NMC
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Nuclear Management Company, LLC
Prairie Island Nuclear Generating Plant
1717 Wakonade Dr. East
Welch MN 55089

February 14, 2002

10 CFR Part 50
Section 50.90

U S Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

PRAIRIE ISLAND NUCLEAR GENERATING PLANT
Docket Nos. 50-282 License Nos. DPR-42
50-306 DPR-60

Supplement to License Amendment Request dated December 11, 2000
Conversion to Improved Technical Specifications (ITS)

By letter dated, December 11, 2000, Prairie Island submitted a License Amendment Request (LAR) to convert the current Technical Specifications (CTS) using the guidance of NUREG-1431, Revision 1 as amended by NRC and industry Technical Specification Task Force (TSTF) documents. This letter supplements the subject LAR.

By letter dated December 21, 2001, the NRC Staff sent NMC requests for additional information (RAIs) regarding our LAR dated December 11, 2000 to convert to Improved Technical Specifications. Attachment 1 to this letter contains the NRC RAIs for ITS Section 3.9, "Refueling Operations", and the Nuclear Management Company (NMC) answers to these RAIs.

NMC also proposes to make the review changes and corrections identified as E34 and E37. Changes designated as E34 revise the 3.5.3 Bases Applicable Safety Analyses as resolution of RAI 3.5-43. Changes designated as E37 clarify the location and purpose of audible countrate.

Attachment 2, Page List by RAI Q, provides a cross-reference of RAIs and other sources of page changes to the pages that they changed.

Attachment 3 to this letter contains Revision 10 change pages which implement answers to the Section 3.9 RAIs. Changes to the Revision 10 pages are

A001

sidelined in the right margin beside the line(s) which have been revised. Change Pages from Parts A, B, D, F, G or Cross-References are dated 1/21/02. Change Pages from Parts C and E are marked as Revision 10 with a small textbox below the revision sideline which contains "R-10".

The Significant Hazards Determinations and Environmental Assessments, as presented in the original December 11, 2000 submittal and as supplemented March 6, 2001, July 3, 2001, August 13, 2001, November 12, 2001, December 12, 2001, January 25, 2002, January 31, 2002 and by the Part G change pages in Attachment 3 of this letter, bound the proposed license amendment.

NMC is notifying the State of Minnesota of this LAR supplement by transmitting a copy of this letter and attachments to the designated State 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 on my personal knowledge, but on information furnished by other Prairie Island Nuclear Generating Plant (PINGP) and NMC employees, contractor employees, and/or consultants. Such information has been reviewed in accordance with company practice, and I believe it to be reliable.

In this letter NMC has not made any new or revised any Nuclear Regulatory Commission commitments. Please address any comments or questions regarding this matter to myself or Mr. Dale Vincent at 1-651-388-1121.

M. K. Nazar

Mano K. Nazar
Site Vice President
Prairie Island Nuclear Generating Plant

C: Regional Administrator - Region III, NRC
Senior Resident Inspector, NRC
NRR Project Manager, NRC
James Bernstein, State of Minnesota
J E Silberg

(Attachments listed on Page 3)

Attachments:
Affidavit
1. NRC RAIs Section 3.9, "Refueling Operations", and NMC Responses.
2. Page List by RAI Q
3. Revision 10 Change Pages

UNITED STATES NUCLEAR REGULATORY COMMISSION

NUCLEAR MANAGEMENT COMPANY, LLC

PRAIRIE ISLAND NUCLEAR GENERATING PLANT DOCKET NO. 50-282
50-306

REQUEST FOR AMENDMENT TO
OPERATING LICENSES DPR-42 & DPR-60

SUPPLEMENT TO LICENSE AMENDMENT REQUEST DATED DECEMBER 11, 2000
CONVERSION TO IMPROVED TECHNICAL SPECIFICATIONS (ITS)

By letter dated February 14, 2002, Nuclear Management Company, LLC, a Wisconsin corporation, is submitting additional information in support of the License Amendment Request originally submitted December 11, 2000.

This letter contains no restricted or other defense information.

NUCLEAR MANAGEMENT COMPANY, LLC

By M. K. Nazar
Mano K. Nazar
Site Vice President
Prairie Island Nuclear Generating Plant

State of Minnesota

County of Goodhue

On this 14th day of February 2002 before me a notary public acting in said County, personally appeared Mano K. Nazar, Site Vice President, Prairie Island Nuclear Generating Plant, and being first duly sworn acknowledged that he is authorized to execute this document on behalf of Nuclear Management Company, LLC, that he knows the contents thereof, and that to the best of his knowledge, information, and belief the statements made in it are true.

Marlys E. Davis

MARLYS E. DAVIS
NOTARY PUBLIC-MINNESOTA
My Commission Expires Jan. 31, 2005

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Lic Libr				1
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PI Records	1			1
Betty Underwood (OSRC)	1			
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Prairie Island Nuclear Generating Plant

Attachment 1

to
Supplement dated February 14, 2002
to License Amendment Request dated December 11, 2000
Conversion to Improved Technical Specifications (ITS)

NRC RAIs Section 3.9, "Refueling Operations", and NMC Responses

PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2
REQUEST FOR ADDITIONAL INFORMATION
ITS SECTION 3.9, REFUELING

1. ITS 3.9.3 Action B.2
CTS 3.8.A.1.c

ITS 3.9.3 Action B.2 requires the performance of SR 3.9.1.1 in 12 hours. The 12 hour completion time is not in the CTS. No discussion of changes was provided for the 12 hour completion time of ITS 3.9.3 Action B.2.

Comment: Provide the discussion of changes for the 12 hour completion time of ITS 3.9.3 Action B.2.

NMC Response:
Parts affected by this change:
Part D: DOC M3.9-22

DOC M3.9-22 was revised to include discussion of the 12 hour Completion Time.

2. ITS 3.9.3 Action C.3
CTS 3.8.A.1.c

ITS 3.9.3 Action C.3 requires the performance of SR 3.9.1.1 in 12 hours. The 12 hour completion time is not in the CTS. No discussion of changes was provided for the 12 hour completion time of ITS 3.9.3 Action C.3.

Comment: Provide the discussion of changes for the 12 hour completion time of ITS 3.9.3 Action C.3.

NMC Response:
Parts affected by this change:
Part D: DOC M3.9-23

DOC M3.9-23 was revised to include discussion of the 12 hour Completion Time.

3. ITS SR 3.9.3.1
CTS 3.8.A.1.c

ITS SR 3.9.3.1 requires the performance of a channel check every 12 hours. The 12 hour frequency is not in the CTS. No discussion of changes was provided for the 12 hour frequency of ITS SR 3.9.3.1.

Comment: Provide the discussion of changes for the 12 hour frequency of ITS SR 3.9.3.1.

NMC Response:
Parts affected by this change:
Part D: DOC M3.9-24

DOC M3.9-24 was revised to include discussion of the 12 hour SR 3.9.3.1 Frequency.

4. ITS SR 3.9.3.2
CTS 3.8.A.1.c

ITS SR 3.9.3.2 requires the performance of a channel calibration every 24 months. The 24 month frequency is not in the CTS. No discussion of changes was provided for the 24 month frequency of ITS SR 3.9.3.2.

Comment: **Beyond Scope Issue.** Provide the discussion of changes for the 24 month frequency of ITS SR 3.9.3.2.

NMC Response:
Parts affected by this change:
Part D: DOC M3.9-24

It is NMCs position that this is not a beyond scope issue. As discussed in response to RAI 3.6.0-2, CTS 4.0.A.2 allows surveillances to be performed with intervals up to two years (24 months). Since this is a new surveillance for Prairie Island, any interval is more restrictive than CTS. DOC M3.9-24 was revised to include discussion of the the SR 3.9.3.2 Frequency.

5. ITS 3.9.3 Action C.2 and C.3
PA3.9-70

ITS 3.9.3 Action C.2 and C.3 require the immediate suspension of operations that would cause introduction into the RCS, coolant with boron concentration less than required to meet the boron concentration of LCO 3.9.1 and the performance of SR 3.9.1.1 every 12 hours. These required actions are not in the STS or the CTS. PA3.9-70 states that these new required actions have been included to be consistent with the intent of TSTF-268 Rev. 2 which was not considered when TSTF-23 was written. PA3.9-70 does not provide sufficient plant specific information for the adoption of the proposed ITS 3.9.3 Action C.2 and C.3.
Comment: Provide plant specific justification for the adoption of the proposed ITS 3.9.3 Action C.2 and C.3.

NMC Response:
Parts affected by this change:
Part F: JFD PA3.9-70

JFD PA3.9-70 has been revised to provide further justification for including 3.9.3 Required Actions C.2 and C.3.

6. ITS SR 3.9.3.2 Note

ITS SR 3.9.3.2 has a note which states "Neutron detectors are excluded from CHANNEL CALIBRATION." 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 the ITS.

Comment: Provide an adequate discussion of changes which addresses the addition of ITS 3.9.3.2 Note.

NMC Response:
Parts affected by this change:
Part D: DOC M3.9-24

DOC M3.9-24 was revised to include discussion of excluding the neutron detectors from the calibration.

