

December 21, 2001

Mr. Mano Nazar  
Site Vice President  
Prairie Island Nuclear Generating Plant  
Nuclear Management Company, LLC  
1717 Wakonade Drive East  
Welch, MN 55089

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2 - REQUEST  
FOR ADDITIONAL INFORMATION REGARDING THE APPLICATION FOR  
CONVERSION TO IMPROVED TECHNICAL SPECIFICATIONS, SECTION 3.2  
(TAC NOS. MB0695 AND MB0696)

Dear Mr. Nazar:

By application dated December 11, 2000, as supplemented March 6, June 5, July 3, August 13, and November 12, 2001, Nuclear Management Company, LLC, submitted a license amendment request to convert the current Technical Specifications (TSs) for the Prairie Island Nuclear Generating Plant, Units 1 and 2, to a set of improved TSs (ITS).

Enclosed is the Nuclear Regulatory Commission staff's request for additional information (RAI) on Section 3.2, "Power Distribution," of the subject ITS submittal. The contents of the enclosed RAI have been previously forwarded to Mr. Dale Vincent of your staff to facilitate any questions or clarifications on the RAI. Subsequent dialogues have clarified the staff's understanding on a number of items, and thus requires no further information as noted in the enclosure. For the rest of the items in the enclosure, please respond within 60 days from the date of this letter.

Please contact me on (301) 415-1392 if you have any questions regarding this RAI.

Sincerely,

/RA/

Tae Kim, Senior Project Manager, Section 1  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-282 and 50-306

Enclosure: Request for Additional Information

cc w/encl: See next page

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PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2  
REQUEST FOR ADDITIONAL INFORMATION  
ITS SECTION 3.2, POWER DISTRIBUTION

1. CTS 3.10.B.1  
ITS 3.2.1 Applicability  
ITS 3.2.2 Applicability  
A3.2-02

CTS 3.10.B.1 requires that the hot channel factors as defined in CTS 3.10.B.1 and in the bases shall meet the limits specified in CTS 3.10.B.1 at all times, except during low power PHYSICS TESTING. ITS 3.2.1 and 3.2.2 Applicability requires that the heat flux hot channel factor shall be within the limits specified in the COLR in MODE 1. A3.2-02 states that requiring the hot channel factors to be within limits only in MODE 1 is an administrative change consistent with the guidance of NUREG-1431. This is not an acceptable designation of the proposed change. Changing the applicability from "at all times except during low power physics testing," to MODE 1 is a less restrictive change.

Comment: Provide the appropriate discussion of change for changing the applicability from "at all times" to MODE 1.

2. CTS 3.10.B.2  
ITS SR 3.2.1.1  
ITS SR 3.2.2.1  
PA3.2-67  
M3.2-11

M3.2-11 adds a new surveillance requirement to CTS 3.10.B.2 which states "Once after each refueling prior to THERMAL Power exceeding 75% RTP." However, the ITS mark up shows the wording for ITS SR 3.2.1.1 and ITS SR 3.2.2.1 as "Prior to exceeding 75% after each refueling." PA3.2-67 does not discuss the proposed wording change to ITS SR 3.2.1.1 and ITS SR 3.2.2.1 which is different than STS SR 3.2.1.1, STS SR 3.2.2.1 and CTS 3.10.B.2.c.

Comment: The M doc for CTS 3.10.B.2 and the proposed wording in ITS SR 3.2.1.1 and ITS SR 3.2.2.1 needs to be consistent with one another and adequate justification provided.

3. CTS 3.10.B.3(a)  
ITS 3.2.1 Action A.3  
A3.2-16

A3.2-16 discusses the addition of a new required Action, A.3, which requires the performance of SR 3.2.1.1 and SR 3.2.1.2 prior to increasing THERMAL POWER above the limit of Required Action A.1. A3.2-16 states that these new requirements would be performed under the CTS even though they are not explicitly required, in order to determine that TS requirements are met prior to increasing power level. However, ITS 3.2.1 Action A.3 is a new required action and cannot be categorized as an administrative change.

ENCLOSURE

Comment: Revise the discussion of changes to properly categorize the addition of the new required action.

CTS 3.10.B.3(b)  
ITS 3.2.1 Action B.3  
A3.2-16

A3.2-16 discusses the addition of a new required Action, B.3, which requires the performance of SR 3.2.1.1 and SR 3.2.1.2 prior to increasing THERMAL POWER above the limit of Required Action B.1. A3.2-16 states that these new requirements would be performed under the CTS even though they are not explicitly required, in order to determine that TS requirements are met prior to increasing power level. However, ITS 3.2.1 Action B.3 is a new required action and cannot be categorized as an administrative change.

