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. 205, are hereby incorporated in the license. The licensee shall operate the facility in accordance with Technical Specifications.

3. This license amendment is effective as of the date of issuance and shall be implemented within 45 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

L. Raghavan, Chief, Section 1  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of issuance: August 29, 2002

NUCLEAR MANAGEMENT COMPANY, LLC

DOCKET NO. 50-301

POINT BEACH NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 210  
License No. DPR-27

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Nuclear Management Company, LLC (the licensee), dated March 20, 2002, 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. 210, are hereby incorporated in the license. The licensee shall operate the facility in accordance with Technical Specifications.

3. This license amendment is effective as of the date of issuance and shall be implemented within 45 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

L. Raghavan, Chief, Section 1  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of issuance: August 29, 2002

ATTACHMENT TO LICENSE AMENDMENT NO. 205  
TO FACILITY OPERATING LICENSE NO. DPR-24  
AND LICENSE AMENDMENT NO. 210  
TO FACILITY OPERATING LICENSE NO. DPR-27  
DOCKET NOS. 50-266 AND 50-301

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE

3.7.8-1  
3.7.8-2  
B 3.7.8-2 thru B 3.7.8-9

INSERT

3.7.8-1  
3.7.8-2  
B 3.7.8-2 thru B 3.7.8-9

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 205 TO FACILITY OPERATING LICENSE NO. DPR-24  
AND AMENDMENT NO. 210 TO FACILITY OPERATING LICENSE NO. DPR-27  
NUCLEAR MANAGEMENT COMPANY, LLC  
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2  
DOCKET NOS. 50-266 AND 50-301

## 1.0 INTRODUCTION

By application dated March 20, 2002, the Nuclear Management Company, LLC (NMC or the licensee) requested changes to the Technical Specifications (TSs) for Point Beach Nuclear Plant, Units 1 and 2. The proposed changes would revise TS 3.7.8, "Service Water (SW) System," to allow the SW system to be operable with five operable SW pumps, provided one unit is in Mode 5 or 6, or defueled, and the SW system is capable of providing the required cooling water flow to required equipment. Currently, TS 3.7.8 requires all six SW pumps to be operable when either or both units are in Mode 1, 2, 3, or 4.

Specifically, the proposed change would add a note to Limiting Condition for Operation (LCO) 3.7.8 that specifies "Only five SW pumps are required to be OPERABLE with one unit in MODE 5 or 6, or defueled, and the SW System capable of providing required cooling water flow to required equipment." Also Action Statement A, which currently addresses the condition of "one SW pump inoperable," would be revised to state "One SW pump inoperable AND Both units in MODES 1, 2, 3, or 4." The proposed changes would also revise the associated Bases section for TS 3.7.8 to reflect the TS changes.

## 2.0 BACKGROUND

LCOs, per 10 CFR 50.36(c)(2), are "the lowest functional capability or performance levels of equipment required for safe operation of the facility." The proposed changes to TS 3.7.8 are intended to provide added plant operational flexibility while still maintaining this lowest functional capability for the SW system.

The SW system consists of two trains of SW pumps (three pumps per train) discharging to a common loop header, which provides SW to both units. The loop header is actually made up of four headers designated "north," "south," "east," and "west." The SW pumps discharge to the east header. The loop header is provided with isolation valves that may be used to isolate the north, south, east, and west headers. In addition, redundant motor-operated valves in the east header may be used to divide the east header into two sets of three SW pumps. The SW system is designed to provide cooling water to essential and non-essential plant equipment of both units.

Operation of the SW system with five operable SW pumps for an indefinite period of time can be justified with one unit in Mode 5 or 6, or defueled, if the system is in a configuration that ensures that all relevant design-basis requirements are met while sustaining the most limiting single active failure. The most limiting single active failure that the SW system can experience is the loss of an entire safeguards train. When activated, each safeguards train sends a start signal to three of the SW pumps; a failure of one of the trains results in only three pumps receiving a start signal. Therefore, if all six pumps are operable, three operating pumps must be able to meet the system flows and pressures that ensure the design-basis requirements are met.

If only five SW pumps are operable, the most limiting single active failure is the loss of the safeguards train that provides the start signal for three of the operable SW pumps. Therefore, the start of only two SW pumps is assured.