7. CTS 3.8.A.1.a.2) a)
A3.9-10
ITS LCO 3.9.4.b

CTS 3.8.A.1.a.2) a) adds the phrase "capable of being closed and" to the CTS and ITS. The addition of this phrase is not discussed in the discussion of changes.

Comment: Provide a discussion of changes for the addition of the phrase "capable of being closed" to the CTS and ITS.

NMC Response:
Parts affected by this change:
Part B: ITS final pages
Part E: ISTS markup

In response to RAI 3.9-8, below, LCO 3.9.4 was revised to delete this phrase.

8. CTS 3.8.A.1.a.2) b)
ITS LCO 3.9.4.b
A3.9-10
LR3.9-11
A3.9-12
LR3.9-13
A3.9-14
CL3.9-62

CTS 3.8.A.1.a.2) b) allows both doors in each air lock to be open if four requirements are met. The CTS mark up proposes to relocate some of those requirements out of the ITS. This change is not consistent with the CTS and is considered to be beyond scope.

Comment: Maintain the CTS requirements in the ITS and provide revised mark up ITS pages and justifications.

NMC Response:
Parts affected by this change:
Part B: ITS final pages
Part C: CTS markup
Part D: DOCs A3.9-07, A3.9-10, LR3.9-11(deleted), A3.9-12, LR3.0-13 and A3.9-14
Part E: ISTS markup
Part F: JFD CL3.9-62, CL3.9-128
Paart G: NSHDs

ITS LCO3.9.4 has been revised to more clearly retain the CTS requirements when both air lock doors are open during fuel handling in containment. The changes proposed are not out of scope. The CTS markup has been simplified and the DOCs list above have been revised to show that the CTS requirements have been retained.

9. ITS SR 3.9.4.1
CTS 3.8-1 Overflow

ITS SR 3.9.4.1 requires the verification of each required containment penetration is in the required status every 7 days. The 7 day frequency is not in the CTS. No discussion of changes was provided for the 7 day frequency of ITS SR 3.9.4.1.

Comment: Provide the discussion of changes for the 7 day frequency of ITS SR 3.9.4.1.

NMC Response:
Parts affected by this change:
Part C: CTS markup
Part D: DOC M3.9-16

CTS markup and DOC M3.9-16 were revised to show the 7 day Frequency for ITS SR 3.9.4.1 and provide discussion of this change.

10. ITS SR 3.9.4.2
CTS 3.8-1 Overflow

ITS SR 3.9.4.2 requires the verification that each required containment inservice (low flow) purge system valve actuates to the isolation position on an actual or simulated actuation signal every 24 months. The 24 month frequency is not in the CTS. No discussion of changes was provided for the 24 month frequency of ITS SR 3.9.4.2.

Comment: **Beyond Scope Issue.** Provide the discussion of changes for the 24 month frequency of ITS SR 3.9.4.2.

NMC Response:
Parts affected by this change:
Part C: CTS markup
Part D: DOC M3.9-16

CTS markup and DOC M3.9-16 were revised to show the 24 month Frequency for ITS SR 3.9.4.2 and provide discussion of this change. The SR Frequency of 24 months is not beyond scope. As discussed in response to RAI 3.6.0-2, PI CTS allows refueling outage intervals up 24 months. A CTS SR with a Frequency of "each refueling outage" could be performed every 24 months. Since this is a new SR for Prairie Island, the 24 month Frequency is consistent with CTS allowed Frequency for SRs are intended to be performed at the same Frequency as refueling outages. Since the intent for SR 3.9.4.2 is performance at the same Frequency as refueling outages, 24 months is consistent with CTS and this is not a beyond scope change.

11. ITS LCO 3.9.4.c.1
CL3.9-65

ITS mark up for ITS LCO 3.9.4.c.1 indicates that the changes made are associated with CL3.9-65. However, Part F, Justification for Differences, states that 65 is not used.

Comment: Correct the ITS mark up or Part F to represent what is being changed.

NMC Response:
Parts affected by this change:
Part F: JFD CL3.9-65

JFD CL3.9-65 was added as justification for the change to LCO 3.9.4.c.1.

12. ITS SR 3.9.4.2 Note

ITS SR 3.9.4.2 has a note which states "Not required to be met for containment inservice (low flow) purge valve(s) in penetrations closed to comply with LCO 3.9.4.c.1." 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 the ITS.

Comment: Provide an adequate discussion of changes which addresses the addition of ITS 3.9.4.2 Note.

NMC Response:
Parts affected by this change:
Part C: CTS markup
Part D: DOC M3.9-16

CTS markup was revised to more clearly show the SR 3.9.4.2 Note and DOC M3.9-16 was revised to provide discussion of this change.

13. ITS LCO 3.9.5 Note
TA3.9-68

TA3.9-68 states that the changes incorporate TSTF-153. TSTF-153 has been revoked due to confusion over the wording.

Comment: Please use NUREG 1431 Rev. 1 wording (wording prior to TSTF-153) for all affected specifications.

NMC Response:
Parts affected by this change:
Part B: Final ITS pages
Part E: ISTS markup
Part F: Delete JFD TA3.9-68

ITS Specification 3.9.5 has been revised to delete TSTF-153 and JFD TA.9-68 has been deleted. Changes associated with removal of TSTF-153 from Specifications 3.4.5, 3.4.6, 3.4.7 and 3.4.8 will be included with the change pages in response to RAIs for Section 3.4. TSTF-153 changes to Specification 3.5.2 will not be removed since the Prairie Island (PI) ITS only incorporated the changes which relocated the Applicability Note to be an LCO Note which remains a viable change. The 3.5.2 change which reworded requirements for the pumps to be inoperable were not included in the PI ITS.

14. ITS 3.9.5 Action A.4
ITS 3.9.5 Action A.6.1
ITS 3.9.5 Action A.6.2

ITS Required Actions A.4, A.6.1 and A.6.2 for Specification 3.9.5 do not appear in the CTS or the CTS mark up. No justification of differences or discussion of changes was provided for the addition of these required actions.

Comment: Provide an adequate discussion of changes for the addition of required actions A.4, A.6.1 and A.6.2 and the associated completion time.

NMC Response:
Parts affected by this change:
Part C: CTS markup
Part D: Add DOC A3.9-50 and MA3.9-51

ITS Specification 3.9.5 Required Actions (RA) A.4 and A.6.1 are included in the actions required by CTS shown on Page 6 of 10 in the ITS submittal. The CTS markup has been revised to make this clear and a new A-DOC, A3.9-50 has been provided. The CTS markup has also been revised to include verification that the inservice purge penetrations are capable of being isolated by an OPERABLE containment ventilation isolation system. A new M-DOC, M3.9-51, is included to provide discussion for this change.

15. ITS 3.9.5 Action A.6.1
STS 3.9.5 Action A.6.1
ITS 3.9.6 Action B.5.1
STS 3.9.6 Action B.5.1

STS 3.9.5 Required Action A.6.1 and 3.9.6 Required Action B.5.1 state "close each penetration providing direct access from the containment atmosphere to the outside atmosphere with a manual or automatic isolation valve, or blind flange, or equivalent." ITS 3.9.5 Action A.6.1 and ITS 3.9.6 Action B.5.1 are missing the phrase "or equivalent." No justification of differences was provided for the change.

Comment: Adopt the STS wording for Action A.6.1 and Action B.5.1 or provide plant specific justification for the change.

NMC Response:
Parts affected by this change:
Part F: Revise JFD TA3.9-69

JFD TA3.9-69 was revised to provide justification for not including "or equivalent" in Specifications 3.9.5 and 3.9.6.

16. CTS 3.A.8.1.f
M3.9-33
L3.9-34
ITS 3.9.6 Note 1

CTS 3.8.A.1.f states that the pump (one RHR pump must be operable and running) may be shut down for up to one hour to facilitate movement of fuel or core components. STS 3.9.6 requires two RHR loops to be operable and one RHR loop shall be in operation. M3.9-33 and L3.9-34 provide a discussion of changes to CTS 3.8.A.1.f which would add the phrase "per 8 hour period provided no operations are permitted which would cause reduction of RCS boron concentration," and delete the phrase "to facilitate movement of fuel or core components." These changes are incorporated into ITS 3.9.5 Note and are consistent with the STS. However, the proposed changes are not consistent with STS 3.9.6 Note 1 or the CTS mark up. M3.9-33 and L3.9-34 do not provide any basis for changing STS 3.9.6 Note 1 to that proposed by ITS 3.9.6 Note 1. The proposed ITS 3.9.6 Note 1 is not justified, not consistent with the proposed operation specified in ITS LCO 3.9.6 and therefore is not acceptable.

Comment: Adopt STS 3.9.6 Note 1 wording by providing adequate justification for use at Prairie Island.

