

April 2, 2004

Gary D. Van Middlesworth
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: TECHNICAL SPECIFICATION 3.9.3, CONTAINMENT PENETRATIONS, ASSOCIATED WITH HANDLING OF IRRADIATED FUEL ASSEMBLIES AND USE OF SELECTIVE IMPLEMENTATION OF THE ALTERNATIVE SOURCE TERM FOR FUEL HANDLING ACCIDENT (TAC NOS. MB8223 AND MB8224)

Dear Mr. Van Middlesworth:

The Commission has issued the enclosed Amendment No. 213 to Facility Operating License No. DPR-24 and Amendment No. 218 to Facility Operating License No. DPR-27 for the Point Beach Nuclear Plant, Units 1 and 2, respectively. The amendment consists of changes to the Technical Specifications (TS) in response to your application dated March 27, 2003, as supplemented by letters dated October 30, and December 19, 2003.

This amendment eliminates TS requirements for selected engineered safety features during Core Alterations, other than during movement of recently-irradiated fuel assemblies, by modifying the Applicability and Required Actions of TS 3.9.3, "Containment Penetrations." The changes concern the handling of irradiated fuel in the containment and the Bases for selected specifications associated with Core Alterations. The amendment establishes a point in time following a unit shutdown when operability is no longer required for systems, other than control room emergency ventilation, that are typically used to mitigate the consequences of a fuel handling accident. Specifically, the amendment identifies that only a "recently" irradiated fuel assembly contains a radionuclide inventory sufficient to require operability of selected accident mitigation features in order to meet the relevant dose acceptance criteria.

G. Van Middlesworth

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A copy of the 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. 213 to DPR-24
2. Amendment No. 218 to DPR-27
3. Safety Evaluation

cc w/encls: See next page

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

Sincerely,

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ADAMS Accession Number: ML040680934 (Package)

ADAMS Accession Number: ML040680918 (Amendment)

ADAMS Accession Number: ML040990077 (Technical Specifications)

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Point Beach Nuclear Plant, Units 1 and 2

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NUCLEAR MANAGEMENT COMPANY, LLC

DOCKET NO. 50-266

POINT BEACH NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 213
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 27, 2003, as supplemented by letters dated October 30, and December 19, 2003, 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. 213, 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 90 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA by J. Stang for/

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: April 2, 2004

NUCLEAR MANAGEMENT COMPANY, LLC

DOCKET NO. 50-301

POINT BEACH NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 218
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 27, 2003, as supplemented by letters dated October 30, and December 19, 2003, 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. 218, 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 90 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA by J. Stang for/

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: April 2, 2004

ATTACHMENT TO LICENSE AMENDMENT NO. 213

TO FACILITY OPERATING LICENSE NO. DPR-24

AND LICENSE AMENDMENT NO. 218

TO FACILITY OPERATING LICENSE NO. DPR-27

DOCKET NOS. 50-266 AND 50-301

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

REMOVE

3.9.3-1

INSERT

3.9.3-1

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 213 TO FACILITY OPERATING LICENSE NO. DPR-24
AND AMENDMENT NO. 218 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 27, 2003, as supplemented by letters dated October 30, and December 19, 2003, Nuclear Management Company, LLC (the licensee) requested changes to the Technical Specifications (TS) for Point Beach Nuclear Plant Units 1 and 2. The supplements dated October 30, and December 19, 2003, provided additional information that clarified the application, did not expand the scope of the application as originally noticed and did not change the staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on May 13, 2003 (68 FR 25656).

The proposed changes would eliminate TS requirements for selected engineered safety features (ESF) during Core Alterations, other than during movement of recently-irradiated fuel assemblies, by modifying the Applicability and Required Actions of TS 3.9.3, "Containment Penetrations." The proposed changes concern the handling of irradiated fuel in the containment and the Bases for selected specifications associated with Core Alterations. The purpose of the licensee's proposal is to establish a point in time following a unit shutdown when operability is no longer required for systems, other than control room emergency ventilation, that are typically used to mitigate the consequences of a fuel-handling accident (FHA) in order to meet the relevant dose acceptance criteria. Specifically, the proposal identifies that only a "recently" irradiated fuel assembly contains a radionuclide inventory sufficient to require operability of selected accident mitigation features in order to meet the relevant dose acceptance criteria.

