NMC
Committed to Nuclear Excellence

Kewaunee Nuclear Power Plant
N490 Highway 42
Kewaunee, WI 54216-9511
920.388.2560

Point Beach Nuclear Plant
6610 Nuclear Road
Two Rivers, WI 54241
920.755.2321

Kewaunee / Point Beach Nuclear
Operated by Nuclear Management Company, LLC

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10 CFR 50.90

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U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
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Dockets 50-266 and 50-301
Point Beach Nuclear Plant, Units 1 and 2
License Amendment Request 228
Technical Specification LCO 3.1.8, Physics Tests Exceptions – MODE 2

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 3.1.8, Physics Tests Exceptions, to correct a typographical error in the numbering of a function. The existing typographical error inappropriately makes the TS more restrictive than intended.

NMC requests approval of the proposed License Amendment by September 2002, with the amendment being implemented within 45 days. The approval date was administratively selected to allow for NRC review but the plant does not require this amendment to allow continued safe full power operation.

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

To the best of my knowledge and belief, the statements contained in this document are true and correct. In some respects, these statements are not based entirely on my personal knowledge, but on information furnished by cognizant NMC employees and consultants. Such information has been reviewed in accordance with company practice and I believe it to be reliable.

I declare under penalty of perjury that the foregoing is true and correct.
Executed on June 11, 2002.

Mark E. Warner
Site Vice President

JG/kmd

A001

Attachments:
1 - Description of Changes
2 - Proposed Technical Specification Changes
3 - Proposed Technical Specification Bases Changes
4 - Revised Technical Specification Pages

cc: NRC Regional Administrator
NRC Resident Inspector
NRC Project Manager
PSCW

# DESCRIPTION OF CHANGES

## LICENSE AMENDMENT REQUEST 228

## TECHNICAL SPECIFICATION LCO 3.1.8, PHYSICS TESTS EXCEPTIONS – MODE 2

## 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 correct a typographical error in TS LCO 3.1.8, Physics Tests Exceptions – Mode 2, in the numbering of a function. The existing typographical error inappropriately makes the TS more restrictive than intended.

## 2.0 BACKGROUND

The primary purpose of the Mode 2 Physics Tests exceptions is to permit relaxations of existing LCOs to allow certain Physics Tests to be performed.

During the conversion of Point Beach Custom Technical Specifications (CTS) to Improved Technical Specifications (ITS), Point Beach originally proposed ITS LCO 3.1.8 to specify that the number of required channels for Reactor Trip System Interlock, Power Range Neutron Flux, P-10, may be reduced to "3" required channels. This proposed allowance was consistent with NUREG-1431, *Standard Technical Specifications, Westinghouse Plants* and was accepted by the NRC reviewers. At that time, Power Range Neutron Flux, P-10, was identified as "Function 17.d" of ITS Table 3.3.1-1.

In response to NRC requests for additional information (RAI 3.3.1-14, dated November 17, 2000) on a different section of the ITS conversion submittal, Point Beach reinstated a previously deleted function (Function 17.b) into ITS Table 3.3.1-1 (NMC letter to NRC dated February 6, 2001). To maintain conformity with NUREG-1431, the functions in that Table that were previously numbered 17.b, 17.c and 17.d were renumbered as Functions 17.c, 17.d and 17.e respectively. However, we inadvertently did not renumber the corresponding reference to the P-10 interlock within LCO 3.1.8 when this function was renumbered to 17.e in ITS Table 3.3.1-1. Consequently, LCO 3.1.8 continued to reference Function 17.d, which was no longer the P-10 interlock. Renumbering of these functions in LCO 3.3.1 (ITS Table 3.3.1-1) thus caused LCO 3.1.8 to refer to the incorrect function (Function 17.d).

The proposed change is intended to rectify this condition and correct the reference in LCO 3.1.8 to the appropriate function in TS Table 3.3.1-1 (Function 17.e).

### System License Basis

The reactor fuel is protected by LCOs that preserve the initial conditions of the core assumed during the safety analyses. The methods for development of the LCOs that are excepted by the Physics Test Exceptions LCO are described in the Westinghouse Reload Safety Evaluation Methodology Report. These Physics Tests, and other tests that may be required to calibrate nuclear instrumentation or to diagnose operational problems, may require the operating control or process variables to deviate from their LCO limitations.

The FSAR defines requirements for initial testing of the facility, including Physics Tests. Table 13.2.2-1 summarizes the zero, low power, and power tests. Requirements for reload fuel cycle Physics Tests are defined in ANSI/ANS-19.6.1-1985. Although Physics Tests are generally accomplished within the limits for all LCOs, conditions may occur when one or more LCOs must be suspended to make completion of Physics Tests possible or practical. This is acceptable as long as the fuel design criteria are not violated. When one or more of the requirements specified in LCO 3.1.3, "Moderator Temperature Coefficient (MTC)," LCO 3.1.4, LCO 3.1.5, LCO 3.1.6, and LCO 3.4.2 are suspended for Physics Tests, the fuel design criteria are preserved as long as the power level is limited to ≤ 5%, the reactor coolant temperature is kept ≥ 530°F, and shutdown margin is within the limits provided in the Core Operating Limits Report (COLR).