NMC Response:
Parts affected by this change:
Part B: Final ITS pages
Part C: CTS markup
Part D: Revise DOC M3.9-33, change DOC A3.9-32 to M3.9-32, add DOC M-53
Part E: ISTS markup
Part F: Revise JFD CL3.9-74
Part G: NSHDs

ITS 3.9.6 Note 1 has been revised to incorporate TSTF-349, Revision 1, with one exception. The traveler limits the pump shut down time to 15 minutes for switching from one pump to another. CTS allows both pumps to be shutdown for one hour. To be consistent with othe ITS Specifications, the limitation of 1 hour per 8 hour period is included. The Prairie Island plant may need up to one hour to perform refueling operations in accordance with CTS. These changes have been made in all applicable locations in the ITS submittal.

17. CTS 3.8.A.1.g
M3.9-37
ITS 3.9.6 Note 2

M3.9-37 discusses the addition of a new note (ITS 3.9.6 Note 2) to CTS 3.8.A.1.g which states that "the required operating RHR loop may be removed from operation, and considered OPERABLE and in operation, to support filling and draining the reactor cavity when aligned to, or during transitioning to or from, the refueling water storage tank provided the required RHR loop is capable of being realigned to the RCS." This new note is not consistent with the CTS or the STS. M3.9-37 does not provide any basis for the addition of the new note and therefore, ITS 3.9.6 Note 2 is not acceptable.

Comment: Adopt STS 3.9.6 Note 2 wording by providing adequate justification for use at Prairie Island.

NMC Response:
Parts affected by this change:
Part B: Final ITS pages
Part C: CTS markup
Part D: Revise DOC M3.9-37, add DOC L3.9-54
Part E: ISTS markup
Part F: Revise JFD X3.9-76 to TA3.9-76
Part G: NSHDs

LCO 3.9.6 Note 1 has been revised to incorporate TSTF-361, Revision 2. The appropriate markup and changes have been made in the ITS submittal.

18. ITS SR 3.9.6.1
CTS 3.8.A.1.g

ITS SR 3.9.6.1 requires the verification that one RHR loop is in operation every 12 hours. The 12 hour frequency is not in the CTS. No discussion of changes was provided for the 12 hour frequency of ITS SR 3.9.6.1.

Comment: Provide the discussion of changes for the 12 hour frequency of ITS SR 3.9.6.1.

NMC Response:
Parts affected by this change:
Part C: CTS markup
Part D: DOC M3.9-43

CTS was revised to include the 12 hour Frequency for SR 3.9.6.1 and DOC M3.9-43 was revised to provide discussion of this change.

19. ITS SR 3.9.6.2
CTS 3.8.A.1.g

ITS SR 3.9.6.2 requires the verification of correct breaker alignment and indicated power available to the required RHR pump that is not in operation every 7 days. The 7 day frequency is not in the CTS. No discussion of changes was provided for the 7 day frequency of ITS SR 3.9.6.2.

Comment: Provide the discussion of changes for the 7 day frequency of ITS SR 3.9.6.2.

NMC Response:
Parts affected by this change:
Part C: CTS markup
Part D: DOC M3.9-43

CTS was revised to include the 7 day Frequency for SR 3.9.6.2 and DOC M3.9-43 was revised to provide discussion of this change.

20. ITS 3.9.6 Action A.2
ITS 3.9.6 Action B.2
ITS 3.9.6 Action B.3
ITS 3.9.6 Action B.5.1
ITS 3.9.6 Action B.5.2

ITS Required Actions A.2, B.2, B.3, B.5.1 and B.5.2 for Specification 3.9.6 do not appear in the CTS or the CTS mark up. No justification of differences or discussion of changes was provided for the addition of these required actions.

Comment: Provide an adequate discussion of changes for the addition of required actions A.2, B.2, B.3, B.5.1 and B.5.2 and the associated completion time.

NMC Response:
Parts affected by this change:
Part C: CTS markup
Part D: Add DOC A3.9-50 and MA3.9-51

ITS Specification 3.9.6 Required Actions (RA) A.2 and B.2 are included in the actions required by CTS shown on Page 5 of 10 of the submittal. ITS Specification 3.9.6 RAs B.3 and B.5.1 are included in the actions required by CTS shown on Page 6 of 10 of the submittal. The CTS markup has been revised to make this clear and new A-DOCs, A3.9-50 and A3.9-52, have been provided. The CTS markup has also been revised to include verification that the inservice purge penetrations are capable of being isolated by an OPERABLE containment ventilation isolation system. A new M-DOC, M3.9-51, is included to provide discussion for this change.

Prairie Island Nuclear Generating Plant

Attachment 2

to
Supplement dated February 14, 2002
to License Amendment Request dated December 11, 2000
Conversion to Improved Technical Specifications (ITS)

Page List by RAI Q

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Prairie Island Nuclear Generating Plant

Attachment 3

to
Supplement dated February 14, 2002
to License Amendment Request dated December 11, 2000
Conversion to Improved Technical Specifications (ITS)

Revision 10 Change Pages

Improved Technical Specifications
Supplement dated 1/21/02

Revision 10 Change Page List

UPDATING INSTRUCTIONS

Remove				Insert			
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3.5	B	B 3.5.3-1	12/11/00	3.5	B	B 3.5.3-1	1/21/02
3.5	E	B 3.5.3-1		3.5	E	B 3.5.3-1	10
3.5	E	B 3.5.3-2		3.5	E	B 3.5.3-2	None
3.9	B	3.9.4-1	12/11/00	3.9	B	3.9.4-1	1/21/02
3.9	B	3.9.4-2	12/11/00	3.9	B	3.9.4-2	12/11/00
3.9	B	3.9.5-1	12/11/00	3.9	B	3.9.5-1	1/21/02
3.9	B	3.9.6-1	12/11/00	3.9	B	3.9.6-1	1/21/02
3.9	B	3.9.6-2	12/11/00	3.9	B	3.9.6-2	12/11/00
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3.9	B	B 3.9.4-7	12/11/00	3.9	B	B 3.9.4-7	12/11/00
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3.9	C	2 of 10		3.9	C	2 of 10	10
3.9	C	3 of 10		3.9	C	3 of 10	10
3.9	C	4 of 10		3.9	C	4 of 10	10
3.9	C	5 of 10		3.9	C	5 of 10	10
3.9	C	6 of 10		3.9	C	6 of 10	10
3.9	D	4	12/11/00	3.9	D	4	1/21/02
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9	D	6	12/11/00	3.9	D	6	1/21/02
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Improved Technical Specifications
Supplement dated 1/21/02

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UPDATING INSTRUCTIONS

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3.9	D	8	12/11/00	3.9	D	8	1/21/02
3.9	D	9	12/11/00	3.9	D	9	12/11/00
3.9	D	10	12/11/00	3.9	D	10	1/21/02
3.9	D	11	12/11/00	3.9	D	11	1/21/02
3.9	D	12	12/11/00	3.9	D	12	12/11/00
3.9	D	13	12/11/00	3.9	D	13	12/11/00
3.9	D	14	12/11/00	3.9	D	14	1/21/02
3.9	D	---	12/11/00	3.9	D	15	12/11/00
3.9	D	---	---	3.9	D	16	1/21/02
3.9	D	---	---	3.9	D	17	1/21/02
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3.9	D	---	---	3.9	D	19	1/21/02
3.9	D	---	---	3.9	D	20	1/21/02
3.9	E	3.9.4-1		3.9	E	3.9.4-1	10
3.9	E	3.9.4-2		3.9	E	3.9.4-2	None
3.9	E	3.9.5-1		3.9	E	3.9.5-1	10
3.9	E	3.9.6-1		3.9	E	3.9.6-1	10
3.9	E	B 3.9.3-1		3.9	E	B 3.9.3-1	10
3.9	E	B 3.9.3-2		3.9	E	B 3.9.3-2	10
3.9	E	B 3.9.4-6		3.9	E	B 3.9.4-6	10
3.9	E	B 3.9.4-7		3.9	E	B 3.9.4-7	10
3.9	E	B 3.9.4-8		3.9	E	B 3.9.4-8	None
3.9	E	B 3.9.4-9		3.9	E	B 3.9.4-9	None
3.9	E	B 3.9.4-10		3.9	E	B 3.9.4-10	None
3.9	E	B 3.9.5-3		3.9	E	B 3.9.5-3	10
3.9	E	B 3.9.6-3		3.9	E	B 3.9.6-3	10
3.9	F	4	12/11/00	3.9	F	4	1/21/02
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Revision 10 Change Page List

UPDATING INSTRUCTIONS

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3.9	F	9	12/11/00	3.9	F	9	1/21/02
3.9	F	18	---	3.9	F	18	1/21/02
3.9	G	1	5/1/01	3.9	G	1	1/21/02
3.9	G	3	12/11/00	3.9	G	3	1/21/02
3.9	G	7	12/11/00	3.9	G	7	1/21/02
3.9	G	17	12/11/00	3.9	G	17	1/21/02
3.9	G	18	---	3.9	G	18	1/21/02
9	G	19	---	3.9	G	19	12/11/00

B 3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

B 3.5.3 ECCS-Shutdown

BASES

BACKGROUND

The Background section for Bases 3.5.2, "ECCS Operating," is applicable to these Bases, with the following modifications.

In MODE 4, the required ECCS train consists of two separate subsystems: safety injection (SI) and residual heat removal (RHR).

