

March 29, 2002

Mr. Mark Warner  
Site Vice President  
Kewaunee and Point Beach Nuclear Plants  
Nuclear Management Company, LLC  
6610 Nuclear Road  
Two Rivers, WI 54241

SUBJECT: POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2 - ISSUANCE OF  
AMENDMENTS RE: CONTROL ROOM EMERGENCY FILTRATION SYSTEM  
ALLOWED OUTAGE TIME EXTENSION (TAC NOS. MB3322 AND MB3323)

Dear Mr. Warner:

The Commission has issued the enclosed Amendment No. 203 to Facility Operating License No. DPR-24 and Amendment No. 208 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 November 1, 2001.

These amendments revise the TSs to allow a one-time extension of the allowed outage time for the control room emergency filtration system (CREFS) from 7 days to 30 days. The licensee requested this one-time change in order to implement modifications to CREFS.

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/*

John G. Lamb, 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. 203 to DPR-24  
2. Amendment No. 208 to DPR-27  
3. Safety Evaluation

cc w/encls: See next page

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DATE	3/7/02	3/7/02	3/7/02	3/25/02	3/15/02	3/27/02

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Point Beach Nuclear Plant, Units 1 and 2

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May 2001

NUCLEAR MANAGEMENT COMPANY, LLC

DOCKET NO. 50-266

POINT BEACH NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 203  
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 November 1, 2001, 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. 203, 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/*

William D. Reckley, Acting 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: March 29, 2002

NUCLEAR MANAGEMENT COMPANY, LLC

DOCKET NO. 50-301

POINT BEACH NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 208  
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 November 1, 2001, 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. 208, 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/*

William D. Reckley, Acting 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: March 29, 2002

ATTACHMENT TO LICENSE AMENDMENT NO. 203

TO FACILITY OPERATING LICENSE NO. DPR-24

AND LICENSE AMENDMENT NO. 208

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

3.7.9-1  
3.7.9-2

INSERT

3.7.9-1  
3.7.9-2

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 203 TO FACILITY OPERATING LICENSE NO. DPR-24  
AND AMENDMENT NO. 208 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 November 1, 2001, the Nuclear Management Company, LLC (NMC or the licensee), requested changes to the Technical Specifications (TSs) for Point Beach Nuclear Plant (PBNP), Units 1 and 2. The proposed changes would revise TS 3.7.9, "Control Room Emergency Filtration System (CREFS)," to allow a one-time extension to the allowed outage time (AOT) for the CREFS from 7 days to 30 days, and allow an exception to the requirements of Limiting Condition for Operation (LCO) 3.0.4 and Surveillance Requirement (SR) 3.0.4 during the extended AOT at PBNP, Units 1 and 2. The changes are needed to facilitate the online implementation of modifications/upgrades to the CREFS during the current operating cycles and thereby avoid a dual unit shutdown to perform these system upgrades. These modifications/upgrades are designed to limit the intrusion of unfiltered inleakage into the control room envelope by enhancing pressurization of the space and by the use of low leakage dampers with high grade industrial quality air distribution components and sealing accessible duct work that can potentially leak unfiltered air into the control room envelope.

## 2.0 BACKGROUND

The Nuclear Regulatory Commission (NRC) issued Amendment Nos. 174 and 178, dated July 9, 1997, to the licenses for PBNP, Units 1 and 2, respectively. These amendments added a license condition requiring the submittal of a license amendment application and supporting dose analyses demonstrating compliance with General Design Criteria (GDC) 19 dose limits for control room habitability. Subsequently, the NRC eliminated this license condition via PBNP, Units 1 and 2, Amendment Nos. 198 and 203, dated August 15, 2000. Amendment Nos. 198 and 203 were premised on a commitment by the licensee to revise and submit radiological dose analyses for the control room and a license amendment application as necessary to demonstrate continued conformance to regulatory requirements and the PBNP licensing basis. In a letter dated January 11, 2002, NMC notified the NRC that this commitment would be fulfilled by February 28, 2002.

