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10 CFR 50.90

U.S. Nuclear Regulatory Commission  
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Washington, DC 20555

Point Beach Nuclear Plant, Units 1 and 2  
Dockets 50-266 and 50-301  
License Nos. DPR-24 and DPR-27

License Amendment Request 242  
Technical Specification 5.5, Programs and Manuals

In accordance with the provisions of 10 CFR 50.90, Nuclear Management Company, LLC (NMC), is submitting a request for an amendment to the Technical Specifications (TS) for Point Beach Nuclear Plant, Units 1 and 2.

The proposed amendment would revise TS 5.5.7, "Inservice Testing Program," and TS 5.5.8, "Steam Generator (SG) Tube Surveillance Program." The revision updates references to the American Society of Mechanical Engineers code and certain associated periodicities for inservice testing activities consistent with the requirements of 10 CFR 50.55a.

Enclosure I provides a description and analysis of the proposed change. Enclosure II provides the existing TS pages marked up to show the proposed change. Enclosure III provides revised (clean) TS pages.

NMC requests approval of the proposed license amendment by September 2005, with the amendment being implemented within 45 days.

This letter contains no new commitments or revisions to existing commitments.

In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the designated Wisconsin Official.

A047

I declare under penalty of perjury that the foregoing is true and correct.  
Executed on November 12, 2004.



Dennis L. Koehl  
Site Vice-President, Point Beach Nuclear Plant  
Nuclear Management Company, LLC

Enclosures:     I     -     Description and Analysis of Change  
                  II    -     Proposed Technical Specification Changes  
                  III   -     Revised Technical Specification Pages

cc:     Regional Administrator, Region III, USNRC  
          Project Manager, Point Beach Nuclear Plant, USNRC  
          Resident Inspector, Point Beach Nuclear Plant, USNRC  
          PSCW

ENCLOSURE I

DESCRIPTION AND ANALYSIS OF CHANGE  
LICENSE AMENDMENT REQUEST 242  
TECHNICAL SPECIFICATION 5.5, PROGRAMS AND MANUALS

POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

1.0 INTRODUCTION

This License Amendment Request (LAR) is made pursuant to 10 CFR 50.90 to revise Technical Specification (TS) 5.5.7, "Inservice Testing Program," and TS 5.5.8, "Steam Generator (SG) Tube Surveillance Program." The revision updates references to the American Society of Mechanical Engineers (ASME) code and certain associated periodicities for inservice testing activities, consistent with the requirements of 10 CFR 50.55a.

2.0 DESCRIPTION

The proposed amendment would revise TS 5.5.7, "Inservice Testing (IST) Program," and TS 5.5.8, "Steam Generator (SG) Tube Surveillance Program."

The revision to TS 5.5.7 updates references to the ASME code from Section XI of the ASME Boiler and Pressure Vessel Code to the ASME Code for Operation and Maintenance of Nuclear Power Plants (OM Code) consistent with the requirements of 10 CFR 50.55a. The associated periodicities for inservice testing activities are also modified to comport to the Code.

TS 5.5.7 is proposed for modification as follows (deletions are marked as strikethrough, additions are double-underlined).

This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 pumps and valves. The program shall include the following:

- a. Testing frequencies specified in ~~Section XI of the ASME Boiler and Pressure Vessel Code~~ Code for Operation and Maintenance of Nuclear Power Plants (OM Code) and applicable Addenda are as follows:

~~ASME Boiler and Pressure Vessel OM Code and applicable Addenda terminology for inservice testing activities~~

Required Frequencies for performing inservice testing activities

~~Weekly~~

At least once per 7 days

~~Monthly~~

At least once per 31 days

<del>Semiquarterly</del>	<del>At least once per 46 days</del>
<del>Quarterly or every 3 months</del>	<del>At least once per 92 days</del>
<del>Semiannually or every 6 months</del>	<del>At least once per 184 days</del>
<del>Every 9 months</del>	<del>At least once per 276 days</del>
<del>Yearly or annually</del>	<del>At least once per 366 days</del>
<del>Biennially or every 2 years</del>	<del>At least once per 731 days</del>
	<u>24 months</u>

- b. The provisions of SR 3.0.2 are applicable to the above required Frequencies and other normal and accelerated Frequencies specified in the Inservice Testing Program for performing inservice testing activities;
- c. The provisions of SR 3.0.3 are applicable to inservice testing activities; and
- d. Nothing in the ASME ~~Boiler and Pressure Vessel~~ OM Code shall be construed to supersede the requirements of any TS.