The ECCS flow paths consist of piping, valves, heat exchangers, and pumps such that water from the refueling water storage tank (RWST) or containment Sump B can be injected into the Reactor Coolant System (RCS) following the accidents described in Bases 3.5.2.

APPLICABLE SAFETY ANALYSES

Due to the lower heat generation rate associated with operation in MODE 4 it has been judged that the full power licensing analyses described in the Applicable Safety Analyses section of Bases 3.5.2 would bound the consequences of a Design Basis Accident (DBA) in MODE 4. It is also recognized that due to the lower pressure and temperatures in the RCS, the probability of occurrence of a DBA is reduced. Therefore, the ECCS operational requirements are reduced. It is understood in these reductions that certain automatic SI actuations are not available. Since the RHR System may be aligned to provide normal shutdown cooling, time may be required for manual alignment of ECCS equipment. In this MODE, sufficient time exists for manual actuation of the required ECCS to mitigate the consequences of a DBA. Therefore, only one train of ECCS is required for MODE 4. This requirement dictates that single failures are not considered for this LCO due to the time available for operators to respond to an accident.

The ECCS trains satisfy Criterion 3 of 10 CFR 50.36(c)(2)(ii).

B 3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

B 3.5.3 ECCS – Shutdown

PA3.5-61

BASES

BACKGROUND

The Background section for Bases 3.5.2, "ECCS – Operating," is applicable to these Bases, with the following modifications.

In MODE 4, the required ECCS train consists of two separate subsystems: safety injection (SI) ~~centrifugal charging (high head)~~ and residual heat removal (RHR) ~~(low head)~~.

CL3.5-72

The ECCS flow paths consist of piping, valves, heat exchangers, and pumps such that water from the refueling water storage tank (RWST) or containment Sump B can be injected into the Reactor Coolant System (RCS) following the accidents described in Bases 3.5.2.

CL3.5-124

APPLICABLE SAFETY ANALYSES

Due to the lower heat generation rate associated with operation in MODE 4 it has been judged that the full power licensing analyses described in t~~T~~he Applicable Safety Analyses section of Bases 3.5.2 would bound the consequences of a Design Basis Accident (DBA) in MODE 4. It is also recognized that due to the lower pressure and temperatures in the RCS, the probability of occurrence of a DBA is reduced~~also applies to this Bases section~~.

CL3.5-126

R-10

~~Due to the stable conditions associated with operation in MODE 4 and the reduced probability of occurrence of a Design Basis Accident (DBA),~~ Therefore, the ECCS operational requirements are reduced. It is understood in these reductions that certain automatic ~~safety injection (SI)~~ actuations are~~is~~ not available. Since the

CL3.5-127

RHR System may be aligned to provide normal shutdown cooling, time may be required for manual alignment of ECCS equipment. In this MODE, sufficient time

BASES

APPLICABLE SAFETY ANALYSES (continued)

exists for manual actuation of the required ECCS to mitigate the consequences of a DBA.

Therefore, oOnly one train of ECCS is required for MODE 4. This requirement dictates that single failures are not considered for this LCO due to the time available for operators to respond to an accident~~during this MODE of operation~~. The ECCS trains satisfy Criterion 3 of 10 CFR 50.36(c)(2)(ii) ~~the NRC Policy Statement~~. CL3.5-127

LCO

In MODE 4, one of the two independent (and redundant) ECCS trains is required to be OPERABLE to ensure that sufficient ECCS flow is available to the core following a DBA. CL3.5-72

In MODE 4, an ECCS train consists of an SI~~centrifugal charging~~ subsystem and an RHR subsystem. Each train includes the piping, instruments, and controls to ensure an OPERABLE flow path capable of taking suction from the RWST and transferring suction to the containment sump.

During an event requiring ECCS actuation, a flow path is required to provide an abundant supply of water from the RWST to the RCS via the ECCS pumps and their respective supply headers to each of the ~~four~~ cold leg injection nozzles and reactor vessel upper plenum. In the long term, this flow path may be switched to take its supply from the containment sump ~~and to deliver its flow to the RCS hot and cold legs~~. CL3.5-88

This LCO is modified by a Note that allows an RHR train to be considered OPERABLE during alignment and operation for decay heat removal, if capable of being manually realigned (remote or local) to the ECCS mode of TA3.5-47

3.9 REFUELING OPERATIONS

3.9.4 Containment Penetrations

LCO 3.9.4 The containment penetrations shall be in the following status:

a. The equipment hatch closed and held in place by four bolts;

b. One door in each air lock closed, or both doors in each air lock may be open with:

1. containment (high flow) purge system isolated,

2. one air lock door OPERABLE and capable of being closed within 30 minutes, and

3. at least two containment fan coil unit fans capable of operating in the high speed mode; and

c. At least one isolation valve in each penetration providing direct access from the containment atmosphere to the outside atmosphere either:

1. OPERABLE or closed by a manual valve, or blind flange, or

2. capable of being closed by an OPERABLE Containment Ventilation Isolation System.

APPLICABILITY: During movement of irradiated fuel assemblies within containment.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more containment penetrations not in required status.	A.1 Suspend movement of irradiated fuel assemblies within containment.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.4.1	Verify each required containment penetration is in the required status.	7 days
SR 3.9.4.2	----------NOTE---------- Not required to be met for containment inservice (low flow) purge valve(s) in penetrations closed to comply with LCO 3.9.4.c.1. ----------	
	Verify each required containment inservice (low flow) purge system valve actuates to the isolation position on an actual or simulated actuation signal.	24 months

3.9 REFUELING OPERATIONS

3.9.5 Residual Heat Removal (RHR) and Coolant Circulation-High Water Level

LCO 3.9.5 One RHR loop shall be OPERABLE and in operation.

---NOTE---
The required RHR loop may be removed from operation for ≤ 1 hour per 8 hour period, provided no operations are permitted that would cause introduction into the Reactor Coolant System, coolant with boron concentration less than that required to meet the minimum required boron concentration of LCO 3.9.1.

APPLICABILITY: MODE 6 with the water level ≥ 20 ft above the top of reactor vessel flange.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. RHR loop requirements not met.	A.1 Suspend operations that would cause introduction into the RCS, coolant with boron concentration less than required to meet the boron concentration of LCO 3.9.1. AND A.2 Suspend loading irradiated fuel assemblies in the core. AND	Immediately Immediately

3.9 REFUELING OPERATIONS

3.9.6 Residual Heat Removal (RHR) and Coolant Circulation-Low Water Level

LCO 3.9.6 Two RHR loops shall be OPERABLE, and one RHR loop shall be in operation.

---NOTES---

1. Both RHR pumps may be de-energized for ≤ 1 hour per 8 hour period, provided:

   a. The core outlet temperature is maintained > 10 degrees F below saturation temperature;

   b. No operations are permitted that would cause a reduction of the Reactor Coolant System (RCS) boron concentration; and

   c. No draining operations to further reduce RCS water volume are permitted.

2. One required RHR loop may be inoperable for up to 2 hours for surveillance testing, provided that the other RHR loop is OPERABLE and in operation.

APPLICABILITY: MODE 6 with the water level < 20 ft above the top of reactor vessel flange.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Less than the required number of RHR loops OPERABLE.	A.1 Initiate action to restore required RHR loop(s) to OPERABLE status. OR A.2 Initiate action to establish ≥ 20 ft of water above the top of reactor vessel flange.	Immediately Immediately
B. No RHR loop in operation.	B.1 Suspend operations that would cause introduction into the RCS, coolant with boron concentration less than required to meet the boron concentration of LCO 3.9.1. AND B.2 Initiate action to restore one RHR loop to operation. AND B.3 Close equipment hatch and secure with four bolts. AND B.4 Close one door in each air lock. AND	Immediately Immediately 4 hours 4 hours

B 3.9 REFUELING OPERATIONS

B 3.9.3 Nuclear Instrumentation

BASES

BACKGROUND

Neutron flux monitors are used during refueling operations to monitor the core reactivity condition. The installed neutron flux monitors are part of the Nuclear Instrumentation System (NIS). These detectors (N-31, N-32, N-51, and N-52) are located external to the reactor vessel and detect neutrons leaking from the core.

The installed neutron flux monitors are:

a. BF3 detectors operating in the proportional region of the gas filled detector characteristic curve; or

b. Fission chambers.

The detectors monitor the neutron flux in counts per second. The instrument range used for monitoring changes in subcritical multiplication typically covers six decades of neutron flux. The detectors provide continuous visual indication in the control room. The installed BF3 neutron flux monitors provide an audible indication to alert operators in containment to a possible dilution accident. The NIS is designed in accordance with the criteria presented in Reference 1.

APPLICABLE SAFETY ANALYSES

Two OPERABLE neutron flux monitors are required to provide a signal to alert the operator to unexpected changes in core reactivity such as with a boron dilution accident (Ref. 2) or an improperly loaded fuel assembly.

The neutron flux monitors satisfy Criterion 3 of 10 CFR 50.36 (c)(2)(ii).

BASES (continued)

LCO

This LCO requires that two neutron flux monitors, capable of monitoring subcritical neutron flux, be OPERABLE to ensure that redundant monitoring capability is available to detect changes in core reactivity. Neutron detectors N-31, N-32, N-51 and N-52 may be used to satisfy this LCO requirement.