To enhance control room habitability in support of this commitment, modifications/upgrades of the pressure boundary formed by the control room envelope have been initiated by the licensee. These modifications/upgrades are designed to reduce the intrusion of unfiltered leakage into the control room envelope by enhancing pressurization of the space and by the use of low leakage dampers with high grade industrial quality air distribution components. The parameter of unfiltered leakage is a significant factor in the determination of control room total dose exposure. The proposed modifications/upgrades include 1) installation of bubble tight dampers for isolation of the control room and cable spreading room inlet ductwork; 2) isolation of the computer room, control room, and cable spreading room smoke and heat ventilation ductwork; 3) isolation of the control room toilet exhaust ductwork, and 4) sealing of accessible ductwork that could contribute to unfiltered leakage into the control room envelope. However, to preclude an unnecessary dual unit shutdown during installation of these safety enhancing measures, a one-time extension of the 7-day AOT for the CREFS to 30 days was requested by the licensee.

The modifications/upgrades are part of a comprehensive plan by the licensee to enhance the control room habitability envelope and are planned to be implemented in eight phases: 1) temporary cooling for the cable spreading room, 2) cable spreading room duct modifications, 3) control room toilet exhaust fan and isolation damper, 4) control/computer rooms smoke and heat isolation dampers, 5) cable spreading room ventilation system duct sealing, 6) temporary control room ventilation system 7) control room outside air isolation damper, and 8) control room ventilation system duct sealing. Implementation of items 6, 7 and 8 of the modifications/upgrades will require the licensee to enter into Condition A of TS 3.7.9 for a period of time exceeding that permitted by the current AOT. Because the control room is common to both units, PBNP, Units 1 and 2, will both be affected by the modifications/upgrades.

## 2.1 System Information

Information on the control room heating, ventilation and air conditioning (CR-HVAC) system, which includes the CREFS, is provided below.

The CR-HVAC system is used to maintain the temperature in the control/computer rooms, which are both within the control room envelope, such that equipment and instrumentation in the envelope does not operate in an environment above its qualification temperature. In addition, the CR-HVAC (which includes the CREFS) also maintains the control room habitable for reactor operators during and following accident conditions. The system is designed for four ventilation modes of operation--ventilation Mode 1 is for normal operation and Modes 2, 3, and 4 are for operations during emergency conditions. In Modes 2, 3, and 4, damper VNCR-4849C closes to isolate the pressure boundary from normal outside air intake.

The CREFS serves to filter the control room atmosphere and makeup air during control room isolation conditions. Charcoal adsorbers in these units are installed to reduce the potential intake of radioactive iodine to the control room during accident conditions. The system is required to be operable in reactor Modes 1, 2, 3, and 4 during movement of irradiated fuel assemblies, and during core alterations. If the CREFS is inoperable, the system must be restored to operable status within 7 days or both reactors must be placed in Mode 5 (cold shutdown).

Other features of the CR-HVAC system include a smoke and heat removal subsystem. Associated with this subsystem are three isolation dampers. The cable spreading room isolation damper helps ensure a pressure differential between the control room envelope and adjacent spaces. The control/computer rooms isolation dampers are intended to limit inleakage into the control room envelope and ensure the integrity of the control room pressure boundary.

During ventilation Modes 2, 3, and 4 of the CR-HVAC system, the control room toilet exhaust fan is deenergized, but not otherwise isolated from atmosphere. In phase 3 of the proposed licensee modifications/upgrades, a new motor-operated isolation damper between the exhaust fan discharge and the outdoor discharge duct would be added.

## 2.2 System Operation

The CR-HVAC system (including the CREFS) is located in the mechanical room above the control room and is controlled from control room panel C67. The system is designed for four modes of operation: Mode 1 is for normal operation, Mode 2 is for 100-percent recirculation, Mode 3 is for 25-percent filtered return air /75-percent recirculation, and Mode 4 is for 25-percent filtered outside pressurization air / 75-percent recirculation.

For Mode 1, one of the two normal supply/recirculation fans (W-13B1 or W-13B2) is started. The fan start opens outside air damper VNCR-4849C to a predetermined throttled position to supply approximately 1000 cubic feet per minute (cfm) of makeup air ducted from an intake penthouse (located on the roof of the auxiliary building.) The makeup air and the return air from the control/computer rooms pass through roughing filter F-43 and cooling units HX-100 A&B before entering one of the normal recirculation fans. Room thermostats and/or humidistats control operation of the chilled water unit supplying the cooling units. After leaving the normal recirculation fan, filtered and cooled air is supplied to the mechanical room and through heating coils HX-92 and HX-91 A&B, and humidifiers Z-78 and Z-77, to the computer/control rooms, respectively. Also, room thermostats and humidistats control the operation of the heating coils and humidifiers. In addition, operating in Mode 1 are computer room supplementary air conditioning unit W-107A/HX-190A/HX-191A or W-107B/HX-190B/HX-191B and control room toilet exhaust fan W-15.