The revised TS 5.5.7 will incorporate the current ASME OM Code requirements. In addition, the terms 'weekly,' 'monthly,' 'semiannually or every 6 months,' and 'every 9 months,' are not used in the ASME OM Code and have been deleted. The term, "Semiquarterly," is being added to define it as a periodicity of at least once per 46 days (half the interval of 'quarterly or every 3 months'). The periodicity of 'Biennially' is revised to state 24 months vice 731 days in accordance with the guidance of Table 3.2 of NUREG-1482, Revision 1, "Guidelines for Inservice Testing at Nuclear Power Plants."

TS 5.5.7.b. is revised to indicate that the provisions of SR 3.0.2 are applicable to other Frequencies that are not specified in 5.5.7.a. Related information is contained in Section 2, Code and Regulatory Requirements, of the PBNP Inservice Testing Program 4<sup>th</sup> Interval Program Document.

Editorial changes are made for enhanced clarity.

The revision to TS 5.5.8.c, "Examination Method and Requirements," updates the references to the ASME Code as follows.

The examination method shall meet the intent of the requirements in ASME Section XI ~~Appendix IV~~. This includes equipment, personnel, and procedure requirements, certification and calibration along with records and reports. The actual technique may be the latest industry accepted technique, provided the flaw detection capability is as good or better than the technique endorsed by the code in effect per 10 CFR 50, Section 50.55a(g). This allows the use of improvements in inspection techniques that were not included in the code in effect. However, it means that word-for-word compliance with ~~Appendix IV~~ of ASME Section XI rules may not be possible.

The existing reference in TS 5.5.8.c to ASME XI Appendix IV is no longer applicable. ASME XI Appendix IV previously applied to both surface and volumetric examinations. Currently, Appendix IV (1998 Edition, 2000 Addenda) only applies to surface examinations; whereas ASME XI specifies volumetric examinations for SG tubing. This change updates the reference in TS 5.5.8.c to ASME Section XI, which specifies a requirement for volumetric inservice inspection of SG tubing.

The final paragraph of TS 5.5.8.b.2 contains a typographical error that is being corrected. The first word, "If", should read, "In", as follows:

Ifn the first sample of a given steam generator during any inservice...

This typographical error was introduced during the conversion to Improved TS in a letter to NRC dated March 15, 2000. The correct wording existed previously in PBNP TS as issued in License Amendments 166 and 170 for Units 1 and 2 respectively on November 22, 1995. This correction changes neither the intent nor the requirement of TS 5.5.8.b.2.

### **3.0 ASSESSMENT**

#### **3.1 Background**

In 1990, the ASME published the initial edition of the ASME OM Code which includes rules for inservice testing of pumps and valves. The ASME intended that the ASME OM Code replace Section XI of the Boiler and Pressure Vessel Code for inservice testing of pumps and valves. The 1995 Edition, including the 1996 Addenda, of the ASME OM Code was incorporated by reference into the regulations in 10 CFR 50.55a(b) on September 22, 1999 (64 FR 51370). 10 CFR 50.55a(f) addresses the requirements for inservice testing using the ASME OM Code. PBNP is currently in the 4<sup>th</sup> inservice testing interval.

10 CFR 50.55a(g) addresses the requirements for inservice inspection using ASME Boiler and Pressure Vessel Code, Section XI. The applicable ASME Section XI Code for PBNP is the 1998 Edition with the 2000 Addenda. PBNP is currently in the 4<sup>th</sup> inservice inspection interval, which began July 1, 2002.