Comment: Revise the discussion of changes to properly categorize the addition of the new required action.

4. CTS 3.10.B(a)  
CTS 3.10.B(c)  
ITS 3.2.1 Action C  
ITS 3.2.2 Action B  
L3.2-17

L3.2-17 discusses the addition of a new required Action, ITS 3.2.1 Action C.1 and ITS 3.2.2 Action B.1, which requires the reactor to be in MODE 2 within 6 hours if the required action and associated completion time is not met. L3.2-17 states that this new requirement is less restrictive since CTS 3.10.B(c) requires the unit to go to MODE 3 for this situation. However, CTS 3.10.B(c) also allows 24 hours for the mode change whereas the new requirement only allows 6 hours for the mode change. Changing the technical specifications completion time from 24 hours to 6 hours is a more restrictive change.

Comment: Provide a discussion of changes and the CTS mark up to properly categorize the change to the allowed completion time from 24 hours to 6 hours.

5. CTS 3.10.B.2(c)  
ITS SR 3.2.1.2 Frequency  
PA3.2-67

CTS 3.10.B.2(c) states "once after each refueling prior to THERMAL POWER exceeding 75% RTP (does not apply to SR 3.2.1.2 and SR 3.2.3.2)." The first part of the frequency statement of ITS SR 3.2.1.2 states "once within 12 hours after achieving equilibrium conditions after each refueling after THERMAL POWER exceeds 75% RTP." If CTS 3.10.B.2(c) does not apply to ITS SR 3.2.1.2, then the first part of the frequency statement of ITS SR 3.2.1.2 is not in the CTS and no discussion of changes was presented for the inclusion of the first part of ITS SR 3.2.1.2. The CTS and ITS SR 3.2.1.2 are not consistent.

Comment: Make the appropriate changes to the CTS or ITS in order to accurately reflect the frequency of the surveillance requirement. Provide adequate justification for all changes including the 12 hour limit.

6. ITS LCO 3.2.1  
PA3.2-61  
TSTF-290  
TA3.2-62

PA3.2-61 states that the  $F_Q$  methodology which closest meets CTS is NUREG-1431 3.2.1B. TA3.2-62 states that the ITS incorporated TSTF-290 which introduced a third methodology which is the most appropriate for PI. This third methodology is STS 3.2.1C. ITS 3.2.1 follows the wording of NUREG-1431 3.2.1C in Revision 2 not 3.2.1B in revision 1 or revision 2. Additionally, no explanation was provided which justified the selection of STS 3.2.1C as the technical specification which matches the  $F_Q$  methodology in the CTS.

Comment: Correct PA3.2-61 to clearly state which STS 3.2.1 is being used and how it compares to the current methodology. The description of the methodology being used, i.e., CAOC Methodology, should be maintained in the title of the specification.

7. ITS 3.2.1 Action B.1 Completion Time  
ITS 3.2.1 Action B.2 Completion Time  
TA3.2-62  
TA3.2-63  
TSTF-290 Rev. 0  
TSTF-241 Rev. 4

ITS 3.2.1 Action B.1 and Action B.2 completion times include the phrase “after each  $F_Q^w(Z)$  determination.” This proposed change is not consistent with the CTS or the STS. TA3.2-62 states that TSTF-290 introduces a new Condition B with required actions and completion times similar to those in Condition A. As such, the completion times of Condition B have been corrected to include the changes from TSTF-241 which did not recognize the existence of the new condition B. The proposed change to STS 3.2.1 Action B.1 and Action B.2 completion times is generic and should be changed through the TSTF.

Comment: Provide a plant specific justification for the proposed changes to STS 3.2.1 Action B.1 and Action B.2 completion times or maintain the STS wording.

8. ITS 3.2.1 SR Note

ITS 3.2.1 SR has a note which states “during power escalation at the beginning of each cycle, THERMAL POWER may be increased until an equilibrium power level has been achieved, at which a power distribution map is obtained.” This note does not appear in the CTS or the CTS mark up. No justification of differences or discussions of changes was provided for adding this SR note to the ITS.

Comment: Provide an adequate discussion of changes which addresses the addition of ITS 3.2.1 SR Note.

9. ITS 3.2.2 Action A Note

ITS 3.2.2 Action A has a note which states “Required Actions A.2 and A. 4 must be completed whenever Condition A is entered.” This note does not appear in the CTS or the CTS mark up.

No justification of differences or discussions of changes was provided for adding this Condition A note to the ITS.

Comment: Provide an adequate discussion of changes which addresses the addition of ITS 3.2.2 Action A Note.