Mode 2 operation is 100-percent recirculation of the air initiated by a containment isolation/safety injection signal or manually from panel C67. When this mode is initiated, outside air damper VNCR-4849C closes and the toilet exhaust fan is deenergized.

Mode 3 operation employs one of two CREFS filter fans (W-14A or W-14B) and filtration unit F-16, which includes a roughing filter, a HEPA filter, and a charcoal filter. This mode is initiated from panel C67 and opens dampers VNCR-4851B and VNCR-4851C. With these dampers in the full open position, a portion (approximately 25 percent) of the recirculated air is directed through filter bank F-16 and the operating emergency fan back to the suction of the normal recirculation fan. Operation in this mode also closes outside makeup air damper VNCR-4849C and deenergizes the toilet exhaust fan W-15.

Mode 4 is similar to Mode 3 except return air inlet damper VNCR-4851B to the emergency fans remains closed and outside air supply damper VNCR-4851A opens. This allows approximately 4950 cfm of makeup air to pass through filter F-16 and the emergency fan to the suction of the normal recirculation fan. Thereby, a positive pressure of  $\geq 1/8$  in. w.g. is maintained in the

control/computer rooms to prevent in-leakage. This mode is initiated by a high radiation signal from control room area monitor RE-101, a high radiation signal from noble gas monitor RE-235 (located in the supply duct to the control room), or manually from panel C67.

Other features of the CR-HVAC system include the capability to exhaust smoke and heat from the control room, computer room, or cable spreading room through dedicated smoke and heat vent fan W-13C. The associated dampers for this evolution are interlocked so that only one room can be lined up for smoke and heat removal at a time. This operation precludes smoke damage to the air filters in the recirculation system. The controls for smoke and heat removal are from panel C-67A, located in the work control center adjacent to the control room. The computer room has supplementary air conditioning units W-107A/HX-190A/HX-191A and W-107B/HX-190B/HX-191B to assist the normal CR-HVAC system in maintaining computer room temperatures below equipment design limits. The computer room is also equipped with a Halon fire suppression system. Activation of this system automatically closes dampers VNCOMP-4849A and VNCOMP-4849B to isolate the computer room from the rest of the control room ventilation system and deenergizes the supplementary air conditioning units. Filter F-16 has a manually initiated water suppression system to mitigate a fire in the charcoal bed.

### 3.0 EVALUATION

#### 3.1 Proposed Change

The licensee proposes to change TS 3.7.9 by the addition of an asterisk to the 7-day Completion Time for Required Action A.1. The asterisk will refer to a note that extends this Completion Time to 30 days, on a one-time basis, for performance of the CREFS modifications/upgrades.

The proposed note will read:

“The Completion Time of Required Action A.1 may be extended up to 30 days, on a one-time basis to implement modifications/upgrades to the CREFS. The provisions of LCO 3.0.4 and SR 3.0.4 are not applicable during the modifications/upgrades to the CREFS that require use of the extended Completion Time.”

This proposed one-time allowance in TS 3.7.9 would exist only for the purpose of supporting the planned CREFS modifications/upgrades. This TS change would not affect the existing 7-day AOT of TS 3.7.9 in the event that the CREFS is determined to be inoperable for any other reason. Therefore, the licensee proposes that no changes to the TS Bases are necessary.

Also, the licensee requests an exception to the requirements of LCO 3.0.4 and SR 3.0.4 during implementation of the proposed modifications/upgrades to the CREFS. LCO 3.0.4 prohibits entry into a mode when the conditions of the LCO are not met and the associated action does not permit continued operation in that mode for an unlimited period of time. SR 3.0.4 prohibits entry into a mode unless the associated SRs have been met.

During implementation of the modifications/upgrades, the licensee states the requirements of LCO 3.0.4 and SR 3.0.4 would unnecessarily prevent a restart of PBNP, Units 1 and 2, in the event of an unplanned reactor shutdown. The conditions established by the proposed note

would allow PBNP to restart without meeting the surveillance and LCO requirements of TS 3.7.9 in the event of a plant shutdown while the system modifications/upgrades are being implemented. During implementation of the system modifications/upgrades, contingency measures and temporary equipment would be in place to ensure cooling of the control room area and availability of emergency filtration. Therefore, the licensee states it is not necessary to impose the requirements of LCO 3.0.4 and SR 3.0.4 during implementation of the modifications/upgrades to the CREFS.