The requested changes to TS 5.5.7 are similar to those granted to Seabrook Station (Docket No. 50-443) in NRC Safety Evaluation dated May 8, 2000 (TAC No. MA8251).

#### **3.2 Technical Analysis**

##### **TS 5.5.7, Inservice Testing Program**

The purposes of the Inservice Testing Programs are to assess the operational readiness of pumps and valves, to detect degradation that might affect

component OPERABILITY, and to maintain safety margins with provisions for increased surveillance and corrective action. NRC regulation 10 CFR 50.55a defines the requirements for applying industry codes to each licensed nuclear powered facility. Licensees are required by 10 CFR 50.55a(f)(4)(i) to initially prepare programs to perform inservice testing of certain ASME Code Class 1, 2, and 3 pumps and valves during the initial 120-month interval. The regulations require that programs be developed utilizing the latest edition and addenda incorporated into paragraph (b) of 10 CFR 50.55a on the date 12 months prior to the date of issuance of the operating license subject to the limitations and modification identified in paragraph (b).

NRC regulations also require that the Inservice Testing Programs be revised during successive 120-month intervals to comply with the latest edition and addenda of the Code incorporated by reference in paragraph (b) 12 months prior to the start of the interval.

Section XI of the ASME Codes has been revised on a continuing basis over the years to provide updated requirements for the inservice inspection and inservice testing of components. Until 1990, the ASME Code requirements addressing the IST of pumps and valves were contained in Section XI, Subsections IWP (pumps) and IWV (valves). In 1990, the ASME published the initial edition of the OM Code that provides the rules for the inservice testing of pumps and valves. Since the establishment of the 1990 Edition of the OM Code, the rules for the inservice testing of pumps are no longer being updated in Section XI. As identified in NRC SECY-99-017 dated January 13, 1999, the NRC has generally considered the evolution of the ASME Code to result in a net improvement in the measures for inspecting piping and components and testing pumps and valves.

Technical Specification 5.5.7.b. is revised to indicate that the provisions of SR 3.0.2 are applicable to other frequencies that are not specified in 5.5.7.a. The Inservice Test Program may have frequencies for testing that are based on risk and do not conform to the standard testing Frequencies specified in 5.5.7.a. For example, an Inservice Testing Program may use ASME Code Case OMN-1, "Alternative Rules for Preservice and Inservice Testing of Certain Electric Motor-Operated Valve Assemblies in Light-Water Reactor Plants," in lieu of stroke time testing.

The frequency of the surveillance may be determined through a mix of risk informed and performance based means in accordance with the Inservice Testing Program. This is consistent with the guidance in NUREG-1482, "Guidelines for Inservice Testing at Nuclear Power Plants," which indicates that the 25% extension of the interval specified in the Frequency would apply to increased frequencies the same as it applies to regular frequencies.

## **TS 5.5.8, Steam Generator (SG) Tube Surveillance Program**

The Inservice Inspection (ISI) Program, as it pertains to TS 5.5.8, provides controls for periodic inspection of SG tubing. Prior to the 4<sup>th</sup> (current) ISI interval, the ASME Section XI Code applicable to PBNP was the 1986 Edition, which specified a volumetric examination in accordance with ASME Section XI, Appendix IV. Since the start of the 4<sup>th</sup> ISI interval in 2002, the ASME Section XI Code applicable to PBNP was the 1998 Edition with the 2000 Addenda.

For the current ISI interval, ASME Section XI – Division 1, Table IWB-2500-1, Examination Categories, Item B16.20, states that for SG tubing in a U-tube design, the examination method shall be volumetric. ASME Section XI – Division 1, Paragraph IWA-2233, Eddy Current Examination (a volumetric examination), states that, "Eddy current examination shall be conducted in accordance with (ASME) Section V, Article 8, Appendix II".

