



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 12, 2001

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

SUBJECT: KEWAUNEE NUCLEAR POWER PLANT - ISSUANCE OF AMENDMENT
(TAC NO. MB0571)

Dear Mr. Reddeman:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 151 to Facility Operating License No. DPR-43 for the Kewaunee Nuclear Power Plant. This amendment revises the Technical Specifications in response to your application dated November 10, 2000.

The amendment revises several sections of the Kewaunee Nuclear Power Plant (KNPP) Technical Specifications (TSs). These sections include administrative changes, Table 4.1-1, and Sections 1.0, 6.4, and 6.10.

Administrative changes are submitted with this proposed amendment to correct minor typographical errors in the Table of Contents and among these changes are renumbering the index section pages and the addition of previously omitted sections.

The proposed changes will modify TS Table 4.1-1, "Minimum Frequencies for Checks, Calibrations and Test of Instrument Channels." This proposed change will decrease the calibration frequency for Turbine First Stage Pressure to support KNPP's 18-month operating cycle, and modify the table to eliminate a note that could lead to non-conservative calibration frequency.

The proposed TS Section 1.0, "Definitions," will incorporate a line item improvement to provide additional clarification on channel calibration.

The proposed TS Section 6.4, "Training," will remove the title of director for the KNPP training program and relocate the title reference to the Operational Quality Assurance Program Description (OQAPD).

The proposed TS Section 6.10, "Record Retention," will revise the off-site review committee title.

Mr. M. Reddeman

- 2 -

A copy of the Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,

A handwritten signature in black ink, reading "John G. Lamb". The signature is fluid and cursive, with the first letters of each name being capitalized and prominent.

John G. Lamb, Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-305

Enclosures: 1. Amendment No.151 to
License No. DPR-43
2. Safety Evaluation

cc w/encls: See next page

Mr. M. Reddeman

- 2 -

A copy of the Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's next regular 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 No. 50-305

Enclosures: 1. Amendment No. 151 to
License No. DPR-43
2. Safety Evaluation

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

NUCLEAR MANAGEMENT COMPANY, LLC

DOCKET NO. 50-305

KEWAUNEE NUCLEAR POWER PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 151
License No. DPR-43

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Wisconsin Public Service Corporation, Wisconsin Power and Light Company, and Madison Gas and Electric Company (the licensees) dated November 10, 2000, 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 2.C.(2) of Facility Operating License No. DPR-43 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 151 , are hereby incorporated in the license. The licensees shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance, and is to be implemented within 30 days of the date of issuance.

FOR THE NUCLEAR REGULATORY
COMMISSION

A handwritten signature in black ink, appearing to read 'Claudia M. Craig', with a stylized initial 'C' to the left.

Claudia M. Craig, 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: February 12, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 151

FACILITY OPERATING LICENSE NO. DPR-43

DOCKET NO. 50-305

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

TS i through iv
TS 1.0-4
TS Table 4.1-1, Pages 1-6
TS 6.4-1
TS 6.10-2

INSERT

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3. CHANNEL CALIBRATION

CHANNEL CALIBRATION consists of the adjustment of channel output as necessary, such that it responds, with acceptable range and accuracy, to known values of the parameter which the channel monitors. Calibration shall encompass the entire channel, including alarm and/or trip, and shall be deemed to include the CHANNEL FUNCTIONAL TEST.

4. SOURCE CHECK

A SOURCE CHECK shall be the qualitative assessment of channel response when the channel sensor is exposed to a source of increased radioactivity.