This LCO also requires that one audible countrate circuit, associated with either N-31 or N-32, be OPERABLE to ensure that audible indication is available to alert the operator in containment in the event of a dilution accident or improperly loaded fuel assembly.

APPLICABILITY

In MODE 6, the neutron flux monitors must be OPERABLE to determine changes in core reactivity. There are no other direct means available to check core reactivity levels. In MODES 2, 3, 4, and 5, the installed detectors and circuitry are also required to be OPERABLE by LCO 3.3.1, "Reactor Trip System (RTS) Instrumentation."

ACTIONS

A.1 and A.2

With only one required neutron flux monitor OPERABLE, redundancy has been lost. Since these instruments are the only direct means of monitoring core reactivity conditions, CORE ALTERATIONS and introduction of coolant into the RCS with boron concentration less than required to meet the minimum boron concentration of LCO 3.9.1 must be suspended immediately. Suspending the introduction of coolant into the RCS with boron concentration less than required to meet the minimum boron concentration of LCO 3.9.1 is required to assure continued safe operation. Introduction of coolant inventory must be from sources that have a boron concentration greater than that required in the RCS for minimum SDM or refueling boron concentration. This may result in an overall reduction in RCS boron concentration, but provides acceptable margin to maintaining subcritical operation.

BASES

APPLICABLE SAFETY ANALYSES (continued)

A fuel handling accident does not cause containment pressurization; however, with an assumed single failure, the operating purge system supply fan is assumed to continue supplying air to containment. To maintain post-fuel handling accident releases well within the limits of 10 CFR 100, only the inservice purge system is allowed to be operating during fuel movement. Two fan coil unit fans are required to operate in the high speed mode following a fuel handling accident to assure that radioactive material in containment is well mixed and any releases will leave containment at a lower concentration over the duration of the accident. The provision that one air lock door is OPERABLE and under procedural control will assure that at least one door will be closed within 30 minutes as required, thus assuring radioactive releases are well within the limits of 10 CFR 100 (Ref. 1).

Containment penetrations satisfy Criterion 3 of 10 CFR 50.36 (c)(2)(ii).

LCO

This LCO limits the consequences of a fuel handling accident in containment by limiting the potential escape paths for fission product radioactivity released within containment.

The LCO requires containment penetrations to meet the following requirements:

a. The equipment hatch is closed and held in place by at least 4 bolts;

b. One door in each air lock is closed, or both doors in each air lock may be open with:

BASES

LCO (continued)

1. containment (high flow) purge system isolated,

2. one air lock door OPERABLE and capable of being closed within 30 minutes, and

3. at least two containment fan coil unit fans capable of operating in the high speed mode; and

c. At least one isolation valve in each penetration, including the containment (high flow) purge system and inservice (low flow) purge system, providing direct access from the containment atmosphere to the outside atmosphere is either:

1. OPERABLE or closed by a manual valve, or blind flange, or

2. capable of being closed by an OPERABLE Containment Ventilation Isolation System.

A penetration with direct access from the containment atmosphere to the outside atmosphere includes all penetrations that have a flow path that leads anywhere outside containment.

The containment air lock doors may be open during movement of irradiated fuel in the containment provided that the LCO requirements are met. These requirements include one door OPERABLE, under procedural control and capable of being closed within 30 minutes following a fuel handling accident in containment and at least two fan coil unit fans are capable of operating in the high speed mode following a fuel handling accident in containment. Should a fuel handling accident occur inside containment, the fan coil unit fans will be operated in high speed and one door in each air lock will be closed following an evacuation of containment.

BASES

LCO (continued)

For the OPERABLE containment inservice purge and exhaust penetrations, this LCO ensures that these penetrations are isolable by the Containment Ventilation Isolation System. The OPERABILITY requirements for this LCO require that the automatic containment inservice purge and exhaust valve closure times specified in the IST Program can be achieved and, therefore, meet the assumptions used in the safety analysis to ensure that releases through the valves are terminated, such that radiological doses are within the acceptance limit.

APPLICABILITY

The containment penetration requirements are applicable during movement of irradiated fuel assemblies within containment because this is when there is a potential for the limiting fuel handling accident.

In MODES 1, 2, 3, and 4, containment penetration requirements are addressed by LCO 3.6.1.

In MODES 5 and 6, when movement of irradiated fuel assemblies within containment is not being conducted, the potential for a fuel handling accident does not exist. Therefore, under these conditions no requirements are placed on containment penetration status.

ACTIONS

A.1

If the containment equipment hatch, air locks, or any containment penetration that provides direct access from the containment atmosphere to the outside atmosphere is not in the required status, including the Containment Ventilation Isolation System not capable of automatic actuation when the inservice purge and exhaust valves are open, the unit must be placed in a condition where the isolation

BASES

ACTIONS

A.1 (continued)

function is not needed. This is accomplished by immediately suspending movement of irradiated fuel assemblies within containment. Performance of these actions shall not preclude completion of movement of a fuel assembly to a safe position.

SURVEILLANCE REQUIREMENTS

SR 3.9.4.1

This Surveillance demonstrates that each of the containment penetrations required to be in its closed position is in that position. The Surveillance on the open inservice purge and exhaust valves will demonstrate that the valves will function if required during a fuel handling accident. Also the Surveillance will demonstrate that each valve operator has motive power, which will ensure that each valve is capable of being closed by an OPERABLE automatic Containment Ventilation Isolation signal.

The Surveillance is performed every 7 days during movement of irradiated fuel assemblies within containment. The Surveillance interval is selected to be commensurate with the normal duration of time to complete fuel handling operations. A surveillance is to be conducted before the start of refueling operations and then in accordance with the frequency specified. As such, this Surveillance ensures that a postulated fuel handling accident that releases fission product radioactivity within the containment will not result in a release of significant fission product radioactivity to the environment.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.9.4.2

This Surveillance demonstrates that each containment inservice purge and exhaust valve actuates to its isolation position on manual initiation or on an actual or simulated high radiation signal. The 24 month Frequency maintains consistency with other similar ESFAS instrumentation and valve testing requirements. In BASES

LCO 3.3.5, the Containment Ventilation Isolation instrumentation requires a CHANNEL CHECK every 12 hours and a COT every 92 days to ensure the channel OPERABILITY during refueling operations. Every 24 months a CHANNEL CALIBRATION is performed. SR 3.6.3.5 demonstrates that the isolation time of each valve is in accordance with the Inservice Testing Program requirements. These Surveillances, when performed, will ensure that the valves are capable of closing after a postulated fuel handling accident to limit a release of fission product radioactivity from the containment.

The SR is modified by a Note stating that this Surveillance is not required to be met for valves in isolated penetrations. The LCO provides the option to close penetrations in lieu of requiring automatic actuation capability.

REFERENCES

1. USAR, Section 14.5.

BASES (continued)

LCO

Only one RHR loop is required for decay heat removal in MODE 6, with the water level ≥ 20 ft above the top of the reactor vessel flange. Only one RHR loop is required to be OPERABLE, because the volume of water above the reactor vessel flange provides backup decay heat removal capability.

At least one RHR loop must be OPERABLE and in operation to provide:

a. Removal of decay heat;

b. Mixing of borated coolant to minimize the possibility of criticality; and

c. Indication of reactor coolant temperature.

An OPERABLE RHR loop includes a RHR pump, a heat exchanger, valves, piping, instruments, and controls to ensure an OPERABLE flow path and to determine the low end temperature. The flow path starts in one of the RCS hot legs and is returned to a RCS cold leg.

The LCO is modified by a Note that allows the required operating RHR loop to be removed from service for up to 1 hour per 8 hour period, provided no operations are permitted that would dilute the RCS boron concentration with coolant at boron concentrations less than required to meet the minimum boron concentration of LCO 3.9.1. Boron concentration reduction, with coolant at boron concentrations less than required to assure the RCS boron concentration is maintained, is prohibited because uniform concentration distribution cannot be ensured without forced circulation. This permits operations such as core mapping or alterations in the vicinity of the reactor vessel hot leg nozzles and RCS to RHR isolation valve testing. During this 1 hour period, decay heat is removed by natural convection to the large mass of water in the refueling cavity.

BASES

LCO (continued)

a. Removal of decay heat;

b. Mixing of borated coolant to minimize the possibility of criticality; and

c. Indication of reactor coolant temperature.

An OPERABLE RHR loop consists of an RHR pump, a heat exchanger, valves, piping, instruments and controls to ensure an OPERABLE flow path and to determine the low end temperature. The flow path starts in one of the RCS hot legs and is returned to the RCS cold leg.

Either RHR pump may be aligned to the Refueling Water Storage Tank (RWST) to support filling or draining the refueling cavity or for performance of required testing.

The LCO contains two Notes which provide clarification of the LCO.

Note 1 permits the RHR pumps to be de-energized for up to 1 hour per 8 hour period. The circumstances for stopping both RHR pumps are to be limited to situations when the outage time is short and the core outlet temperature is maintained > 10 degrees F below saturation temperature. The Note prohibits boron dilution or draining operatons when RHR forced flow is stopped.