## 3.2 Engineering Analysis

### 3.2.1 Defense In Depth

In order to maintain defense in depth and to ensure a commensurate degree of protection of the operators during the period that the CREFS is inoperable for the installation of the modification/upgrades, temporary cooling and filtration systems would be installed by the licensee and available for use by the licensee operators.

#### 3.2.1.1 Temporary Cooling System

The licensee states that the temporary cooling system will consist of a self-contained, air-cooled water chiller located on the turbine deck outside the control room, and four air handling units with chilled water cooling coils located inside the control room. A single identical air handling unit will be located within the computer room. Additionally, the existing supplemental coolers will be wired to run simultaneously. To connect the chiller to the control room units, two steel supply and return pipes will be routed from the chiller through penetrations in the transom adjacent to the control room south passage door. Inside the control room, these headers will be fitted with four sets of valved connections, one for each of the four air handling unit cooling coils. A set of supply and return lines will be routed to the computer room through penetrations in the transom above the passage door and provided with valved connections to the air handling unit cooling coil. All temporary chilled water piping inside the computer/control rooms will be run along the floor where possible to obviate the need for pipe supports. Ramps may be installed over piping crossing access/egress paths. All temporary equipment and piping will be located and secured as required. Temporary heat will not be provided because there is sufficient heat gain from equipment located in these spaces.

The licensee states that the capacities of the temporary chiller and associated air handling units will be sufficient to meet the maximum load demands of the control room/computer rooms. The chiller and air handling units will run continuously. Temperature within the conditioned spaces will be controlled by throttling or shutoff of the flow of chilled water to individual air handling units. Flow can be restored quickly when needed.

Because the control room is continuously occupied, pipe leaks or ruptures will be immediately detected by the licensee and compensated for by isolating the line until repairs are made. Condensate accumulations in the air handling unit drain pans will be monitored at regular intervals and the pans will be drained as required.

The licensee states that temporary power for the cooling equipment would be provided from spare cubicles in MCC 1B41. A non-safety-related reliable backup power would be supplied via G05, similar to the station blackout (SBO) line-up. Although some components of the normal

CR-HVAC system are connected to the emergency diesel generator power supply, the temporary system would not be connected. Loss of cooling to the control/computer rooms has been analyzed by the licensee. If cooling cannot be restored in a 2-hour period, the actions described in the licensee's Abnormal Operating Procedure (AOP)-10A, Safe Shutdown – Local Control, Attachment E, "Emergency Ventilation for Safe Shutdown Areas," provide compensatory measures that will be taken by the licensee. The licensee states that temperature-sensitive equipment required for safe shutdown, located in the control/computer rooms, has been evaluated for loss of ventilation. During implementation of the CR-HVAC modifications/upgrades, temporary cooling equipment capable of meeting the cooling load demands would be located in these spaces to ensure operability of this equipment by maintaining ambient temperature below the maximum allowable (Final Safety Analysis Report (FSAR) 9.8.3). Failure of temporary cooling does not differ from failure of normal ventilation, which is compensated for by the actions described in the licensee's Abnormal Operating Procedure AOP-10A, Attachment E.

Upon completion of installation and satisfactory testing by the licensee of the modified ductwork and duct sealing in the HVAC equipment room, the temporary cooling equipment would be disconnected, disassembled, and removed. The pipe and conduit penetrations would be capped and left as permanent features of the security, fire, and high-energy line break (HELB) barrier walls.

The licensee states that the brief period during which the temporary cooling system pipe and conduit penetrations will be made through the HELB boundary of the control room is well within the 90-day limit of risk assessed in NRC's Regulatory Issues Summary 2001-09, which clarifies 10 CFR 50.65 (the Maintenance Rule).

The licensee states that the computer room supplemental air conditioning subsystem, Unit A and Unit B, and the temporary operation needed to support the CR-HVAC modifications/upgrades is important for maintaining the ambient temperature conditions for the plant process computer located in the computer room above the control room. Normally, Unit A or Unit B is in operation with the other air conditioning unit in standby mode. The standby unit auto starts on low air flow, lockout, or failure of the operating unit. The temporary change will run both Unit A and Unit B simultaneously in order to supply additional supplemental cooling capability to ensure adequate cooling for the non-safety-related process computer. By running both Unit A and Unit B simultaneously, there is no standby unit; therefore, a failure of either Unit A or Unit B will require manual operation to secure and isolate the failed unit for repair/maintenance. The licensee will develop operating guidance to address the temporary configuration.

