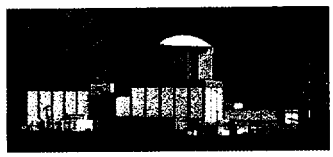
NMC
Committed to Nuclear Excellence

Kewaunee Nuclear Power Plant
N490, State Highway 42
Kewaunee, WI 54216-9511
920-388-2560

Operated by
Nuclear Management Company, LLC



November 10, 2000

10 CFR 50.90

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Ladies/Gentlemen:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
Proposed Amendment 166 to the Kewaunee Nuclear Power Plant Technical Specifications

The Nuclear Management Company (NMC) is submitting this proposed amendment (PA) to the Kewaunee Nuclear Power Plant (KNPP) Technical Specifications (TS) to revise several KNPP TS sections.

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

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.

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).

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

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

Attachment 1 to this letter contains a description of the changes, a safety evaluation, a significant hazards determination and environmental considerations for the proposed changes.

Attachment 2 contains the following affected TS pages: TS i, TS ii, TS iv, TS 1.0-1 through 1.0.6, TS Table 4.1-1, Pages 1 through 6, TS 6.4-1, and TS 6.10-2.

A001

In accordance with the requirements of 10 CFR 50.30(b), this submittal has been signed and notarized. A complete copy of this submittal has been transmitted to the State of Wisconsin as required by 10 CFR 50.91(b)(1).

Sincerely,

Mark E. Reddemann
Site Vice President

DAK

Attach.

cc - US NRC - Region III
US NRC Senior Resident Inspector
Electric Division - PSCW

Subscribed and Sworn to
Before Me This 10th Day
of November 2000

Janet L. Mueller
Notary Public, State of Wisconsin

My Commission Expires:
December 2, 2001

ATTACHMENT 1

Letter from Mark E. Reddemann (NMC)

To

Document Control Desk (NRC)

Dated

November 10, 2000

Proposed Amendment 166

Description of Proposed Changes

Safety Evaluation

Significant Hazards Determination

Environmental Considerations

Introduction

The Table of Contents will be revised to correct minor typographical errors and renumber index sections.

TS 1.i.3 definition "Channel Calibration," will be modified to incorporate additional guidance. This change is consistent with the calibration definition in Standard Technical Specifications (STS).

A review of Kewaunee Nuclear Power Plant (KNPP) Technical Specifications (TS) Table 4.1-1 identified that current calibration requirements for some instruments appear to be non-conservative and confusing. The current TS contain a note that allows deferring calibration based on instrument test results. The proposed change to TS Table 4.1-1 will delete this provision to ensure continued reliability.

Additionally, the calibration frequency for TS Table 4.1-1, Item 24, "Turbine First Stage Pressure," is being changed from annual to each refueling cycle to coincide with the KNPP operating cycle.

TS section 6.4, "Training," will remove the title for the director of training for plant staff. This proposed change eliminates the need for future technical specification amendments in the event of title or organization changes.

TS section 6.10, "Record Retention," will revise the off-site review committee title to Joint Off-Site Review Committee (JOSRC) to reflect NMC changes.

Description of Proposed Changes to Appendix A - Table of Contents

The proposed changes to Appendix A – Table of Contents include the addition of previously omitted sections, revise section page numbering and correct minor typographical errors. Specifically the proposed changes are as follows:

- Renumber sections 1.0.e, 1.0.h, 1.0.m, 1.0.n, 1.0.o, 2.3.a.3, 2.3.a.7, 3.10.b – 3.10.n, 4.2.b.1 – 4.2.b.7, 4.4.b - 4.4.e.

- Revise titles for sections 2.3, 3.1.a.5, 3.1.b, 3.8, 3.10.k – 3.10.n, 3.12, 4.2.a and 6.18.

- Add sections 3.4.a, 3.4.b, 3.4.c, 3.4.d and 6.20.

Safety Evaluation for Proposed Changes to Appendix A - Table of Contents

The proposed changes included in Appendix A – Table of Contents are administrative and strictly for accuracy purposes. The intent or interpretation of these specifications is not changed; therefore, the changes have no safety significance.

Significant Hazards Determination for Proposed Changes to Appendix - Table of Contents

The proposed changes were reviewed in accordance with the provision of 10 CFR 50.92 to show no significant hazards exist. The proposed changes will not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated.

   The proposed changes are administrative in nature and, therefore, have no impact on accident initiators or plant equipment, and thus do not affect the probability or consequences of an accident.

2. Create the possibility of a new or different kind of accident from any accident previously evaluated.

   The proposed changes do not involve changes to the physical plant or operations. Since these administrative changes do not contribute to accident initiation, they do not produce a new accident scenario or produce a new type of equipment malfunction. Also, these changes do not alter any existing accident scenarios; they do not affect equipment or its operation, and thus, do not create the possibility of a new or different kind of accident.