The existing reference in TS 5.5.8.c to ASME XI Appendix IV is no longer applicable. ASME XI Appendix IV previously applied to both surface and volumetric examinations. Currently, Appendix IV (1998 Edition, 2000 Addenda) only applies to surface examinations; whereas ASME XI specifies volumetric examinations for SG tubing. This change updates the reference in TS 5.5.8.c to ASME Section XI, which specifies that a volumetric inservice inspection of SG tubing be performed in accordance with the rules specified in ASME Section V, Article 8, Appendix II.

### **Results and Conclusion**

Based on the above discussion, implementation of the proposed Technical Specification change is consistent with the analysis, and demonstrates that the operational readiness of pumps and valves, the ability to detect component degradation that might affect component OPERABILITY, and safety margins, will be maintained.

## **4.0 REGULATORY ANALYSIS**

### **4.1 No Significant Hazards Determination**

In accordance with the requirements of 10 CFR 50.90, Nuclear Management Company (licensee) hereby requests amendments to facility operating licenses DPR-24 and DPR-27, for Point Beach Nuclear Plant, Units 1 and 2, respectively. The purpose of the proposed amendments is to revise Technical Specification (TS) 5.5.7, "Inservice Testing Program," and TS 5.5.8, "Steam Generator (SG) Tube Surveillance Program." The revision updates references to the American Society of Mechanical Engineers (ASME) code and certain associated periodicities for inservice testing activities for consistency with the requirements of 10 CFR 50.55a.

Nuclear Management Company (NMC) has evaluated the proposed amendments in accordance with 10 CFR 50.91 against the standards in 10 CFR 50.92 and has determined that the operation of the Point Beach Nuclear Plant in accordance with the proposed amendments presents no significant hazards. The NMC evaluation against each of the criteria in 10 CFR 50.92 follows.

**1. Operation of the Point Beach Nuclear Plant in accordance with the proposed amendments does not result in a significant increase in the probability or consequences of any accident previously evaluated.**

The proposed change revises Technical Specifications for consistency with the requirements of 10 CFR 50.55a(f)(4) and 10 CFR 50.55a(g)(4). The proposed change incorporates revisions to the ASME Code that result in a net improvement in the measures for testing pumps and valves.

The proposed change does not involve any hardware changes, nor does it affect the probability of any event initiators. There will be no change to normal plant operating parameters, engineered safety feature actuation setpoints, accident mitigation capabilities, or accident analysis assumptions or inputs.

Therefore, the probability or consequences of any accident previously evaluated will not be significantly increased as a result of the proposed change.

**2. Operation of the Point Beach Nuclear Plant in accordance with the proposed amendments does not result in a new or different kind of accident from any accident previously evaluated.**

The proposed change incorporates revisions to the ASME Code that result in a net improvement in the measures for testing. The proposed change does not involve a modification to the physical configuration of the plant (i.e., no new equipment will be installed) or change in the methods governing normal plant operation. The proposed change will not impose any new or different requirements or introduce a new accident initiator, accident precursor, or malfunction mechanism. Additionally, there is no change in the types or increases in the amounts of any effluent that may be released off-site and there is no increase in individual or cumulative occupational exposure.

Equipment important to safety will continue to operate as designed. The changes do not result in any event previously deemed incredible being made credible. The changes do not result in adverse conditions or result in any increase in the challenges to safety systems. Therefore, operation of the Point Beach Nuclear Plant in accordance with the proposed amendment will

not create the possibility of a new or different type of accident from any accident previously evaluated.

**3. Operation of the Point Beach Nuclear Plant in accordance with the proposed amendments does not result in a significant reduction in a margin of safety.**

The proposed change incorporates revisions to the ASME Code that result in a net improvement in the measures for testing. The safety function of the affected components will be maintained.

There are no new or significant changes to the initial conditions contributing to accident severity or consequences. The proposed amendment will not otherwise affect the plant protective boundaries, will not cause a release of fission products to the public, nor will it degrade the performance of any other structures, systems or components (SSCs) important to safety. Therefore, the requested change will not result in a significant reduction in the margin of safety.