The licensee states that the CR-HVAC system is not credited with maintaining the design-basis environmental conditions for equipment associated with mitigation of an SBO event. The licensee's Abnormal Operating Procedure AOP-10A, Attachment E, provides guidance on emergency response for a loss of ventilation in the control room. Nonetheless, since the CR-HVAC system would be taken out of service during implementation, temporary cooling would be provided by the licensee as a compensatory measure. No failure or malfunction of either the permanent or temporary system can initiate any of the anticipated operational transients or postulated design-basis accidents (DBAs) analyzed in the FSAR.

The NRC staff notes that the installation of non-safety-related temporary equipment for the control room cooling system would not satisfy NRC expectations for a permanent modification. However, the NRC staff evaluated qualitatively the licensee's proposed temporary cooling system and find that it is acceptable based on the licensee's compensatory measures as outlined above.

### 3.2.1.2 Smoke and Heat Removal

The smoke and heat removal system does not normally operate. This dedicated ventilation system, which has no automatic initiation, is manually operated at the discretion of licensee-trained Fire Brigade personnel to purge smoke and excess heat from the control room, the computer room, or the cable spreading room following a fire. Unavailability of this system during implementation of this modification will not increase the probability of a fire or any other accident or event. Fire prevention and mitigation is performed via administrative controls and the engineered system design. The same level of control would be maintained during the extended AOT.

### 3.2.1.3 Temporary Filtration System

The CREFS is a subsystem of the CR-HVAC system. This system provides airborne radiological protection for licensee control room personnel, as demonstrated by the limiting control room dose analyses for the design-basis large-break loss-of-coolant accident (LOCA). Control room dose analysis assumptions are presented in FSAR, Section 14.3.5. The CREFS (Mode 4) is required to be operable to ensure that the control room habitability limits are met following a limiting design-basis LOCA. Total system failure could result in exceeding the control room operator thyroid dose limit of 30 rem in the event of a large radioactive release.

Implementation of the proposed modification/upgrades will require taking the CR-HVAC system (of which the CREFS is a subsystem) out of service for an extended period of time. In the unlikely event of a DBA or uncontrolled radiological release, a temporary filtration system will be available to mitigate the dose to licensee operators. The temporary filter unit will be designed in general conformance with NRC Regulatory Guide 1.52. The temporary filter unit will be rated at a nominal 2000 cfm and will have a pre-filter, carbon adsorber, and a high-efficiency particulate air (HEPA) filter. The carbon adsorber material will be impregnated nuclear grade carbon. The carbon and HEPA filters will be of equivalent efficiencies as existing control room emergency filter F-16. The temporary system will be designed to pressurize the control room when taking into consideration (1) the previously performed upgrades to the control room envelope and (2) that the control room envelope would be reduced by approximately one-third during the modification/upgrades that necessitate the extended AOT.

The licensee states that the temporary filter system will be supplied from a reliable power source. In the event of a DBA or an uncontrolled radiological release, the temporary filtration system will be started at the direction of NMC's Operations Department or the NMC Emergency Response Organization. The temporary filter unit will be verified that it operates and supplies air prior to final installation into the control room.

The temporary filter unit will be located in the turbine building with filter pressurization supply air from the turbine building. The licensee states that the temporary filter unit will be located such that it will not contribute significant shine dose to the operators in the control room. There will

be a temporary penetration required in a door transom to admit the filtered pressurization air into the control room. The temporary penetration will meet fire, HELB, and security requirements. Hose stations in the area of the temporary filter unit can be utilized by the fire brigade for fire protection.

The licensee states that implementation of these modifications/upgrades would not change the form, function, or operation of the CR-HVAC system, which does not perform any safety-related functions. The control room habitability envelope will be upgraded by providing the occupants with a greater margin of safety from exposure to the effects of airborne radionuclides during a DBA. Upon completion of this modification/upgrade, the engineered safeguards features actuation system will continue to shift the CREFS to Mode 2 upon reception of a containment isolation signal. No changes will be made to the main control board annunciation. The proposed modifications/upgrades will result in an improved control room habitability environment, consistent with the objective of establishing a high level of confidence that the CREFS will function reliably and at a degree of efficiency equal to or better than that assumed in the accident analyses.

The NRC staff notes that the installation of non-safety-related temporary equipment for the control room filtration system would not satisfy NRC expectations for a permanent modification. However, the NRC staff evaluated qualitatively the licensee's proposed temporary filtration system and find that it is acceptable based on the licensee's compensatory measures as outlined above.