Note 2 allows one RHR loop to be inoperable for a period of 2 hours provided the other loop is OPERABLE and in operation. Prior to declaring the loop inoperable, consideration should be given to the existing plant configuration. This consideration should include that the core time to boil is short, there is no draining operation to further reduce RCS water level and that the capability exists to inject borated water into the reactor vessel. This permits surveillance tests to be performed on the inoperable loop during a time when these tests are safe and possible.

~~3.8 REFUELING AND FUEL HANDLING~~

~~Applicability~~

~~Applies to operating limitations associated with fuel handling operations and CORE ALTERATIONS.~~

A3.9-02

~~Objectives~~

~~To ensure that no incident could occur during fuel handling and CORE ALTERATIONS that would affect public health and safety.~~

Specification

A. ~~Core Alterations~~

A3.9-03

1. ~~During CORE ALTERATIONS~~ the following conditions shall be satisfied (except as specified in 3.8.A.2 and 3 below):

L3.9-04

LCO 3.9.4

~~a.~~ During movement of irradiated fuel assemblies in containment

LCO 3.9.4.a

a. ~~1)~~ The equipment hatch shall be closed and held in place by four bolts.

A3.9-06

LCO 3.9.4.c

A3.9-07

c. ~~In addition,~~ at least one isolation valve ~~shall be OPERABLE or locked closed~~ in each penetration providing ~~line which penetrates the containment and provides a~~ direct access ~~path~~ from containment atmosphere to the outside atmosphere, either OPERABLE or closed by a manual valve, or blind flange, or capable of being closed by an OPERABLE Containment Ventilation Isolation System, ~~.~~

A3.9-10

~~2)~~ Airlock doors

LCO 3.9.4.b

b. ~~a) At least~~ one door in each air lock is closed, or

~~b)~~ Both doors in each air lock may be open with ~~if:~~

LCO 3.9.4.b

~~i.~~ The containment (high flow) purge system ~~is~~ isolated,

A3.9-12

~~ii.~~ The inservice (low flow) purge system ~~is~~ capable of automatic isolation

A3.9-14

~~iii.~~ At least one door in each air lock is OPERABLE~~, under procedural control,~~ and capable of being closed within 30 minutes ~~following a fuel handling accident in containment,~~ and

LR3.9-13

R-10

~~iv.~~ At least two containment fan coil unit fans are capable of operating in the high speed mode ~~following a fuel handling accident in containment~~.

~~TS.3.8-1~~
~~Overflow~~

SR3.9.4.1
SR3.9.4.2

New SRs, Verify containment penetration status every 7 days, verify inservice (low flow) purge system valves actuate to isolation position on actual or simulated signal (not required to be met for inservice purge valves are closed to comply with TS.3.8.A.1.a.(1) (ITS 3.9.4.c.1)) every 24 months.

M3.9-16

R-10

~~b. Radiation levels in the fuel handling areas of the containment shall be monitored continuously.~~

LR3.9-17

~~3.8.A.1.c.~~ The core subcritical neutron flux shall be continuously monitored by at least two neutron monitors, ~~each with continuous visual~~ ~~indication in the control room~~ and one with audible indication ~~in the containment~~, which are in service whenever in MODE 6 ~~core geometry is being changed~~. When ~~core geometry is not being changed, at least~~ only one required neutron flux monitor is ~~shall be~~ in service take 3.8.A.2 required action.

LCO3.9.3

LR3.9-18

M3.9-21

LCO3.9.3 Cond A

LCO3.9.3 Cond B

When both required neutron flux monitors are inoperable, verify boron concentration every 12 hours.

M3.9-22

LCO3.9.3 Cond C

If the audible countrate indication is not operable, verify boron concentration every 12 hours.

M3.9-23

SR3.9.3.1
SR3.9.3.2

New SRs, perform CHANNEL CHECK every 12 hours and CHANNEL CALIBRATION every 24 months. Neutron detectors are excluded from CHANNEL CALIBRATION.

M3.9-24

R-10

~~d. The plant shall be in the REFUELING condition.~~

A3.9-26

LR3.9-27

e. During movement of fuel assemblies in containment ~~or control rods out of the reactor vessel~~, at least 23 feet of water shall be maintained above the reactor vessel flange. The required water level shall be verified ~~prior to moving fuel assemblies or control rods and~~ at least once every day ~~while the cavity is flooded~~.

LCO3.9.2

SR3.9.2.1

A3.9-28

L3.9-31

f. At least one residual heat removal pump shall be OPERABLE and running in MODE 6 with water level > 20 ft above the top of reactor vessel flange and in MODE 6 with the water level < 20 ft above the top of reactor vessel flange.

LCO3.9.5
LCO3.9.6

M3.9-32

R-10

The pump may be shut down for up to one hour per 8 hour period provided no operations are permitted which would cause reduction of RCS boron concentration. ~~to facilitate movement of fuel or core components.~~

LCO3.9.5 Note

M3.9-33

L3.9-34

The pump may be shut down for up to one hour per 8 hour period provided the core outlet temperature is maintained >10 F below saturation temperature, no operations are permitted that would cause a reduction of the RCS boron concentration and no draining operations to further reduce RCS water volume are permitted.

LCO3.9.6 Note 1

M3.9-53

R-10

SR3.9.5.1

New SR, verify RHR loop is in operation.

M3.9-36

~~TS.3.8-2~~
~~Overflow~~

3.8.A.1.g (continued)

LCO3.9.6

g. In Mode 6, If the water level above the top of the reactor vessel flange is less than 20 feet, M3.9-37

~~except for control rod unlatching/latching operations or upper internals removal/replacement,~~ M3.9-37

both residual heat removal loops shall be OPERABLE.

LCO3.9.6 Note 2

New LCO NOTE 2 which allows one required RHR loop to be Inoperable for up to 2 hours for surveillance testing. L3.9-54

SR3.9.6.1 SR3.9.6.2

New SRs, verify one RHR loop in operation every 12 hours, verify breaker alignment and power available to other RHR pump every 7 days. M3.9-43

R-10

~~h. Direct communication between the control room and the operating floor of the containment shall be available whenever CORE ALTERATIONS are taking place.~~ LR3.9-44 LR3.9-46

~~i. No movement of irradiated fuel in the reactor shall be made until the reactor has been subcritical for at least 100 hours.~~ Addressed Elsewhere

j. The radiation monitors which initiate isolation of the Containment Purge System shall be tested and verified to be OPERABLE prior to CORE ALTERATIONS.

LCO3.9.2 Cond A LCO3.9.3 Cond A&C LCO3.9.4 Cond A

~~f~~. If ~~any of~~ the above conditions are not met, CORE ALTERATIONS shall cease (for 3.8.A.1.c (ITS 3.9.3)), or cease irradiated fuel movement in containment (for 3.8.A.1.a (ITS 3.9.4) and e (ITS 3.9.2)) A3.9-47

A3.9-47

LCO3.9.3 Cond B LCO3.9.5 Cond A LCO3.9.6 RA A.1, A.2, B.2

Work shall be initiated to correct the violated conditions so that the specifications are met (for 3.8.A.1.c (ITS 3.9.3), f (ITS3.9.5) and g (ITS 3.9.6 or initiate action to increase ≥ 20 ft of water above top of reactor vessel flange)), A3.9-52

A3.9-47

R-10

LCO3.9.3 Cond A LCO3.9.5 Cond A LCO3.9.6 Cond B

and (for 3.8.A.1.c (ITS 3.9.3), f (ITS 3.9.5) and g (ITS 3.9.6)) no operations which may increase the reactivity of the core shall be performed

~~TS 3.8-2~~
~~Overflow~~
~~continued~~

~~3~~. If Specification 3.8.A.1.f or 3.8.A.1.g cannot be satisfied, all fuel handling operations in the core ~~containment~~ shall be

A3.9-47

LCO3.9.5 RA A.2

suspended (3.8.A.1.f (ITS 3.9.5)), the requirements of

A3.9-47

LCO3.9.5 RA A.4, A.5,A.6.1 LCO3.9.6 RA B.3, B.4, B.5.1

Specification 3.8.A.1.a.1 (Close the equipment hatch and penetrations) shall be satisfied,

A3.9-50

at least one door in each personnel air lock shall be closed,

LCO3.9.5 RA A.1 LCO3.9.6 RA B.1

and no reduction in reactor coolant boron concentration less than required to meet LCO 3.9.1 shall be made.

A3.9-48

M3.9-51

LCO3.9.5 RA A.6.2 LCO3.9.6 RA B.5.2

Verify each inservice purge penetration is capable of being closed by an OPERABLE containment ventilation isolation system.