5. FREQUENCY NOTATION

The FREQUENCY NOTATION specified for the performance of surveillance requirements shall correspond to the intervals in Table TS 1.0-1.

j. MODES

MODE	REACTIVITY $\Delta k/k$	COOLANT TEMP T_{avg} °F	FISSION POWER %
REFUELING	$\leq -5\%$	≤ 140	~ 0
COLD SHUTDOWN	$\leq -1\%$	≤ 200	~ 0
INTERMEDIATE SHUTDOWN	(1)	$> 200 \quad < 540$	~ 0
HOT SHUTDOWN	(1)	≥ 540	~ 0
HOT STANDBY	$< 0.25\%$	$\sim T_{oper}$	< 2
OPERATING	$< 0.25\%$	$\sim T_{oper}$	≥ 2
LOW POWER PHYSICS TESTING	(To be specified by specific tests)		
(1) Refer to Figure TS 3.10-1			

k. REACTOR CRITICAL

The reactor is said to be critical when the neutron chain reaction is self-sustaining.

l. REFUELING OPERATION

REFUELING OPERATION is any operation involving movement of reactor vessel internal components (those that could affect the reactivity of the core) within the containment when the vessel head is unbolted or removed.

TABLE TS 4.1-1

MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND TEST OF INSTRUMENT CHANNELS

CHANNEL DESCRIPTION	CHECK	CALIBRATE	TEST	REMARKS
1. Nuclear Power Range	Each shift(a) Effective Full Power Month(c)	Daily(a) Effective Full Power Quarter(c)	Monthly(b) Quarterly(d)	(a) Heat balance (b) Signal to ΔT ; bistable action (permissive, rod stop, trips) (c) Upper and lower chambers for axial off-set using incore detectors. The check and calibration for axial offset shall also be performed prior to > 75% power following any core alteration. (d) Permissives P8 and P10 and the 25% reactor trip are tested quarterly.
2. Nuclear Intermediate Range	Each shift(a,c)	Not applicable	Prior to each startup if not done previous week(b)	(a) Once/shift when in service (b) Log level; bistable action (permissive, rod stop, trips) (c) Channel check required in all plant modes
3. Nuclear Source Range	Each shift(a,c)	Not applicable	Prior to each startup if not done previous week(b)	(a) Once/shift when in service (b) Bistable action (alarm, trips) (c) Channel check required in all plant modes
4. Reactor Coolant Temperature	Each shift (c)	Each refueling cycle	Monthly(a) Monthly(b)	(a) Overtemperature ΔT (b) Overpower ΔT (c) Channel check not required below HOT SHUTDOWN
5. Reactor Coolant Flow	Each shift	Each refueling cycle	Monthly	

TABLE TS 4.1-1

MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND TEST OF INSTRUMENT CHANNELS

CHANNEL DESCRIPTION	CHECK	CALIBRATE	TEST	REMARKS
6. Pressurizer Water Level	Each shift	Each refueling cycle	Monthly	
7. Pressurizer Pressure	Each shift	Each refueling cycle	Monthly	
8. a. 4-KV Voltage and Frequency	Not applicable	Each refueling cycle	Monthly	Reactor protection circuits only
b. 4-KV Voltage (Loss of Voltage)	Not applicable	Each refueling cycle	Monthly	Safeguards buses only
c. 4-KV Voltage (Degraded Grid)	Not applicable	Each refueling cycle	Monthly	Safeguards buses only
9. Analog Rod Position	Each shift(a,b)	Each refueling cycle	Each refueling cycle	(a) With step counters (b) Following rod motion in excess of 24 steps when computer is out of service
10. Rod Position Bank Counters	Each shift(a,b)	Not applicable	Each refueling cycle	(a) With analog rod position (b) Following rod motion in excess of 24 steps when computer is out of service

TABLE TS 4.1-1

MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND TEST OF INSTRUMENT CHANNELS

CHANNEL DESCRIPTION	CHECK	CALIBRATE	TEST	REMARKS
11. a. Steam Generator Low Level	Each shift	Each refueling cycle	Monthly	
b. Steam Generator High Level	Each shift	Each refueling cycle	Monthly	
12. Steam Generator Flow Mismatch	Each shift	Each refueling cycle	Monthly	
13. Deleted				
14. Residual Heat Removal Pump Flow	Each shift (when in operation)	Each refueling cycle	Not applicable	
15. Deleted				
16. Refueling Water Storage Tank Level	Weekly	Annually	Not applicable	
17. Deleted				