3. Involve a significant reduction in the margin of safety.

   Administrative changes do not involve a significant reduction in the margin of safety. The proposed changes do not affect plant equipment or operation. Safety limits and limiting safety system settings are not affected by these changes.

Description of Proposed Changes to TS 1.0, "Definitions"

The definition for channel calibration in section 1.i.3 will be changed to "...the adjustment of channel output as necessary such that it responds...." The proposed change will permit adjustment of the instrument only as necessary, allowing the instrument to perform within acceptable values. The modification will eliminate unnecessary adjustment when the channel is found within surveillance acceptable range. This will improve tracking and trending of channel performance. This change is consistent with the calibration definition in Standard Technical Specifications (STS), NUREG 1431.

Safety Evaluation for Proposed Changes to TS Section 1.0, "Definitions"

Changes are being proposed to improve the calibration definition in section 1.i.3. The proposed change will require adjustment of the instrument only as necessary, such that it performs within acceptable values. The modification will eliminate unnecessary adjustment when the channel is found within surveillance acceptable range. Since a calibration will continue to ensure a channel is

within specification, the intent of this specification is not affected and surveillance will continue to ensure the channel performs as expected. Therefore, there is no impact on public health or safety. Furthermore, this change is consistent with the calibration definition in Standard Technical Specification (STS).

Significant Hazards Determination for Proposed Changes to TS Section 1.0, "Definitions"

The proposed change was reviewed in accordance with the provisions of 10 CFR 50.92 to show no significant hazards exist. The proposed change will not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated.

   A calibration will continue to ensure that a channel is within specification. Furthermore, calibration methodology is not an accident initiator. Therefore, the proposed change will not significantly raise the probability or consequences of an accident previously evaluated.

2. Create the possibility of a new or different kind of accident from any accident previously evaluated.

   The proposed TS change to channel calibration will not introduce any new equipment or result in existing equipment functioning differently from that previously evaluated in the USAR or TS. Calibration will continue to ensure that the channel is within specification and capable of performing its design basis function. No new accident is introduced and no safety-related equipment or safety functions are altered. Therefore, the proposed change does not affect any of the parameters or conditions that contribute to initiation of any accident.

3. Involve a significant reduction in the margin of safety.

   Operation of the facility in accordance with this proposed TS change would not involve a significant reduction in a margin of safety. The specification will still ensure the operability of channels requiring calibration.

Description of Proposed Changes to TS Table 4.1-1, Item 24

A change is being proposed to change calibration frequency for Turbine First Stage Pressure from annual to each refueling cycle to coincide with KNPP's 18-month operating cycle.

Safety Evaluation for Proposed Changes to TS Table 4.1-1, Item 24

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 TS 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 P7. The move to perform calibration each refueling cycle will reduce the likelihood of inducing a plant transient. A review of turbine first stage pressure calibration procedures for the last three years concluded the transmitters performed within acceptable limits. These results indicate stable instrument performance to support extending calibration frequency from 12 months to each refueling cycle.

In addition, a review was conducted to identify transmitters in the plant which were the same manufacturer and series as those used for turbine first stage pressure channels. The transmitters used for containment pressure are similar transmitters and are calibrated on a refueling basis. Calibration for the past three operating cycles show the transmitters remained within acceptable limits. Therefore, based on the past performance of these transmitters and the solid performance of the transmitters installed for turbine first stage pressure, there is no reason to doubt continued good performance on a refueling calibration cycle. KNPP has tentatively scheduled turbine first stage pressure transmitters for replacement during the 2001 outage. A design review will be performed using the design change process to ensure the performance of the new transmitters meet or exceed the current transmitter specifications for accuracy and calibration frequency.

Based on these results, there is no decrease in the health and safety of the public by extending the calibration frequency.

Significant Hazards Determination for Proposed Changes to TS Table 4.1-1, Item 24

The proposed change was reviewed in accordance with the provisions of 10 CFR 50.92 to show no significant hazards exist. The proposed change will not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated.

   The proposed change amends the calibration interval of the turbine first stage pressure from 12 months to each refueling cycle to coincide with KNPP's operating cycle. Calibration frequency would not change the consequence of a failure of the first stage pressure channel. Calibration frequency is not an accident initiator. Therefore, the proposed changes will not significantly raise the probability or consequences of an accident previously evaluated. Additionally, this change is consistent with the turbine first stage pressure calibration frequency stated in STS.