10. STS 3.2.2 Action A.1.1  
PA3.2-68

STS 3.2.2 Action A.1.1 requires the restoration of  $F_{\Delta H}^N$  to within limit in 4 hours. This action was not incorporated into the ITS. PA3.2-68 states that this change is consistent with proposed TSTF-240. TSTF-240 was withdrawn by NEI by letter dated May 29, 2001 and therefore was not reviewed and approved by the staff. A plant specific justification was not provided for not including STS 3.2.2 Action A.1.1.

Comment: Incorporate STS 3.2.2 Action A.1.1 into the ITS or provide a plant specific justification for not including the action statement.

11. ITS 3.2.2 Action A.2  
CTS 3.10.B.3.(c)

ITS 3.2.2 Action A.2 requires the performance of SR 3.2.2.1 in 24 hours. The 24 hour completion time is not in the CTS. No discussion of changes was provided for the 24 hour completion time of ITS 3.2.2 Action A.2.

Comment: Provide the discussion of changes for the 24 hour completion time of ITS 3.2.2 Action A.2.

12. ITS 3.2.2 Action A.4 Note

ITS 3.2.2 Action A.4 has a note which states "THERMAL POWER does not have to be reduced to comply with this Required Action." This note does not appear in the CTS or the CTS mark up. No justification of differences or discussions of changes was provided for adding this REQUIRED ACTION A.4 note to the ITS.

Comment: Provide an adequate discussion of changes which addresses the addition of ITS 3.2.2 Action A.4 Note.

13. ITS 3.2.2 Action A.4 Completion Time  
CTS 3.10.B.3.(c)  
PA3.2-69

CTS 3.10.B.3(c) requires the identification and correction of the "cause of the out of limit condition prior to increasing THERMAL POWER above 50% of RATED THERMAL POWER. THERMAL POWER may then be increased provided  $F_{\Delta H}^N$  is demonstrated through in-core mapping to be within limits." ITS 3.2.2 Action A.4 completion times does not include "THERMAL POWER" even though these words are in the STS 3.2.2 Action A.3 completion

times. PA3.2-69 states that “the term THERMAL POWER is not included in any of the Completion Times since the meaning is clearer without this term.” This justification is not consistent with the CTS or the STS.

Comment: Correct the ITS 3.2.2 Action A.4 Completion Times to include the term THERMAL POWER.

#### 14. ITS 3.2.2 Action A.4 Completion Time

ITS 3.2.2 Action A.4 Completion Times has three statements which include “prior to exceeding 50% RTP AND prior to exceeding 75% RTP AND 24 hours after reaching  $\geq$  95% RTP.” The last two completion time statements are not in the CTS or the CTS mark up. No justification of differences or discussion of changes was provided for adding the two completion time statements to ITS 3.2.2 Action A.4.

Comment: Provide an adequate discussion of changes which addresses the addition of the two completion time statements to ITS 3.2.2 Action A.4.

#### 15. ITS SR 3.2.3.1 M3.2-36

M3.2-36 states that a new surveillance requirement, ITS SR 3.2.3.1, has been included to verify AFD is within limits. However, M3.2-36 did not explain why the seven day frequency was adequate for Prairie Island.

Comment: Provide justification for the seven day frequency of ITS SR 3.2.3.1.

#### 16. ITS 3.2.3 PA3.2-71

PA3.2-71 states that the method used at Prairie Island is closest to the CAOC method. PA3.2-71 continues to state that the methodology name is not necessary in the title and has been deleted. This justification is insufficient. The name of the methodology used should be maintained in the title of the specification.

Comment: Maintain the name of the methodology used in the title of the specification.

#### 17. STS 3.2.3 Action D CL3.2-74

STS 3.2.3 Action D requires Thermal Power to be reduced to less than 15% RTP in 9 hours if the required action and associated completion time for condition C are not met. CL3.2-74 states that Condition D is unnecessary and not in the CTS. While STS 3.2.3 Action D is not consistent with the CTS, it is consistent with ITS 3.2.3 Applicability. The CTS Applicability was modified to match the STS 3.2.3 Applicability and therefore, Action D should be included in order to exit ITS 3.2.3.

Comment: Incorporate STS 3.2.3 Action D into the ITS and provide the associated documentation for the change.



18. ITS SR 3.2.3.3  
STS SR 3.2.3.4  
PA3.2-78

PA3.2-78 states that STS SR 3.2.3.3 and SR 3.2.3.4 have been combined into one SR, ITS SR 3.2.3.3, to be consistent with current plant practices. STS SR 3.2.3.3 and 3.2.3.4 state update target flux difference and determine, by measurement, the target flux difference, respectively. ITS SR 3.2.3.3 states “determine and update target flux difference.” STS SR 3.2.3.4 also has a note which should be included in the new combined ITS SR. The contents of this STS SR note are discussed in the ITS Bases. The combined ITS SR should also contained the phrase ‘by measurement.’