TABLE TS 4.1-1

MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND TEST OF INSTRUMENT CHANNELS

CHANNEL DESCRIPTION	CHECK	CALIBRATE	TEST	REMARKS
18. a. Containment Pressure (SIS signal)	Each shift	Each refueling cycle	Monthly(a)	(a) Isolation Valve Signal
b. Containment Pressure (Steamline Isolation)	Each shift(a)	Each refueling cycle(a)	Monthly(a)	(a) Narrow range containment pressure (-3.0, +3.0 psig excluded)
c. Containment Pressure (Containment Spray Act)	Each shift	Each refueling cycle	Monthly	
d. Annulus Pressure (Vacuum Breaker)	Not applicable	Each refueling cycle	Each refueling cycle	
19. Radiation Monitoring System	Daily (a,b)	Each refueling cycle (a)	Quarterly (a)	(a) Includes only channels R11 thru R15, R19, R21, and R23 (b) Channel check required in all plant modes
20. Deleted				
21. Containment Sump Level	Not applicable	Not applicable	Each refueling cycle	
22. Accumulator Level and Pressure	Each shift	Each refueling cycle	Not applicable	
23. Steam Generator Pressure	Each shift	Each refueling cycle	Monthly	

TABLE TS 4.1-1

MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND TEST OF INSTRUMENT CHANNELS

CHANNEL DESCRIPTION	CHECK	CALIBRATE	TEST	REMARKS
24. Turbine First Stage Pressure	Each shift		Monthly	
25. Portable Radiation Survey Instruments	Monthly (a)	Annually	Quarterly	(a) Channel check required in all plant modes
26. Protective System Logic Channel Testing	Not applicable	Not applicable	Monthly	Includes auto load sequencer
27. Deleted				
28. Deleted				
29. Seismic Monitoring System	Each refueling cycle	Each refueling cycle	Not applicable	
30. Fore Bay Water Level	Not applicable	Each refueling cycle	Each refueling cycle	
31. AFW Flow Rate	(a)	Each refueling cycle	Not applicable	(a) Flow rate indication will be checked at each unit startup and shutdown
32. PORV Position Indication	Monthly	Each refueling cycle	Not applicable	
a. Back-up (Temperature)	Monthly	Each refueling cycle	Not applicable	
33. PORV Block Valve Position Indicator	Monthly	Each refueling cycle	Not applicable	

TABLE TS 4.1-1

MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND TEST OF INSTRUMENT CHANNELS

CHANNEL DESCRIPTION	CHECK	CALIBRATE	TEST	REMARKS
34. Safety Valve Position Indicator (Acoustic)	Monthly	Each refueling cycle	Not applicable	
a. Back-up (Temperature)	Monthly	Each refueling cycle	Not applicable	
35. FW Pump Trip (AFW Initiation)	Not applicable	Not applicable	Each refueling cycle	
36. Reactor Coolant System Subcooling Monitor	Monthly	Each refueling cycle	Each refueling cycle	
37. Containment Pressure (Wide Range)	Daily	Each refueling cycle	Not applicable	
38. Containment Hydrogen Monitors	Daily	Each refueling cycle	Monthly	
39. Containment Water Level (Wide Range)	Not applicable	Not applicable	Each refueling cycle	
40. Reactor Vessel Level Indication	Monthly	Each refueling cycle	Not applicable	
41. Core Exit Thermocouples	Monthly	Each refueling cycle	Not applicable	
42. Steam Generator Level (Wide Range)	Monthly	Each refueling cycle	Not applicable	

6.4 TRAINING

A retraining and replacement training program for the Plant Staff shall be maintained and shall meet or exceed the requirements and recommendations of Section 5.5 of ANSI-N18.1-1971 and 10 CFR Part 55.