The licensee's proposal also makes related changes to the Bases for TS 3.9.3 as well as the Bases for TS 3.7.10 "Fuel Storage Pool Water Level," and TS 3.9.6 "Refueling Cavity Water Level." The licensee modeled its proposal on Nuclear Regulatory Commission (NRC)-approved Technical Specifications Task Force (TSTF) traveler TSTF-51, Revision 2. In this license amendment request, the licensee has not proposed any plant design modifications.

2.0 REGULATORY EVALUATION

The licensee requested a selective implementation of the alternative source term (AST), as described in Regulatory Guide (RG) 1.183, "Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors." In December 1999, the NRC issued a new regulation, of Section 50.67 of Title 10 of the *Code of Federal Regulations* (10 CFR), "Accident Source Term," which provided a mechanism for licensed power reactors to replace the traditional accident source term used in their design basis accident analyses with an AST. Regulatory guidance for the implementation of the AST is provided in RG 1.183. A licensee seeking to use an AST is required, pursuant to 10 CFR 50.67 to apply for a license amendment.

In addition to 10 CFR 50.67 and RG 1.183, the NRC staff also considered in its safety evaluation relevant information in the following documents:

- RG 1.194 "Atmosphere Relative Concentrations for Control Room Radiological Habitability Assessments at Nuclear Power Plants," June 2003.
- Standard Review Plan (SRP) Section 15.0.1 "Radiological Consequence Analyses Using Alternate Source Term," dated July 2000.
- Technical Specification Task Force Traveler TSTF-51, Revision 2, approved by the NRC on October 13, 1999.
- The model TS contained in the improved standard technical specifications, NUREG-1431, Revision 2, "Standard Technical Specifications for Westinghouse Plants" dated April 30, 2001.

3.0 TECHNICAL EVALUATION

3.1 Technical Specification Changes

The licensee proposed modifications to the TS Applicability statements for shutdown conditions for structures (e.g., containment) and systems previously relied upon to mitigate the consequences of the postulated design basis FHA. The Applicability of TS 3.9.3 is revised to read "During movement of recently irradiated fuel assemblies within containment" by adding the word "recently," and by deleting the statement "During CORE ALTERATIONS." In addition, the action requirements for Actions Condition A, "One or more containment penetrations not in the required status," are revised by (1) deleting Required Action A.1, "Suspend CORE ALTERATIONS" and the associated Completion Time of "Immediately," and (2) adding the word "recently" to existing Required Action A.2, renumbered A.1, to read "Suspend movement of recently irradiated fuel assemblies within containment," retaining the associated Completion Time of "Immediately."

The licensee's letter dated March 27, 2003, contained a revised FHA radiological consequence analysis for Point Beach, Units 1 and 2 that takes credit for a radioactive decay period of 65 hours based on an AST pursuant to 10 CFR 50.67 and the guidance of RG 1.183, and draft RG DG-1111, "Atmospheric Relative Concentrations for Control Room Radiological Habitability

Assessments at Nuclear Power Plants,” dated December 2001, subsequently issued as RG 1.194, “Atmospheric Relative Concentrations for Control Room Radiological Habitability Assessments at Nuclear Power Plants,” and SRP Section 15.0.1. Given this decay period, the licensee proposed to relax TS containment penetration closure requirements and only require selected ESF FHA-mitigation systems, during movement of fuel assemblies that have been “recently irradiated.” The term “recently irradiated” is a cycle-specific number and represents the decay period for the reduction in radionuclide inventory available for release in the event of an FHA. For the upcoming refueling outage, the licensee has determined that the appropriate decay period will be 65 hours.

In summary, once the reactor has been sub-critical for a minimum of 65 hours, the licensee’s revised FHA analysis, that does not rely on either building integrity or the FHA mitigating systems, other than control room emergency ventilation, as discussed below, has demonstrated that the consequences of a design basis FHA will not exceed the dose limits in 10 CFR 50.67 for the exclusion area boundary (EAB), low population zone (LPZ), and control room (CR).