Comment: Revise the proposed ITS SR 3.2.3.3 to state ‘determine, by measurement, and update target flux difference.’ The STS SR 3.2.3.4 Note should also be included in ITS SR 3.2.3.3. Otherwise, provide plant specific justification for not including the STS SR 3.2.3.4 Note.

19. CTS 3.10.C.1  
M3.2-38

M3.2-38 states that it is replacing the CTS requirement to monitor and logged the rod position indication once each shift if the QPTR is greater than 1.02 and less than 1.07 with the requirement to perform SR 3.2.1.1, SR 3.2.1.2, and SR 3.2.2.1 24 hours after achieving equilibrium. This appears to be consistent with the requirement in ITS 3.2.4 Action A.3 although it is not identified as such in the CTS mark up. Additionally, the 24 hour completion time was not justified as being appropriate for use at Prairie Island.

Comment: Provide proper justification for the 24 hour completion time for performing SR 3.2.1.1, SR 3.2.1.2 and SR 3.2.2.1.

20. CTS 3.10.C.1.a

CTS 3.10.C.1.a requires that the QPTR be corrected to be less than 1.02 within 2 hours if QPTR exceeds 1.02. The CTS mark up shows that this specification is incorporated in LCO 3.2.4. However, LCO 3.2.4 requires that the QPTR be  $\leq 1.02$ . There is no 2 hour completion time in LCO 3.2.4.

Comment: Provide a discussion of change for CTS 3.10.C.1.a to explain what is being done with this specification.

21. M3.2-41  
ITS 3.2.4 Required Actions A.2, A.3, A.4, A.5, and A.6  
ITS 3.2.4 Required Actions B.1

M3.2-41 states that new Action Statements are included in addition to CTS 3.10.C.1 to address remedial actions for QPTR outside of limits. These new Action Statements are consistent with the guidance of NUREG-1431 and are included for completeness. No discussion of how these new Action Statements are applicable to Prairie Island or that the associated completion times are appropriate. Each new Action Statement should be discussed.

Comment: Provide discussion of changes for the new Action Statements included in the ITS and document how those new Action Statements and associated completion times are appropriate for Prairie Island.

22. ITS SR 3.2.4.1  
M3.2-43

M3.2-43 discusses the addition of a new surveillance requirement, SR 3.2.4.1. However, the frequency of the surveillance requirement was not justified in M3.2-43.

Comment: Provide a discussion on the appropriateness of the 7 day frequency of SR 3.2.4.1 at Prairie Island.

23. ITS 3.2.4 Action A.2  
TA3.2-80

ITS 3.2.4 Action A.2 shows the deletion of the phrase “and reduce THERMAL POWER  $\geq$  3% from RTP for each 1% of QPTR > 1.00.” TA3.2-80 is the only justification of differences associated with ITS 3.2.4 Action A.2 and it does not discuss the deletion of the above phrase. The deletion of the above phrase was approved in TSTF-241 Rev. 4. No justification of differences was provided to discuss the deleted phrase.

Comment: Provide the justification for differences which discussion the deletion of the phrase in ITS 3.2.4 Action A.2.

24. ITS SR 3.2.4.1

ITS SR 3.2.4.1 has notes for the performance of the surveillance. These notes do not appear in the CTS or the CTS mark up. No justification of differences or discussions of changes was provided for adding these notes to ITS SR 3.2.4.1. Since SR 3.2.4.1 is a new surveillance, these notes should have been discussed too.

Comment: Provide an adequate discussion of changes which addresses the addition of ITS SR 3.2.4.1 Notes.

25. ITS SR 3.2.4.2

ITS SR 3.2.4.2 has a note for the performance of the surveillance. This note does not appear in the CTS or the CTS mark up. No justification of differences or discussions of changes was provided for adding this note to ITS SR 3.2.4.2.

Comment: Provide an adequate discussion of changes which addresses the addition of ITS SR 3.2.4.2 Note.

26. ITS SR 3.2.4.2 Note

ITS SR 3.2.4.2 Note changes the phrase “input from one or more” to “input from one.” No justification of differences was provided for this change. Table 3.5-2A Action 2 implies more than one channel. This requirement does not seem to be incorporated into the ITS.

Comment: Provide adequate justification for the deletion of “or more” from the ITS SR 3.2.4.2 Note.