**Conclusion**

Operation of the Point Beach Nuclear Plant in accordance with the proposed amendment will not result in a significant increase in the probability or consequences of any accident previously analyzed; will not result in a new or different kind of accident from any accident previously analyzed; and, does not result in a significant reduction in any margin of safety. Therefore, operation of the Point Beach Nuclear Plant in accordance with the proposed amendment does not result in a significant hazards determination.

**4.2 Applicable Regulatory Requirements**

10 CFR 50.36(c)(5) states that, "Administrative controls are the provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner." The technical analysis performed by NMC concludes that the proposed changes to TS 5.5.7 and TS 5.5.8.c will continue to provide the appropriate procedural and program controls for inservice testing and steam generator tube surveillance.

10 CFR 50.55a defines the requirements for applying industry codes to each licensed nuclear powered facility. Licensees are required by 10 CFR 50.55a(f)(4)(i) to initially prepare programs to perform inservice testing of certain ASME Code Class 1, 2, and 3 pumps and valves during the initial 120-month interval. The regulations require that programs be developed utilizing the latest edition and addenda incorporated into paragraph (b) of 10 CFR 50.55a

on the date 12 months prior to the date of issuance of the operating license subject to the limitations and modification identified in paragraph (b).

10 CFR 50.55a(f) addresses the requirements for inservice testing using the ASME OM Code and 10 CFR 50.55a(g) addresses the requirements for inservice inspection using ASME Boiler and Pressure Vessel Code, Section XI.

NMC concludes that the proposed changes are in accordance with 10 CFR 50.36(c)(5) with regard to maintaining the necessary procedural and program controls to assure operation of the facility in a safe manner. These changes also continue to meet the applicable requirements of 10 CFR 50.55a. The proposed changes thus continue to be compliant with the above regulatory requirements.

#### **4.3 Commitments**

There are no actions committed to by NMC in this document. The statements in this submittal are provided for information purposes and are not considered to be commitments.

#### **5.0 ENVIRONMENTAL EVALUATION**

NMC has determined that the information for the proposed amendment does not involve a significant hazards consideration, authorize a significant change in the types or total amounts of effluent release, or result in any significant increase in individual or cumulative occupational radiation exposure. Therefore, NMC concludes that the proposed amendment meets the categorical exclusion requirements of 10 CFR 51.22(c)(9) and that an environmental impact appraisal need not be prepared.

**ENCLOSURE II**

**PROPOSED TECHNICAL SPECIFICATION CHANGES  
LICENSE AMENDMENT REQUEST 242  
TECHNICAL SPECIFICATION 5.5, PROGRAMS AND MANUALS**

**POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2**

(2 pages follow)

5.5 Programs and Manuals

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5.5.7 Inservice Testing Program

This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 pumps and valves. The program shall include the following:

- a. Testing frequencies specified in Section XI of the ASME Boiler and Pressure Vessel Code Code for Operation and Maintenance of Nuclear Power Plants (OM Code) and applicable Addenda are as follows:

<u>ASME Boiler and Pressure Vessel OM Code and applicable Addenda terminology for inservice testing activities</u>	<u>Required Frequencies for performing inservice testing activities</u>
<del>Weekly</del>	<del>At least once per 7 days</del>
<del>Monthly</del>	<del>At least once per 31 days</del>
<del>Semiquarterly</del>	<del>At least once per 46 days</del>
<del>Quarterly or every 3 months</del>	<del>At least once per 92 days</del>
<del>Semiannually or every 6 months</del>	<del>At least once per 184 days</del>
<del>Every 9 months</del>	<del>At least once per 276 days</del>
<del>Yearly or annually</del>	<del>At least once per 366 days</del>
<del>Biennially or every 2 years</del>	<del>At least once per 731 days</del>
	<u>24 months</u>

- b. The provisions of SR 3.0.2 are applicable to the above required Frequencies and other normal and accelerated Frequencies specified in the Inservice Testing Program for performing inservice testing activities;
- c. The provisions of SR 3.0.3 are applicable to inservice testing activities; and
- d. Nothing in the ~~ASME Boiler and Pressure Vessel OM Code~~ shall be construed to supersede the requirements of any TS.