6. Records of transient or operational cycles for these facility components.
7. Records of training and qualification for current members of the plant staff.
8. Records of in-service inspections performed pursuant to these Technical Specifications.
9. Records of meetings of the JOSRC and PORC.
10. Records for Environmental Qualification.
11. Records of reviews performed for changes made to the ODCM and the PCP.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATING TO AMENDMENT NO. 151 TO FACILITY OPERATING LICENSE NO. DPR-43
NUCLEAR MANAGEMENT COMPANY, LLC
KEWAUNEE NUCLEAR POWER PLANT
DOCKET NO. 50-305

1.0 INTRODUCTION

By letter dated November 10, 2000, Nuclear Management Company, LLC (the licensee) submitted a proposed amendment to the Kewaunee Nuclear Power Plant (KNPP) Technical Specifications (TSs) to revise several KNPP TSs sections. These sections include administrative changes, Table 4.1-1, and Sections 1.0, 6.4, and 6.10.

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The proposed changes will modify TS Table 4.1-1, "Minimum Frequencies for Checks, Calibrations and Test of Instrument Channels." This proposed change will decrease the calibration frequency for Turbine First Stage Pressure to support KNPP's 18-month operating cycle, and modify the table to eliminate a note that could lead to non-conservative calibration frequency.

The proposed TS Section 1.0, "Definitions," will incorporate a line item improvement to provide additional clarification on channel calibration.

The proposed TS Section 6.4, "Training," will remove the title of director for the KNPP training program and relocate the title reference to the Operational Quality Assurance Program Description (OQAPD).

The proposed TS Section 6.10, "Record Retention," will revise the off-site review committee title.

2.0 EVALUATION

2.1 Administrative Changes

The licensee proposed changes to Appendix A - Table of Contents. These proposed changes include the addition of previously omitted sections, the revision of section page numbering, and the correction of minor typographical errors. The proposed changes for the addition of previously omitted sections are the following: 3.4.a, 3.4.b, 3.4.c, 3.4.d, and 6.20. The proposed

changes for the revision of section page numbering are the following: 1.0.e, 1.0.h, 1.0.m, 1.0.n, 1.0.o, 2.3.a.7, 3.10.b through 3.10.n, 4.2.b.1 through 4.2.b.7, and 4.4.b through 4.4.e. The proposed changes for the revision of titles are for the following sections: 2.3, 3.1.a.5, 3.1.b, 3.8, 3.10.k through 3.10.n, 3.12, 4.2.a, and 6.18.

The proposed changes included in Appendix A - Table of Contents are administrative. The intent or interpretation of these specifications is not changed; therefore, the staff finds these administrative changes acceptable.

2.2 TS Table 4.1-1, "Minimum Frequencies for Checks, Calibrations and Test of Instrument Channels"

The proposed changes will modify TS Table 4.1-1, "Minimum Frequencies for Checks, Calibrations and Test of Instrument Channels." This proposed change will modify the table to eliminate a note that could lead to non-conservative calibration frequency, and decrease the calibration frequency for Turbine First Stage Pressure to support KNPP's 18-month operating cycle.

To ensure calibration will be done on each refueling cycle, the proposed change to Table 4.1-1 will remove the note that states calibration "only if test indicates calibration is required" for each of the following line items:

- Item 5 - Reactor Coolant Flow
- Item 6 - Pressurizer Water Level
- Item 7 - Pressurizer Pressure
- Item 9 - Analog Rod Position
- Item 11.a - Steam Generator Low Level
- Item 11.b - Steam Generator High Level
- Item 12 - Steam Generator Flow Mismatch
- Item 18.a - Containment Pressure (SIS signal)
- Item 18.b - Containment Pressure (Steamline Isolation)
- Item 18.c - Containment Pressure (Containment Spray Act)
- Item 18.d - Annulus Pressure (Vacuum Breaker)
- Item 24 - Turbine First Stage Pressure
- Item 30 - Fore Bay Water Level
- Item 36 - Reactor Coolant System Subcooling Monitor

TS Table 4.1-1 allows deferring calibration if the instrument indicates there was no drifting of the instrument. This is non-conservative; therefore, the licensee is deleting the note. The proposed change is more restrictive and will ensure the continued reliability of the channel instruments. Therefore, the staff finds this change acceptable.