Based on the revised FHA analysis, TS 3.9.3 need only apply when handling fuel assemblies that have recently been in the critical reactor core (i.e., “recently irradiated fuel assemblies”). The TS 3.9.3 Bases will be revised to identify “a recently irradiated fuel assembly” as a fuel assembly that has occupied part of a critical reactor core within the previous 65 hours. In addition, consistent with the instructions in TSTF-51, Revision 2, regarding decreasing doses even further below that provided by natural decay, the licensee has committed to follow the guidelines of NUMARC 93-01, Revision 3, Section 11.3.6, “Assessment Methods for Shutdown Conditions,” Subsection 5, “Containment - Primary (PWR)/Secondary (BWR).”

The deletion of “During CORE ALTERATIONS” from the TS 3.9.3 Applicability is justified because an FHA is the only event during Core Alterations that is postulated to result in fuel rod damage and radiological release. That is, the FHA consequences bound those of non-FHA events during Core Alterations under the proposed Applicability.

In addition to the above changes to the Applicability statements, the licensee proposed corresponding changes to the TS 3.9.3 action requirements, such as elimination of references to Core Alterations and using “recently irradiated fuel assemblies” when referring to the movement of irradiated fuel assemblies. The proposed changes do not impact TS requirements for systems needed to prevent or mitigate Core Alteration events other than the FHA. They also do not change the requirements for systems needed for decay heat removal, or the requirement to maintain the specified water level above the top of irradiated fuel assemblies in the containment refueling cavity and the spent fuel storage pool.

The NRC staff has determined that the proposed TS changes conform to the corresponding changes included in TSTF-51, and the conditions for adopting those changes stated in the traveler have been met. In addition to this, the proposed TS changes are acceptable because TS 3.9.3 will ensure that containment penetrations are maintained operable in the required status during conditions requiring their radiological consequence mitigation function in the event of an FHA; that is, during movement of recently irradiated fuel assemblies. Potential changes to the cycle-specific decay period must be evaluated by the licensee in accordance with the TS Bases Control Program (TS 5.5.13). The staff notes that for this AST selective implementation, the licensee’s analysis relies on the operation of the control room emergency

ventilation system to mitigate doses to control room personnel. Accordingly, the TS will continue to require this system to be operable during Core Alterations and during movement of irradiated fuel assemblies, without regard to decay time.

3.2 Selective Implementation of the AST for Fuel-Handling Accident

The FHA analysis postulates that a spent fuel assembly is dropped during refueling. The kinetic energy developed in this drop is conservatively assumed to be dissipated to the cladding on all fuel rods in the dropped assembly. The fission product inventory in the core is largely contained in the fuel pellets that are enclosed in the fuel rod clad. However, the volatile constituents of this inventory will migrate from the pellets to the gap between the pellets and the fuel rod clad. The licensee assumed that the core inventory of fission products, which has decayed for 65 hours, is equally distributed in all fuel assemblies in the core. To account for differences in core power distribution across the core, the averaged fission product inventory in the dropped assembly is conservatively multiplied by a radial peaking factor of 1.8. The licensee, in its letter dated March 27, 2003, stated that the reactor core design for Point Beach, Units 1 and 2 is such that no fuel rod above 54 GWD/MTU fuel burnup exceeds the 6.3 Kw/ft peak rod average power that is consistent with the guideline provided in RG 1.183.

The fission product inventory in the fuel rod gap of the fuel rods assumed to be damaged is postulated to be instantaneously released because of the accident. The associated activity is assumed to be released from the containment refueling cavity or the spent fuel pool to the environment over two hours. The quantity of fission products released from the damaged fuel is reduced by passage through the refueling cavity or spent fuel pool water. The licensee assumed a decontamination factor of 200 which is consistent with the guidance provided in RG 1.183. The licensee assumed no credit for removing fission products by containment and spent fuel pool building ventilation systems nor is credit taken for isolation of release paths.