R-10

NSHD Category	Change Number 3.9-	Discussion of Change
A	06	3.8.A.1.a.1. CTS for containment closure require the equipment hatch to be closed but does not specify what it means to be "closed". This change defines four bolts required to hold the equipment hatch in place when it is considered closed. Since either more or less bolts could be used to hold the hatch in place in accordance with the CTS, this change is administrative. This is not a safety concern since during refueling, there is not a potential for containment pressurization and the hatch is not required to be leak tight in accordance with 10CFR50, Appendix J. This change is consistent with the guidance of NUREG-1431.
A	07	CTS 3.8.A.1.a.1. CTS requires at least one isolation valve to be OPERABLE or locked closed in each line which penetrates the containment and provides a direct path to the outside. The wording of this paragraph has been re-arranged to be consistent with the format of NUREG-1431 LCO 3.9.4. To be consistent with NUREG-1431, the CTS 3.8.A.1.a.2).a).ii requirements for penetrations to be capable of being closed by the Containment Ventilation Isolation System (CVI) are also included in this paragraph. This change is discussed further in DOC A3.9-14. Since the meaning is the same as CTS, this is an administrative change. This change is consistent with the guidance of NUREG-1431.
M	08	CTS Table 1-1, Definition of Operational Modes, Footnote *. New Required Actions are provided in the ITS which specify the actions to be taken when the RCS and refueling cavity (when connected) boron concentration is less than the required limit. These actions are acceptable since they are consistent with current plant practices and will not cause the plant to be operated in an unsafe manner. These new requirements have been included to make the ITS complete and consistent with the guidance of NUREG-1431. Since these are TS requirements, this is a more restrictive change.

NSHD Category	Change Number 3.9-	Discussion of Change
	09	Not used.
A	10	CTS 3.8.A.1.a.1). The CTS requirements for isolation of lines which penetrate containment and provide a direct path from containment atmosphere to the outside have been revised by the addition of "atmosphere". This provides clarification on which spaces are under consideration in this LCO. Further clarification is also provided in the Bases to assure that the operator understand that all penetrations which lead to spaces outside containment are included. Since the intent of the Specification has not changed this is an administrative change.
	11	Not used.
A	12	CTS 3.8.A.1.a.2). CTS provides four requirements which allow both containment doors in each air lock to be open when fuel is being handled in containment. Minor editorial changes have been made by deleting "At least" from the requirement to close one air lock door and "if" has been replaced by "with" in the introduction to the listing of requirements to make the Specification read correctly. Since these changes do not reduce or increase any CTS requirements, these are administrative changes.

NSHD Category	Change Number 3.9-	Discussion of Change
LR	13	CTS 3.8.A.1.a.2) b) iii and 3.8.A.1.a.2) b) iv. CTS requires at least one door in each air lock to be under procedural control and capable of being closed following a fuel handling accident in containment. The requirement to be under procedural control and the clause "following a fuel handling accident in containment" have been relocated to the Bases. Typically TS requirements are under procedural controls and this requirement is a detail that is unnecessary to be repeated in ITS. The requirement to have one door OPERABLE and capable of being closed in 30 minutes is applicable the whole time that plant conditions are in the applicability of this Specification, not just "following a fuel handling accident in containment", therefore this clause is unnecessary and is not included in ITS. Likewise, the requirement for two containment fan coil unit fans to be capable of operating in the high speed mode is applicable the whole time that the plant is moving irradiated fuel assemblies in containment not just "following a fuel handling accident in containment". Therefore this clause is not included in ITS for the fan coil unit fans. It is understood that the provisions for closing an air lock door and operating the containment fan coil unit fans are to mitigate the consequences of a fuel handling accident in containment since that is the purpose of this specification. Therefore this clause is unnecessary. These requirements have been relocated to the Bases since this is unnecessary detail in the TS. This change is consistent with the guidance of NUREG-1431 and TSTF-51. Since the ITS Bases (under the Bases Control Program in Section 5.5 of the ITS) are licensee controlled, this change is less restrictive.

NSHD Category	Change Number 3.9-	Discussion of Change
A	14	CTS 3.8.A.1.a.2) b) ii. CTS requires the inservice (low flow) purge system to be capable of automatic isolation when both doors in each air lock are open during fuel handling in containment. ITS LCO 3.9.4.c requires "At least one isolation valve in each penetration providing direct access from the containment atmosphere to the outside atmosphere either: 2. capable of being closed by an OPERABLE Containment Ventilation Isolation System." at all times during movement of irradiated fuel assemblies in containment. The only Prairie Island system which is closed by the Containment Ventilation Isolation (CVI) System is the inservice (low flow) purge system. Therefore it is not necessary to repeat this requirement explicitly in ITS LCO 3.9.4.b. Since the intent of the specification is unchanged this is an administrative change.
	15	Not used.

NSHD Category	Change Number 3.9-	Discussion of Change
M	16	New SRs, 3.9.4.1 and 3.9.4.2 are included which require verification of containment penetration status every 7 days and verification of inservice purge valve actuation every 24 months. The 7 day frequency for containment penetration status verification is commensurate with the normal duration of time to complete fuel handling operations. The 24 month Frequency for verification of inservice purge valve actuation is consistent with a 24 month refueling outage interval and will allow this verification to be performed during each refueling outage. ITS SR 3.9.4.2 is modified by a note which does not require the SR to be met when inservice purge valves are closed in compliance with LCO 3.9.4 requirements for penetrations to be isolated. This is an acceptable exception since penetrations that are closed in compliance with the LCO do not have to be tested to assure that they can be automatically closed. These are activities which are currently performed under plant procedures; therefore this change does not adversely impact plant operations. Since these will be formal TS required surveillances, this change is considered more restrictive. This change is included to make the PI ITS complete and consistent with the guidance of NUREG-1431.

NSHD Category	Change Number 3.9-	Discussion of Change
LR	17	CTS 3.8.A.1.b. The CTS requirement for containment radiation monitors which provide monitoring for personnel safety, was not included in the PI ITS. No TS screening criteria apply for this requirement because the process variable of the LCO is not an initial condition of a DBA or transient analysis. Further, the containment radiation monitors are a non-significant risk contributor to core damage frequency and offsite release. Therefore, the requirement specified for this function does not satisfy the NRC Final Policy Statement technical specification screening criteria and is relocated to the USAR (TRM). This is acceptable since the TRM is under the controls of 10CFR50.59. This change is consistent with the guidance of NUREG-1431.
LR	18	3.8.A.1.c. The CTS requirement for the neutron flux monitor to have continuous visual indication in the control room is relocated to the Bases. Visual indication is a normal part of considering these monitors operable and thus specification of this requirement in the TS is unnecessary detail. Likewise, the requirement to have audible indication in containment is relocated to the Bases. These changes are consistent with the guidance of NUREG-1431. Since the ITS Bases (under the Bases Control Program in Section 5.5 of the ITS) are licensee controlled, these changes are less restrictive.
	19	Not used.

NSHD Category	Change Number 3.9-	Discussion of Change
	20	Not used.
M	21	CTS 3.8.A.1.c. The applicability for this specification is revised to the broader requirement during MODE 6 which is consistent with the guidance of NUREG-1431. Neutron flux monitoring is required during MODE 6 since this is the only direct means of determining core reactivity changes during these activities. Since this change only involves more extensive use of monitoring equipment, it does not cause any conditions adverse to plant operations. This change is more restrictive since it requires more extensive monitoring.
M	22	CTS 3.8.A.1.c. A new Action Statement is included which addresses inoperability of both required neutron monitors. This new action statement will require additional verification of boron concentration once per 12 hours. This verification every 12 hours will allow time to obtain a reactor coolant boron sample, analyze the boron concentration and ensure unplanned changes in boron concentration are identified. This change is included to make the ITS complete and consistent with the guidance of NUREG-1431. Since this change requires additional verifications, it is more restrictive.

NSHD Category	Change Number 3.9-	Discussion of Change
M	23	CTS 3.8.A.1.c. A new Action Statement is included which addresses inoperability of the audible countrate indication. This new action statement will require additional verification of boron concentration once per 12 hours. This verification every 12 hours will allow time to obtain a reactor coolant boron sample, analyze the boron concentration and ensure unplanned changes in boron concentration are identified. This change is included to provide additional assurance that a boron dilution event will not occur. Since this change requires additional verifications, it is more restrictive.
M	24	New SRs, 3.9.3.1 and 3.9.3.2 are included which require a CHANNEL CHECK every 12 hours and a CHANNEL CALIBRATION every 24 months of the neutron flux monitors. These are activities which are currently performed under plant procedures; therefore this change does not adversely impact plant operations. Performance of a CHANNEL CHECK every 12 hours is consistent with the Frequency for CHANNEL CHECKs required for other instruments in other Specifications and assures that the instrument does not have any obvious inoperabilities. Performance of a CHANNEL CALIBRATION every 24 months allows the SR to be performed during plant outage conditions and is acceptable based on operating experience with these instruments. Neutron detectors are excluded from this calibration which is the same as CTS requirements in CTS Table 4.1-1A, Function 6. Since these SRs will be formal TS required surveillances, this change is considered more restrictive. These changes are included to make the PI ITS consistent with the guidance of NUREG-1431.