The proposed change to Table 4.1-1, Item 24, "Turbine First Stage Pressure," will move calibration from annual to each refueling cycle to coincide with KNPP's 18-month operating cycle. Current TSs will require calibration at full power.

Turbine first stage pressure is used as an indication of turbine power. This signal provides turbine power input to steam generator level control, rod control, steam dump control and the permissive P-7. The move to perform calibration each refueling cycle will reduce the likelihood of inducing a plant transient. If the licensee's turbine impulse channels were to fail, either high or low, the licensee would enter Abnormal Operating Procedure A-TB-54, "Abnormal Turbine Generator Operation"; this proposed change does not effect the licensee's abnormal operating procedure.

The licensee performed a review of turbine first stage pressure calibration procedures for the last three years and concluded the transmitters performed within acceptable limits. The licensee stated these results indicate stable instrument performance to support extending the calibration frequency from 12 months to each refueling cycle.

In addition, the licensee performed a review to identify transmitters in the plant which were the same manufacturer and series as those used for turbine first stage pressure channels. The licensee discovered the transmitters used for containment pressure are similar transmitters and are calibrated on a refueling basis. Calibration for the past three operating cycles showed the transmitters remained within acceptable limits. Based on the past performance of these transmitters and the solid performance of the transmitters installed for turbine first stage pressure, the licensee believes there is no reason to doubt continued good performance on a refueling calibration cycle.

The channel calibration surveillance frequency is 18 months for Turbine Impulse Pressure in Standard Technical Specifications (STS), NUREG-1431, "Standard Technical Specifications Westinghouse Plants." The licensee's proposed change is consistent with NUREG-1431. Therefore, the staff finds the change acceptable.

2.3 TS Section 1.0, "Definitions"

The proposed TS Section 1.0, "Definitions," will incorporate a line item improvement to provide additional clarification on channel calibration.

The current TSs definition for "Channel Calibration" states the following: "Channel Calibration consists of the adjustment of channel output such that it responds, with acceptable range and accuracy, to known values of the parameter which the channel monitors."

The proposed change adds "as necessary" after channel output. This is consistent with the wording for "Channel Calibration" in NUREG-1431.

The proposed change will require adjustment of the instrument only as necessary, such that it performs within acceptable values. The proposed change will eliminate unnecessary adjustment when the channel is found within the surveillance acceptable range. Since a calibration will continue to ensure a channel is within specification, the intent of this specification is not affected and the surveillance will continue to ensure the channel performs as expected. In addition, this proposed change is consistent with the wording for "Channel Calibration" in NUREG-1431. Therefore, the staff finds this change acceptable.

2.4 TS Section 6.4, "Training"

The proposed TS Section 6.4, "Training," will remove the title of director for the KNPP training program and relocate the title reference to the OQAPD. The elimination of the title from the TSs will reduce the regulatory burden for future changes due to administrative title changes.

Removing the title for the training manager from TSs and relocating this title to the OQAPD will not affect the licensee's retraining and replacement training program. The proposed change does not change the intent of the TSs or the responsibilities of the position described. Therefore, the staff finds this change acceptable.

2.5 TS Section 6.10, "Record Retention"

The proposed TS Section 6.10, "Record Retention," will revise the off-site review committee title. This change is a result of the formation of the Nuclear Management Company, LLC.

The title change is administrative and does not change the intent of the TSs or the responsibilities of the committee. Therefore, the staff finds this change acceptable.

3.0 STATE CONSULTATION

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

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a surveillance requirement. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding (65 *FR* 77923). The amendment, also, changes recordkeeping, reporting, or administrative procedures or requirements. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and (c)(10). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment for the above items.

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of no significant impact has been prepared and published in the *Federal Register* on [date] (66 *FR*), on those items relating to allowing relocating or revising titles, updating the table of contents to reflect the changes due to typographical errors. Accordingly, based on the environmental assessment, the Commission has determined that the issuance of the amendment will not have a significant effect on the quality of the human environment.

5.0 CONCLUSION

The NRC staff 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

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