Since the assumptions and parameters used to model the release due to an FHA inside containment are identical to those for an FHA in the spent fuel pool, except for different control room air intake atmospheric dispersion factors for the different release paths, the activity released is the same regardless of the location of the accident. The licensee assumed the accident occurs in the Unit 2 containment building and the release is through the purge stack, resulting in a bounding analysis for an FHA in either location (see Section 3.3.2 below).

The assumptions found acceptable to the staff are presented in Table 2. The licensee evaluated the maximum 2-hour total effective dose equivalent (TEDE) to an individual located at the EAB and the 30-day TEDE to an individual at the outer boundary of the LPZ. The resulting doses are shown in Table 1 and they are within the dose criteria provided in SRP 15.0-1, "Radiological Consequence Analyses Using Alternative Source Terms."

The licensee also evaluated the dose to operators in the control room. The licensee assumed that the CR heating, ventilating, and air conditioning (HVAC) system is initially operating in normal mode, whereby fresh air is being brought into the CR unfiltered at a rate of 2000 cfm. The licensee further assumed that the emergency HVAC mode is entered 10 minutes after event initiation based on the area monitor inside the CR reaching its alarm setpoint. The staff finds this assumption acceptable since the area monitor would actuate at approximately 2.8 seconds based on the Xe-133 release calculation. The CR HVAC system in emergency mode

provides 4550 cfm of filtered outside air with no filtered recirculation. The licensee assumed 500 cfm of unfiltered air leakage. The licensee and the staff performed a sensitivity study to determine the maximum air leakage that the CR can tolerate to meet the 5 rem TEDE dose limit. The maximum air leakage to reach the 5 rem TEDE is 1675 cfm.

On June 12, 2003, the staff issued Generic Letter (GL) 2003-01, "Control Room Habitability." This GL letter identifies staff concerns regarding the reliability of current surveillance testing to identify and quantify control room leakage, and requests licensees to confirm the most limiting unfiltered leakage into their control room envelope. On December 5, 2003, the licensee submitted a "60-day" response to this GL. In this submittal, the licensee stated that Point Beach completed tracer gas testing in accordance with American Society for Testing and Materials E-741 in September 2003, and that the preliminary results indicated the unfiltered air leakage into the CR envelope is less than 100 cfm. In this submittal, the licensee also committed to provide to the NRC no later than September 2004, (1) the final results of the control room envelope leakage test performed in September 2003, and (2) TS changes to reference an acceptable surveillance methodology to support requested information in GL 2003-01.

Although the staff has reviewed Point Beach's response, as well as those received from other licensees, follow-on regulatory action has not been decided at this time. Nonetheless, the staff has determined that there is reasonable assurance that the Point Beach control room will be habitable during an FHA and that this amendment may be approved prior to the staff's review of the Point Beach final response to the GL. The staff bases this determination on (1) the 500 cfm unfiltered air leakage rate assumed in the FHA radiological consequence analysis (instead of less than 100 cfm preliminary test result), (2) the staff's confirming analysis, (3) the resulting control room operator dose is approximately 50 percent of the acceptable dose limit, (4) the control room habitability assessment performed by the licensee, and (5) the programmatic elements identified in Point Beach's 60-day response to GL 2003-01. The staff's approval of this amendment does not relieve Point Beach of addressing the information requested in GL 2003-01 and does not imply that the staff would necessarily find the analysis in this amendment acceptable as a response to information request 1(a) in GL 2003-01.

The resulting dose is shown in Table 1 and it is within the dose criteria provided in general design criteria (GDC) 19, "Control Room," and 10 CFR 50.67. To verify the licensee's radiological consequence analysis, the staff performed its independent confirmatory dose calculations. The staff finds that the radiological consequences resulting from the postulated FHA are also within the dose acceptance criteria specified in the SRP 15.0.1 and GDC 19. Although, the staff performed its independent radiological consequence dose calculations as a means of confirming the licensee's results, the staff's acceptance is based on the licensee's analysis.

Based on its review of the licensee's analysis as described above and as confirmed by its independent analysis, the staff finds that the licensee's radiological consequence analyses and the resulting doses due to an FHA using a selective implementation of the AST are acceptable.