Test Exception LCOs provide flexibility to perform certain operations by appropriately modifying requirements of other LCOs. A discussion of the criteria satisfied for the other LCOs is provided in their respective bases.

LCO 3.1.8 allows the reactor parameters of MTC and minimum temperature for criticality to be outside their specified limits. In addition, it allows selected control and shutdown rods to be positioned outside of their specified alignment and insertion limits. One Power Range Neutron Flux channel may be bypassed, reducing the number of required channels from "4" to "3". Operation beyond specified limits is permitted for the purpose of performing Physics Tests and poses no threat to fuel integrity, provided the surveillance requirements (SRs) are met.

During the performance of Physics Tests initiated in Mode 2, when LCO 3.1.8 applies, the requirements of LCO 3.1.3, LCO 3.1.4, LCO 3.1.5, LCO 3.1.6, and LCO 3.4.2 may be suspended and the number of required channels for LCO 3.3.1, "RPS Instrumentation," Functions 2, 5, and 17.e, may be reduced to "3" required channels, provided:

a. RCS lowest loop average temperature is ≥ 530°F;

b. SDM is within the limits provided in the COLR; and

c. THERMAL POWER is ≤ 5% RTP.

## 3.0 PROPOSED CHANGE

The proposed amendment would revise TS LCO 3.1.8, Physics Tests Exceptions – Mode 2, to correct a typographical error in the numbering of a function. The existing typographical error inappropriately makes the TS more restrictive than intended. The reference to Function 17.d would be corrected to read Function 17.e. LCO 3.1.8 is intended to specify that the number of required channels for LCO 3.3.1, "RPS Instrumentation," Functions 2, 5, and 17.e, may be reduced to "3" required channels, provided the additional stated conditions are satisfied. LCO 3.3.1, Function 17.e, is Reactor Trip System Interlock, Power Range Neutron Flux, P-10.

Technical Specification Bases changes are also being made to reflect the proposed Technical Specifications changes.

The proposed change is consistent with NUREG-1431, *Standard Technical Specifications, Westinghouse Plants*, Revision 2.

## 4.0 ANALYSIS

The original application to convert the Point Beach Current Technical Specifications (CTS) to the Improved Technical Specifications (ITS) was dated November 15, 1999. In that application, we stated that the CTS implicitly provides an exception to the operability requirements for the P-10 interlock during Low Power Physics Testing, thereby making the explicit accounting in ITS administrative.

The NRC Safety Evaluation, dated August 8, 2001, associated with Amendments 201/206 (ITS Conversion), stated, "The CTS allowance permitting an additional Power Range channel to be removed from service during Low Power Physics testing, which also results in an implicit exception to operability requirements for the ...P-10 interlock, has been explicitly stated in the ITS. This change is administrative since it represents a clarification of current plant practice." (SE Table DOC No. 3.1.10, A7)

The P-10 interlock is specified as Function 17.e in TS Table 3.3.1-1. For LCO 3.1.8, the NRC Safety Evaluation clearly approved an exception to operability requirements for the P-10 interlock, which is Function 17.e, and not for Function 17.d, which is the P-9 interlock. Therefore, the proposed change merely restores the originally approved exception for the P-10 interlock within LCO 3.1.8 by correctly identifying this function as Function 17.e.

The incorrect LCO 3.1.8 exception to operability requirements for Function 17.d (the P-9 interlock) is immaterial, because the TS do not require this function during Mode 2 (i.e., no nonconservatism existed in the TS as a result of this typographical error).

## 5.0 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 TS LCO 3.1.8, Physics Tests Exceptions – Mode 2, to correct a typographical error in the numbering of a function. The existing typographical error inappropriately makes the TS more restrictive than intended.

Nuclear Management Company 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. Our 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 primary purpose of the Mode 2 Physics Tests exceptions is to permit relaxations of existing LCOs to allow certain Physics Tests to be performed. The proposed change will permit the number of required channels specified in LCO 3.3.1, "RPS Instrumentation," for Power Range Neutron Flux, P-10 interlock, to be reduced to "3" required channels for Physics Tests, as originally analyzed and approved by NRC. LCO 3.1.8 already allows one power range neutron flux channel to be bypassed, reducing the number of required channels from "4" to "3". With this reduction in the number of required channels, the fuel design criteria are preserved as long as the power level is limited to ≤ 5% RTP, the reactor coolant temperature is kept ≥ 530°F, and shutdown margin (SDM) is within the limits provided in the Core Operating Limits Report (COLR). These three conditions are not affected by the proposed change. This change only restores the allowance previously analyzed as acceptable.