#### 3.2.1.4 Toxic Gas Concerns

The control room needs to remain habitable in the event of a hazardous chemical release per item III.D.3.4 of NUREG-0737. The licensee states that the initial evaluation concluded that toxic gases are not a serious concern at PBNP, mainly because of its location and the lack of industry in the surrounding area. This conclusion still holds today according to the licensee because the surrounding area's industry focus has not had any major changes.

### 3.3 Compliance with Regulations

Licensee analyses performed to show compliance with 10 CFR Part 50, Appendix A, GDC 19, indicated that these limits could be met with the CR-HVAC system (including the CREFS) operating in Mode 4 considering that additional lead blanket shielding was provided for the control room window and doors to reduce the whole body dose from gamma streaming, the control room personnel have access to protective clothing and eyeglasses to reduce beta dose, and potassium iodide tablets have been administered to operating personnel.

### 3.4 Radiological Consequence Analysis

The NRC staff reviewed the licensee's proposed temporary filter unit and determined that it will provide adequate filtration to remove radioactive contaminants from the control room habitability envelope atmosphere and from the outside makeup air in the event of a DBA. The effectiveness of the temporary filter unit is equivalent to that provided by the permanently installed CREFS. Therefore, the NRC staff concludes that the proposed license amendment to allow a one-time extension of the AOT for the CREFS from 7 days to 30 days is acceptable. The bases for the NRC staff's acceptance are that there is reasonable assurance that the

PBNP control room will be habitable with the temporary filter unit in the event of a DBA that could challenge the ability of control room operator to protect the health and safety of the public.

### 3.5 Integrated Decisionmaking

The NRC staff has determined that this one-time AOT extension from 7 days to 30 days is a practical solution for addressing the online implementation of modifications/upgrades to the CREFS during the current operating cycles and thereby avoid a dual unit shutdown to perform these system upgrades. These modifications/upgrades are designed to limit the intrusion of unfiltered in-leakage into the control room envelope by enhancing pressurization of the space and by the use of low leakage dampers with high-grade industrial quality air distribution components and sealing accessible duct work that can potentially leak unfiltered air into the control room envelope. The NRC staff has determined that balancing this one-time AOT extension against the improvements provided by the PBNP modifications/upgrades would result in a net benefit to the radiological safety of the operators at PBNP. Additionally, performing the CREFS modifications/upgrades during a one-time extended AOT will reduce the total out of service time of the system and the impact on the licensee control room operators.

### 3.6 Summary

The NRC staff made a qualitative assessment of the impact of the proposed change. The NRC staff's qualitative assessment is summarized below:

1. NMC committed to develop contingency plans for briefing operations personnel and key Emergency Response Organization personnel on system status and available contingencies, availability of materials and personnel to re-enable the system, as needed, and management of risk from concurrent work in accordance with 10 CFR 50.65(a)(4).
2. NMC committed to a standby temporary filtration subsystem that will supply HEPA and charcoal-filtered makeup pressurization air to the control room. The temporary filter will have equivalent filter efficiencies as existing control room emergency filter F-16. The temporary penetration will meet fire, HELB, and security requirements. The temporary filter subsystem will be supplied from a reliable power source. In the event of a DBA or an uncontrolled radiological release, the temporary filter will be started at the direction of NMC's Operations Department or the NMC Emergency Response Organization.
3. NMC committed to alternate cooling that will meet the cooling load demands to maintain the control/computer rooms below the maximum design-basis temperatures. The temporary penetration for this alternate cooling will meet fire, HELB, and security requirements.
4. The NRC staff has determined that balancing this one-time AOT extension against the improvements that would be gained by the PBNP modifications/upgrades results in a net benefit to the radiological safety of the operators at PBNP.
5. The NRC staff reviewed the licensee's proposed temporary filter unit and determined it will provide adequate filtration to remove radioactive contaminants from the control room habitability envelope atmosphere and from the outside makeup air in the event of a DBA.

For the reasons stated above, the NRC staff believes that there is a net benefit to the radiological safety of the licensee operators at PBNP balancing the proposed TS 3.7.9 change to extend the completion time for Required Action A.1 to 30 days on a one-time basis for performance of CREFS against the improvements provided by the proposed modifications/upgrades. Therefore, the NRC staff finds this 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 (66 FR 59510). 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.

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