3.3 Atmospheric Relative Concentration Estimates

3.3.1 Meteorological Data

The licensee used 3 years of hourly onsite meteorological data collected during calendar years 1997 through 1999 to generate new CR air intake atmospheric dispersion factors (χ/Q values) for use in this license amendment request. Wind speed and direction were measured at the 45 and 10 meter levels and the atmospheric stability categorization was based on temperature difference measurements between these two levels. The data was provided for staff review in the form of hourly meteorological data files for input into the ARCON96 atmospheric dispersion computer code (NUREG/CR-6331, Revision 1, "Atmospheric Relative Concentrations in Building Wake") to estimate CR dose consequences from a postulated FHA. The staff also used these data to generate χ/Q values for the CR, EAB, and LPZ for comparison with the values calculated by the licensee.

The licensee initially reported the joint wind speed, wind direction, and atmospheric stability data recovery for the three year period to be greater than 90 percent, which meets the recommendations of RG 1.23, "Onsite Meteorological Programs." The licensee did note that while recovery during 1997 was 93 percent, recovery during 1999 was less than 90 percent due, in part, to replacement of meteorology data recorders in the control room.

Staff performed a quality review of the ARCON96 hourly meteorological database using the methodology described in NUREG-0917, "Nuclear Regulatory Commission Staff Computer Programs for Use with Meteorological Data." Further review was performed using computer spreadsheets. Wind speed and direction frequency occurrence at each of the two levels were fairly similar from year to year. With regard to atmospheric stability, the A (extremely unstable) stability class was reported to occur more frequently, for a longer duration and more frequently during the night than at many other power reactor sites. The licensee attributed this to the close proximity of the site and meteorological tower to Lake Michigan. Staff identified several other concerns that were subsequently discussed with the licensee. The licensee performed further evaluation of the data and the data collection and processing procedures, including reviewing the ARCON96 data file, strip charts, calibrations, site logs, operation plan and standard operating procedures, and tower siting. Specific areas of note are as follows:

- Some of the data were subsequently recategorized as invalid. Staff estimated the resulting hourly joint recovery rate of atmospheric stability, wind speed, and wind direction data for the 3 year period to be about 81 percent. This recovery rate does not meet the recommendations of RG 1.23. However, joint recovery during 1997, the year having highest recovery, remained at about 93 percent. The licensee has implemented procedures to improve the recovery and quality of the data, but these changes do not impact the meteorological data used in this assessment.
- On several occasions, instruments were found to be beyond their tolerance limits. The licensee has revised procedures for performing calibration checks, including conducting the checks more frequently (i.e., semi-annually). However, these changes do not impact the meteorological data used in this assessment.

- The licensee noted that there were some trees near the vicinity of the meteorological tower, but judged their effect on the meteorological measurements to be minimal due to the porosity of the trees.

In summary, the staff has reviewed the available information relative to the onsite meteorological measurements program and the 1997 through 1999 ARCON96 data files provided by the licensee. Although weaknesses were noted, the staff concludes that the 1997 through 1999 onsite data provide an acceptable basis for making atmospheric dispersion estimates for this specific FHA design-basis accident (DBA) dose assessment. This conclusion is based on the staff's data review discussed above as well as the fact that the resulting CR dose is approximately 50 percent of the acceptable limit. However, these data should not be considered acceptable for use in amendments to this FHA dose assessment or other DBA dose assessments without further NRC staff review. As an alternative, the licensee should consider using data collected subsequent to the upgrades in the meteorological measurement program.

3.3.2 Control Room Atmospheric Dispersion Factors

The licensee calculated CR air intake χ/Q values to evaluate releases from the Unit 2 Purge Stack, Spent Fuel Pool Deck, and Drumming Area Vent Stack using the 1997 through 1999 onsite meteorological data and the ARCON96 computer code (NUREG/CR-6331, Revision 1, "Atmospheric Relative Concentrations in Building Wakes"). Staff qualitatively reviewed the inputs to the ARCON96 calculations and found them generally consistent with site configuration drawings and staff practice. Specific areas of note are as follows:

- The licensee stated that releases from other locations, such as the Unit 1 Purge Stack had been considered, but due to factors such as plant layout, the resultant X/Q values were judged to be less than for the three locations cited above. The X/Q value for the limiting release location, the Unit 2 Purge Stack, was used in the dose assessment.
- The licensee noted that their assessment generally followed DG-1111 which was subsequently issued as RG 1.194, "Atmospheric Relative Concentrations for Control Room Radiological Habitability Assessments at Nuclear Power Plants." One exception to the RG 1.194 guidance is that 3 years of meteorological data were used, rather than the recommended 5 year period.
- Using the revised meteorological data, staff made calculations of the X/Q values for each year individually and the 3 year period combined and compared the results with the licensee's calculation. Staff found variations of a few percent which were judged to be inconsequential for this dose assessment.

In summary, the staff has reviewed the licensee's assessment of the CR post-FHA accident dispersion conditions generated from the licensee's meteorological data and atmospheric diffusion modeling. The resulting CR χ/Q value is presented in Table 2. On the basis of this review, the staff concludes that the CR χ/Q value is acceptable only for use in this FHA CR dose assessment. This value is not acceptable for use in amendments to this FHA dose assessment or other DBA dose assessments without further NRC staff review.

3.3.3 EAB and LPZ Relative Concentration Estimates

To evaluate the EAB and LPZ doses, the licensee used χ/Q values currently presented in the Point Beach Updated Final Safety Analysis Report, Table 14.3.5-2, which are also listed in Table 2 below. These values were calculated following the guidance in RG 1.145, "Atmospheric Dispersion Models for Potential Accident Consequence Assessments at Nuclear Power Plants." Staff made comparison estimates using the 1997 through 1999 meteorological data described above and also compared the licensee's values with values previously calculated by the staff. On the basis of this review, the staff concludes that these values are acceptable for use in the FHA dose assessment described above.

3.4 Conclusion

As described above, the staff reviewed the assumptions, inputs, and methods used by the licensee to assess the radiological impacts of the proposed license amendment at Point Beach Nuclear Plant Units 1 and 2. The staff finds the proposed TS changes and selective implementation of the AST are acceptable. The bases for the staff's acceptance are (1) the licensee's estimates of the EAB, LPZ, and control room doses comply with the dose guidelines in SRP 15.0-1 and in 10 CFR 50.67, and (2) the proposed TS changes are consistent with the guidance provided by the staff in NUREG-1431, "Standard Technical Specifications for Westinghouse Plants," Revision 2 (April 2001) and Technical Specification Task Force Traveler TSTF 51, Revision 2 (October 1999).

TABLE 1
Radiological Consequences
for
Fuel Handling Accident
(rem TEDE⁽¹⁾)

Exclusion Area Boundary	1.6
Low Population Zone	0.1
Control Room	2.8

Dose Acceptance Criteria:

Exclusion area boundary	6.3 ⁽²⁾
Low Population Zone	6.3 ⁽²⁾
Control Room	5.0 ⁽³⁾

⁽¹⁾ Total effective dose equivalent

⁽²⁾ From SRP 15.0-1

⁽³⁾ From 10 CFR 50.67

Table 2
Parameters and Assumptions Used in
Radiological Consequence Calculations
Fuel Handling Accident

<u>Parameter</u>	<u>Value</u>
Radial peaking factor	1.8
Fission product decay period	65 hours
Number of fuel assemblies	1
Fuel pool/reactor cavity water depth	23 ft
Fuel gap fission product inventory	
Noble gases excluding Kr-85	5%
Kr-85	10%
Iodine except I-131	5%
I-131	8%
Fuel pool decontamination factors	
Iodine	200
Noble gases	1
Control room	
Normal makeup air flow (unfiltered)	2000 cfm
Unfiltered infiltration	500 cfm
Recirculation flow	0 cfm
Charcoal adsorber iodine removal efficiency	
Elemental	95%
Organic	95%
Particulate	99%
Atmospheric relative concentrations (sec/m ³)	
Exclusion area boundary	
0 to 2 hours	5.0E-4
Low population zone	
0 to 8 hours	3.0E-5
Control room	
0 to 2 hours	5.76E-3
Duration of fission product release	2 hours

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. 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 (68 FR 25656). 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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