2. Create the possibility of a new or different kind of accident from any accident previously evaluated.

   The proposed TS change will not introduce any new equipment or result in existing equipment functioning differently from that previously evaluated in the USAR or TS. The proposed change amends the calibration interval of the turbine first stage pressure from 12 months to each refueling cycle to coincide with KNPP's operating cycle. Performing the surveillance during refueling will decrease the likelihood for an induced transient. Expanding the calibration frequency will not affect the performance of the first stage pressure channel. A review of turbine first stage pressure calibration results for the last three years concluded no adjustment of the instrument was necessary due to little or no drift. Furthermore, similar transmitters already calibrated on a refueling basis have remained within acceptable limits These results indicate stable instrument performance to support extending calibration frequency from 12 months to each refueling cycle.

3. Involve a significant reduction in the margin of safety.

   Operation of the facility in accordance with the proposed TS changes would not involve a significant reduction in the margin of safety. The calibration will continue to verify the operability of the turbine first stage pressure channels. Therefore, the proposed change does not involve a significant reduction in the margin of safety.

<u>Description of Proposed Changes to TS Table 4.1-1, "Minimum Frequencies for Checks, Calibrations, and Test of Instrument Channels"</u>

Remove the note that states calibration "only if test indicates calibration required" for each of the following line items. This will ensure calibration will be done each refueling cycle.

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

Safety Evaluation of Proposed Changes to TS Table 4.1-1, "Minimum Frequencies for Checks, Calibrations, and Test of Instrument Channels"

TS Table 4.1-1 allows deferring calibration if the instrument test indicates there was no drifting of the instrument. This is non-conservative and confusing; therefore, the note is being deleted. The proposed change is more restrictive and will ensure the continued reliability of channel instruments; therefore, this change will not adversely affect the health and safety of the public.

Significant Hazards Determination for Proposed Changes to TS Table 4.1-1, "Minimum Frequencies for Checks, Calibrations, and Test of Instrument Channels"

The proposed changes were reviewed in accordance with the provisions of 10 CFR 50.92 to show no significant hazards exist. The proposed changes will not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated.

   The proposed changes to the identified line items in Table 4.1-1 will require calibration of the instruments on a refueling cycle interval without exception. These calibration frequencies are not accident initiators and thus do not affect the probability of an accident. These changes are more conservative than existing TS and, therefore, will not increase the consequences of an accident.

2. Create the possibility of a new or different kind of accident from any accident previously evaluated.

   The proposed changes will ensure that the affected channels are calibrated on a refueling basis. These changes will not introduce any new equipment or result in existing equipment functioning differently from that previously evaluated in the USAR or TS. No new accident is introduced and no safety-related equipment or safety functions are altered. The proposed changes do not affect any of the parameters or conditions that contribute to initiation of any accident.

3. Involve a significant reduction in the margin of safety.

   Operation of the facility in accordance with the proposed TS changes would not involve a significant reduction in a margin of safety. The proposed changes will ensure the continued reliability of the instruments. This change is more conservative than existing TS and is consistent with STS.

Description of Proposed Changes to TS 6.4, "Training"

TS 6.4 will remove the title of the director for the KNPP training program and relocate the title reference to the OQAPD. The elimination of the title from the TS will alleviate the need for future changes due to administrative title changes. This will eliminate some of the strain on the limited NRC and licensee resources.

Safety Evaluation for Proposed Changes to TS 6.4, "Training"

Removing the title for the training manager from TS and relocating this title to the OQAPD will not lower the safety or effectiveness of the organization. The title change will not affect the plant staff's retraining and replacement training program. The proposed change does not change the intent of the technical specifications or the responsibilities of the position described.

Significant Hazards Determination for Proposed Changes to TS 6.4, "Training"

The proposed change was reviewed in accordance with the provisions of 10 CFR 50.92 to show no significant hazards exist. The proposed change will not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated.

   The proposed change will not change the intent of the TS. Removing the title from the TS is administrative in nature and, therefore, has no impact on accident initiators or plant equipment, and thus does not affect the probability or consequences of an accident.

2. Create the possibility of a new or different kind of accident from any accident previously evaluated.

   The proposed change does not involve a change to the physical plant or operations. Since an administrative change does not contribute to accident initiation, it does not produce a new accident scenario or produce a new type of equipment malfunction.

3. Involve a significant reduction in the margin of safety.

   Administrative changes do not involve a significant reduction in the margin of safety. The proposed change does not affect plant equipment or operation. Safety limits and limiting safety system settings are not affected by this change.

Description of Proposed Changes to TS 6.10, "Record Retention"

TS 6.10 has been revised to reflect the change in title of the off-site review committee. This change is a result of the formation of the NMC.

Safety Evaluation for Proposed Changes to TS 6.10, Record Retention"

The title change is administrative and does not change the intent of the Technical Specifications or the responsibilities of the committee.