The current requirement for the SW system is that it be operated within the bounds of its hydraulic analysis, with the exceptions delineated by the additional license conditions identified in Appendices C of the operating licenses. The applicable calculations in the existing SW hydraulic analysis, Calculations 97-0054-04-C and 97-0126-04-C (loss-of-coolant accident (LOCA) injection phase and LOCA recirculation phase, respectively), demonstrate that two operating SW pumps are sufficient to meet current design-basis acceptance criteria, provided that enough SW flowpaths are isolated prior to the postulated accident. In the cited calculations, the SW flow to the non-accident unit turbine hall and the flows to the non-accident unit containment fan coolers (CFCs) are isolated in addition to the flowpaths currently isolated by automatic action or by current procedures. Additionally, the cited calculations assume component cooling water (CCW) heat exchanger inlet and outlet blowdown valves will not be open concurrent with SW flushing of auxiliary feedwater (AFW) pumps (or equivalent flowpaths). The isolation of these flowpaths necessitates that the non-accident unit be in Mode 5 or 6, or defueled (modes which do not require the CFCs). These two cited calculations were included as references in the changes proposed to the Bases section supporting the proposed revision to TS 3.7.8.

Additionally, adopting this proposed TS change would require a revision to the Technical Requirements Manual (TRM) to provide guidance for ensuring that all relevant design-basis requirements are met for given plant configurations. More specifically, the TRM will facilitate compliance with LCO 3.7.8 by defining the number of SW pumps that are required to be operable for a given configuration. Also, the TRM would provide limitations on CCW heat exchanger blowdown valve use concurrent with AFW pump flushing operations. Finally, the TRM would provide guidance on the shutdown unit SW flowpaths that would be required to be isolated to allow operation with five operable SW pumps

### 3.0 EVALUATION

Current TS 3.7.8 requires all six SW pumps to be operable whenever one (or both) of the units is in Mode 1, 2, 3, or 4. This is designed to address the condition when either unit is susceptible to a design-basis accident. Requiring six pumps to be operable assures that adequate SW flow will be provided to all the heat loads necessary to mitigate an accident at either unit, while also assuring that adequate heat removal will be maintained for the non-accident unit. The current TS does not address the condition where one unit is operating

and the other unit is shutdown and not susceptible to the design-basis accident (large-break LOCA). In the latter case, "the lowest functional capability" required by 10 CFR 50.36(c)(2) can be provided by five SW pumps in lieu of six pumps if certain unnecessary flowpaths to the shutdown unit are isolated.

The proposed revision to TS 3.7.8 would allow indefinite operation with five operable SW pumps when one of the units is in Mode 5 or 6, or defueled. Under these conditions, a worst-case single active failure can result in only two operating SW pumps supplying adequate flow to the accident heat loads of the operating unit while still supplying adequate flow to the shutdown heat loads of the unit that is in Mode 5 or 6, or defueled. The licensee performed analyses to verify two SW pumps will provide sufficient flow to the required heat loads for an accident in one unit with the non-accident unit in Mode 5 or 6, or defueled, with specified flowpaths to unnecessary heat loads isolated. The Nuclear Regulatory Commission (NRC) staff reviewed the results of the licensee's analyses and concluded that the analyses are acceptable. Thus, the NRC staff also concluded the licensee's proposed changes to TS 3.7.8 requiring only five operable SW pumps when one unit is in Mode 5 or 6, or defueled are also acceptable. The NRC staff does not object to the changes proposed to the TS Bases.

Based on its review as described above, the NRC staff concludes that the proposed changes to TS 3.7.8 will provide additional operational flexibility without a corresponding reduction in plant safety margins. The NRC staff also concludes that the proposed changes are in accordance with 10 CFR 50.36(c)(2) with regards to maintaining the lowest functional capability of equipment required for safe operation of the facility. The proposed changes are, therefore, acceptable.

#### 4.0 STATE CONSULTATION

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

#### 5.0 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 or change a surveillance requirement. The staff has determined that the amendments involve no significant increase in the amounts and no significant change in the types of any effluent 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 (67 FR 34490). 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.

## 6.0 CONCLUSION

The Commission 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 Contributor: W. LeFave

Date: August 29, 2002