## 5.5 Programs and Manuals

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### 5.5.8 Steam Generator (SG) Tube Surveillance Program (continued)

If in the first sample of a given steam generator during any inservice inspection, degraded tubes not beyond the plugging limit detected by prior examinations in that steam generator shall be included in the above percentage calculations, only if these tubes are demonstrated to have a further wall penetration of greater than 10% of the tube nominal wall thickness.

3. Tubes shall be selected for examination primarily from those areas of the tube bundle where service experience has shown the most severe tube degradation.
4. In addition to the sample size specified in Table 5.5.8-1, the tubes examined in a given steam generator during the first examination of any inservice inspection shall include all non-plugged tubes in that steam generator that from prior examination were degraded.
5. During the second and third sample examinations of any inservice inspection, the tube inspection may be limited to those sections of the tube lengths where imperfections were detected during the prior examination.

#### c. Examination Method and Requirements.

The examination method shall meet the intent of the requirements in ASME Section XI ~~Appendix IV~~. This includes equipment, personnel, and procedure requirements, certification and calibration along with records and reports. The actual technique may be the latest industry accepted technique, provided the flaw detection capability is as good or better than the technique endorsed by the code in effect per 10 CFR 50, Section 50.55a(g). This allows the use of improvements in inspection techniques that were not included in the code in effect. However, it means that word-for-word compliance with ~~Appendix IV~~ of ASME Section XI rules may not be possible.

**ENCLOSURE III**

**REVISED TECHNICAL SPECIFICATION PAGES**

**LICENSE AMENDMENT REQUEST 242  
TECHNICAL SPECIFICATION 5.5, PROGRAMS AND MANUALS**

**POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2**

**(2 pages follow)**

5.5 Programs and Manuals

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5.5.7 Inservice Testing Program

This program provides controls for inservice testing of ASME Code Class 1, 2, and 3 pumps and valves. The program shall include the following:

- a. Testing frequencies specified in the ASME Code for Operation and Maintenance of Nuclear Power Plants (OM Code) and applicable Addenda are as follows:

<u>ASME OM Code and applicable Addenda terminology for inservice testing activities</u>	<u>Required Frequencies for performing inservice testing activities</u>
Semiquarterly	At least once per 46 days
Quarterly or every 3 months	At least once per 92 days
Yearly or annually	At least once per 366 days
Biennially or every 2 years	At least once per 24 months

- b. The provisions of SR 3.0.2 are applicable to the above required Frequencies and other normal and accelerated Frequencies specified in the Inservice Testing Program for performing inservice testing activities;
- c. The provisions of SR 3.0.3 are applicable to inservice testing activities; and
- d. Nothing in the ASME OM Code shall be construed to supersede the requirements of any TS.

5.5 Programs and Manuals

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5.5.8 Steam Generator (SG) Tube Surveillance Program (continued)

In the first sample of a given steam generator during any inservice inspection, degraded tubes not beyond the plugging limit detected by prior examinations in that steam generator shall be included in the above percentage calculations, only if these tubes are demonstrated to have a further wall penetration of greater than 10% of the tube nominal wall thickness.

3. Tubes shall be selected for examination primarily from those areas of the tube bundle where service experience has shown the most severe tube degradation.
4. In addition to the sample size specified in Table 5.5.8-1, the tubes examined in a given steam generator during the first examination of any inservice inspection shall include all non-plugged tubes in that steam generator that from prior examination were degraded.
5. During the second and third sample examinations of any inservice inspection, the tube inspection may be limited to those sections of the tube lengths where imperfections were detected during the prior examination.

c. Examination Method and Requirements.

The examination method shall meet the intent of the requirements in ASME Section XI. This includes equipment, personnel, and procedure requirements, certification and calibration along with records and reports. The actual technique may be the latest industry accepted technique, provided the flaw detection capability is as good or better than the technique endorsed by the code in effect per 10 CFR 50, Section 50.55a(g). This allows the use of improvements in inspection techniques that were not included in the code in effect. However, it means that word-for-word compliance with ASME Section XI rules may not be possible.