Significant Hazards Determination for Proposed Changes to TS 6.10, "Record Retention"

The proposed change was reviewed in accordance with the provisions of 10 CFR 50.92 to show no significant hazards exist. The proposed change will not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated.

   The proposed change will not change the intent of the TS. Changing the title of the off-site review committee is administrative in nature and, therefore, has no impact on accident initiators or plant equipment, and thus does not affect the probability or consequences of an accident.

2. Create the possibility of a new or different kind of accident from any accident previously evaluated.

   The proposed change does not involve a change to the physical plant or operations. Since an administrative change does not contribute to accident initiation, it does not produce a new accident scenario or produce a new type of equipment malfunction.

3. Involve a significant reduction in the margin of safety.

   Administrative changes do not involve a significant reduction in the margin of safety. The proposed change does not affect plant equipment or operation. Safety limits and limiting safety system settings are not affected by this change.

Environmental Considerations

NMC has determined that this proposed amendment involves no significant hazards considerations and no significant change in the types of any effluents that may be released off-site and that there is no significant rise in individual or cumulative occupational radiation exposure. Accordingly, this proposed amendment meets 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 this amendment.

ATTACHMENT 2

Letter From Mark E. Reddemann (NMC)

To

Document Control Desk (NRC)

Dated

November 10, 2000

Proposed Amendment 166

Affected TS Pages:

Facility Operating License Page 4
TS i through iv
TS 1.0-4
TS Table 4.1-1, Pages 1-6
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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	≤ -5%	≤ 140	~0
COLD SHUTDOWN	≤ -1%	≤ 200	~0
INTERMEDIATE SHUTDOWN	(1)	> 200 < 540	~0
HOT SHUTDOWN	(1)	≥ 540	~0
HOT STANDBY	< 0.25%	~T_{oper}	< 2
OPERATING	< 0.25%	~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	~~(a) Only if test indicates calibration required~~

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~~(a)~~	Monthly	~~(a) Only if test indicates calibration required~~
7. Pressurizer Pressure	Each shift	Each refueling cycle~~(a)~~	Monthly	~~(a) Only if test indicates calibration required~~
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~~(c)~~	Each refueling cycle	(a) With step counters (b) Following rod motion in excess of 24 steps when computer is out of service ~~(c) Only if test indicates calibration required~~
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~~(a)~~	Monthly	~~(a) Only if test indicates calibration required~~
b. Steam Generator High Level	Each shift	Each refueling cycle~~(a)~~	Monthly	~~(a) Only if test indicates calibration required~~
12. Steam Generator Flow Mismatch	Each shift	Each refueling cycle~~(a)~~	Monthly	~~(a) Only if test indicates calibration required~~
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~~(b)~~	Monthly(a)	(a) Isolation Valve Signal ~~(b) Only if test indicates calibration required~~
b. Containment Pressure (Steamline Isolation)	Each shift(a)	Each refueling cycle(a~~,b)~~	Monthly(a)	(a) Narrow range containment pressure (-3.0, +3.0 psig excluded) ~~(b) Only if test indicates calibration required~~
c. Containment Pressure (Containment Spray Act)	Each shift	Each refueling cycle~~(a)~~	Monthly	~~(a) Only if test indicates calibration required~~
d. Annulus Pressure (Vacuum Breaker)	Not applicable	Each refueling cycle~~(a)~~	Each refueling cycle	~~(a) Only if test indicates calibration required~~
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	

TABLE TS 4.1-1

MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND TEST OF INSTRUMENT CHANNELS

CHANNEL DESCRIPTION	CHECK	CALIBRATE	TEST	REMARKS
23. Steam Generator Pressure	Each shift	Each refueling cycle	Monthly	
24. Turbine First Stage Pressure	Each shift	~~Annually(a)~~Each refueling cycle	Monthly	~~(a) Only if test indicates calibration required~~
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~~(a)~~	Each refueling cycle	~~(a) Only if test indicates calibration required~~
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~~(a)~~	Each refueling cycle	~~(a) Only if test indicates calibration required~~
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 ~~under the direction of the Manager - Nuclear Plant Support Services~~ 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 ~~NSRAC~~JOSRC and PORC.

10. Records for Environmental Qualification.

11. Records of reviews performed for changes made to the ODCM and the PCP.

ATTACHMENT 3

Letter From Mark E. Reddemann (NMC)

To

Document Control Desk (NRC)

Dated

November 10, 2000

Proposed Amendment 166

Strike-Out TS Pages:

Facility Operating License Page 4
TS i through iv
TS 1.0-4
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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	≤ -5%	≤ 140	~0
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HOT STANDBY	< 0.25%	~T_{oper}	< 2
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LOW POWER PHYSICS TESTING	(To be specified by specific tests)		
(1) Refer to Figure TS 3.10-1			

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

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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
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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	Each refueling cycle	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.