   Therefore, the probability or consequences of an 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 does not involve any physical alteration of plant systems, structures or components, nor does it alter parameters governing normal plant operation. This change does not introduce any new or different normal operation or accident initiators. With the reduction in the number of required instrumentation channels, the fuel design criteria continue to be preserved as originally analyzed.

   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 more 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 primary purpose of the Mode 2 Physics Tests exceptions is to permit relaxations of existing LCOs to allow certain Physics Tests to be performed. The analysis for Physics Tests is based on one power range neutron flux channel being bypassed. Therefore, reducing the requirement for an interlock associated with the bypassed channel is bounded by the original analysis. 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 important to safety. Therefore, the proposed 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.

## 6.0 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, we conclude 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.

# PROPOSED TECHNICAL SPECIFICATION CHANGES

## LICENSE AMENDMENT REQUEST 228

## TECHNICAL SPECIFICATION LCO 3.1.8, PHYSICS TESTS EXCEPTIONS – MODE 2

## POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

## 3.1 REACTIVITY CONTROL SYSTEMS

### 3.1.8 PHYSICS TESTS Exceptions — MODE 2

LCO 3.1.8 During the performance of PHYSICS TESTS, the requirements of

LCO 3.1.3, "Moderator Temperature Coefficient (MTC)";
LCO 3.1.4, "Rod Group Alignment Limits";
LCO 3.1.5, "Shutdown Bank Insertion Limits";
LCO 3.1.6, "Control Bank Insertion Limits"; and
LCO 3.4.2, "RCS Minimum Temperature for Criticality"

may be suspended and the number of required channels for LCO 3.3.1, "RPS Instrumentation," Functions 2, 5, and 17.~~de~~, may be reduced to "3" required channels, provided:

a. RCS lowest loop average temperature is ≥ 530°F;

b. SDM is within the limits provided in the COLR; and

c. THERMAL POWER is ≤ 5% RTP.

APPLICABILITY: During PHYSICS TESTS initiated in MODE 2.

ACTIONS

| CONDITION | REQUIRED ACTION | | COMPLETION TIME |
|---|---|---|---|
| A. SDM not within limit. | A.1 | Initiate boration to restore SDM to within limit. | 15 minutes |
| | AND | | |
| | A.2 | Suspend PHYSICS TESTS exceptions. | 1 hour |
| B. THERMAL POWER not within limit. | B.1 | Open reactor trip breakers. | Immediately |

(continued)

# PROPOSED TECHNICAL SPECIFICATION BASES CHANGES

## LICENSE AMENDMENT REQUEST 228

## TECHNICAL SPECIFICATION LCO 3.1.8, PHYSICS TESTS EXCEPTIONS – MODE 2

## POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

BASES

APPLICABLE SAFETY ANALYSES (continued)

The PHYSICS TESTS include measurement of core nuclear parameters or the exercise of control components that affect process variables. Among the process variables involved are AFD and QPTR, which represent initial conditions of the unit safety analyses. Also involved are the movable control components (control and shutdown rods), which are required to shut down the reactor. The limits for these variables are specified for each fuel cycle in the COLR. As described in LCO 3.0.7, compliance with Test Exception LCOs is optional, and therefore no criteria of the NRC Policy Statement apply. Test Exception LCOs provide flexibility to perform certain operations by appropriately modifying requirements of other LCOs. A discussion of the criteria satisfied for the other LCOs is provided in their respective bases.

Reference 6 allows special test exceptions (STEs) to be included as part of the LCO that they affect. It was decided, however, to retain this STE as a separate LCO because it was less cumbersome and provided additional clarity.

LCO

This LCO allows the reactor parameters of MTC and minimum temperature for criticality to be outside their specified limits. In addition, it allows selected control and shutdown rods to be positioned outside of their specified alignment and insertion limits. One Power Range Neutron Flux channel may be bypassed, reducing the number of required channels from "4" to "3". Operation beyond specified limits is permitted for the purpose of performing PHYSICS TESTS and poses no threat to fuel integrity, provided the SRs are met.

The requirements of LCO 3.1.3, LCO 3.1.4, LCO 3.1.5, LCO 3.1.6, and LCO 3.4.2 may be suspended and the number of required channels for LCO 3.3.1, "~~RTS~~ RPS Instrumentation," Functions 2, 5, and 17.~~de~~, may be reduced to "3" required channels, during the performance of PHYSICS TESTS provided:

a. RCS lowest loop average temperature is ≥ 530°F;

b. SDM is within the limits provided in the COLR; and

c. THERMAL POWER is ≤ 5% RTP.

APPLICABILITY

This LCO is applicable when performing low power PHYSICS TESTS. The Applicability is stated as "during PHYSICS TESTS initiated in MODE 2" to ensure that the 5% RTP maximum power level is not exceeded. Should the THERMAL POWER exceed 5% RTP, and

# REVISED TECHNICAL SPECIFICATION PAGES

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BASES

APPLICABLE SAFETY ANALYSES (continued)

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