NSHD Category	Change Number 3.9-	Discussion of Change
	25	Not used.
A	26	3.8.A.1.d. Since each specification has its individual Applicability defined, this general applicability statement is unnecessary. This change is administrative since the applicability for each specification is addressed separately.
LR	27	CTS 3.8.A.1.e. CTS requires 23 feet of water above the reactor vessel flange during movement of control rods out of the reactor vessel. This change will relocate this requirement to the TRM. This change is consistent with the guidance of NUREG-1431. Since the TRM (under the regulatory control of 10 CFR 50.59) is licensee controlled, this change is less restrictive.
A	28	3.8.A.1.e. For consistency with the guidance of NUREG-1431, the applicability of this specification has been modified to apply to movement of fuel assemblies "in containment". This is an administrative change since it is understood in CTS that these water level requirements apply to activities in containment.
	29	Not used.
	30	Not used.

NSHD Category	Change Number 3.9-	Discussion of Change
L	31	CTS 3.8.A.1.e. The CTS requirement to verify water level prior to moving fuel or control rods is not included in the ITS. The requirement to verify water level while the cavity is flooded is not included since this specification has an applicability statement. The general rules of use and applicability for ITS (SR 3.0.4) require that all surveillance requirements be successfully met and current prior to entering the Mode of Applicability. Thus the water level will be verified prior to commencing movement of fuel. Thereafter, the SR requires verification of water level every 24 hours which is based on engineering judgment and is considered adequate in view of the large volume of water and the normal procedural controls of valve positions which make significant unplanned level changes unlikely. Verification of water level when fuel movement is not occurring is not required because credit is not taken for this level of water in any accident analyses when this activity is not occurring. This change is consistent with the guidance of NUREG-1431.

NSHD Category	Change Number 3.9-	Discussion of Change
M	32	CTS 3.8.A.1.f. CTS requires one RHR pump to be OPERABLE and operating during CORE ALTERATIONS and allows the pump to be shutdown for one hour. To be consistent with NUREG-1431, an Applicability statement is added to this specification to require one RHR pump OPERABLE and operating during all of MODE 6. ITS splits these requirements into two Specifications: ITS 3.9.5 for MODE 6 with the pool level above 20 ft and ITS 3.9.6 with the pool level below 20 ft. Since CTS paragraph 3.8.A.1.g specifies 20 ft as the level at which two RHR pumps are required to be operable, the 20 ft level is used in these applicability statements. The pool is full at 23.5 ft above the top of the reactor vessel flange. Since the plant does not have installed level indication at this elevation, it would be difficult for the operators to maintain the level within such a tight band throughout the outage. For this reason the CTS requires 20 and this level is retained in the ITS. Since this change increases the scope of Applicability for these CTS requirements, this is a more restrictive change. This change is acceptable since current plant operations are allowed with ITS Specifications 3.9.5 and 3.9.6 as proposed and the plant will be operated in a safe manner.
M	33	CTS 3.8.A.1.f. CTS allow the operating RHR pump to be shut down for up to one hour to facilitate movement of fuel or core components. This change will prohibit operations which would cause reduction of RCS boron concentration and limit the pump shutdown to one hour per 8 hour period. This change will not adversely affect safe plant operation and may improve plant safety. This change is included for consistency with NUREG-1431. Since additional limitations are placed on plant operations, this change is more restrictive.

NSHD Category	Change Number 3.9-	Discussion of Change
L	34	3.8.A.1.f. CTS allow the operating RHR pump to be shut down for up to one hour to facilitate movement of fuel or core components. This change will remove the specific activities for which the RHR pump may be shut down. Since the specific activities for which the pump can be inoperable are not included in the TS this is a less restrictive change. This change is acceptable because there are adequate controls on plant activities when no RHR pumps are operating in Mode 6 and the time spent without an RHR pump operating is limited to one hour every eight hours. This change is included for consistency with NUREG-1431, Specification 3.9.5.
	35	Not used.
M	36	A new SR, 3.9.5.1, is included which requires verification that the RHR loop is in operation every 12 hours. Plant operators currently verify RHR pump operation, thus this change will not adversely affect plant operations. Since this verification will be a formal TS required surveillance, this change is considered more restrictive. This change is included to make the PI ITS complete and consistent with the guidance of NUREG-1431.

NSHD Category	Change Number 3.9-	Discussion of Change
M	37	CTS 3.8.A.1.g. The CTS requires two RHR loops OPERABLE when the cavity water level is below 20 ft during CORE ALTERATIONS "except for control rod unlatching/latching operations or upper internals removal/replacement". The Applicability for this specification is revised to require applicability in all of Mode 6 to be consistent with the ITS, thus this is a more restrictive requirement. This change is acceptable since it will not adversely affect plant operations and will require two RHR pumps to be operable during Mode 6 when the water level is below 20 ft and above the flange. ITS does not include the exception for control rod and upper internals operations since this would be allowed in accordance with ITS 3.9.6 LCO Note 1. These changes are acceptable since safe plant operation is assured with the ITS Specification and the plant will be able to perform the required refueling operations. These changes are consistent with the guidance of NUREG-1431 as modified by TSTF-349, Revision 1 and TSTF-361, Revision 2.
	38	Not used.
	39	Not used.
	40	Not used.
	41	Not used.
	42	Not used.

NSHD Category	Change Number 3.9-	Discussion of Change
M	43	New SRs, 3.9.6.1 and 3.9.6.2 are included which require verification that one RHR loop is in operation every 12 hours and verify proper breaker alignment and power available to the other RHR pump every 7 days. Verification of RHR operation every 12 hours is sufficient considering the flow, temperature, pump control. The Frequency of 7 days for verification of power to the other pump is reasonable in view of the other administrative controls on plant operations at this time and based on operating experience. These new SRs are simple observations of plant conditions and will not adversely impact plant operations. Since these will be formal TS required surveillances, this change is considered more restrictive. This change is included to make the PI ITS complete and consistent with the guidance of NUREG-1431.
LR	44	CTS 3.8.A.1.h. The requirement for communication between the control room and containment is not included. No screening criteria apply for this requirement since communications is not part of the primary success path assumed in mitigation of a DBA or transient. The requirement specified for this function does not satisfy the NRC Final Policy Statement technical specification screening criteria and is relocated to the TRM. This is acceptable since the TRM is under the controls of 10CFR50.59. This change is consistent with the guidance of NUREG-1431.
	45	Not used.

NSHD Category	Change Number 3.9-	Discussion of Change
LR	46	3.8.A.1.i. To be consistent with the guidance of NUREG-1431, the CTS restriction on moving fuel prior to 100 hours after the reactor is subcritical is not included in the ITS. This requirement will be relocated to the TRM. This change is acceptable since plant refueling preparations take longer than 100 hours, thus it is not possible to move fuel prior to this time. Since this restriction will not be a TS requirement, this is a less restrictive change.
A	47	3.8.A.2 and 3.8.A.3. Clarification is added to the Action Statements to incorporate the Applicability changes for each individual specification which were discussed previously. Since each change was previously discussed, these changes are considered administrative.
A	48	CTS 3.8.A.3. When specification requirements are not met, CTS require "no reduction in reactor coolant boron concentration shall be made." To consistent with NUREG-1431 as modified by TSTF-286, this CTS requirement is clarified by the addition of the clause, "less than required to meet LCO 3.9.1." Since the Specification requirements (shutdown boron concentrations) continue to be met, this change does not substantively change plant operations. Thus this is an administrative change.
L	49	Table 4.1-2B, Test 8 and Note 3. This change will require boron concentration verification every three days rather than the CTS requirement for daily verification. This change is acceptable due to experience with refueling boron concentration, the large volume of water, and the normal procedural controls of valve positions which make unplanned boron concentration changes unlikely.

NSHD Category	Change Number 3.9-	Discussion of Change
A	50	CTS 3.8.A.3. The phrase "Close the equipment hatch and penetrations" is added after reference to TS.3.8.A.1.a.1 to clarify the actions that are required by this Specification.
M	51	CTS 3.8.A.3. New requirements to verify that the inservice purge system will isolate have been included when a required RHR pump is not operating. This change is acceptable because it provides conservative actions to assure that containment integrity will be maintained in the event of a fuel handling accident in containment. This is a more restrictive change since it is not in CTS.
A	52	CTS 3.6.A.2. Clarification is added that work to correct the violated condition includes increasing the water level when the one RHR pump is not operating and the water level is below 20 ft above the reactor vessel flange. Since CTS does not specify the actions to be taken, the plant currently has this option. Therefore this clarification is an administrative change.

NSHD Category	Change Number 3.9-	Discussion of Change
M	53	CTS 3.8.A.1.f. CTS allows the required operating RHR pump to be shut down for one hour to facilitate movement of fuel or core components. ITS will restrict this shut down to one hour per 8 hour period and add restrictions on temperature, and dilution and draining operations. The limit of one hour per 8 hours is a more restrictive change. This change is acceptable since this will allow the required plant refueling operations to be performed and will assure the plant is maintained in a safe condition. The other restricitions are acceptable since they are consistent with requirements for shut down of an RHR loop in other parts of CTS. This change is consistent with the guidance of NUREG-1431 as modified by TSTF-349, Revision 1.
L	54	CTS 3.8.A.1.g. CTS requires both RHR loops OPERABLE when the water level is less than 20 feet above the reactor vessel flange during CORE ALTERATIONS. ITS will allow one pump to be inoperable for up to two hours for surveillance testing. This change is acceptable since the other loop is OPERABLE and in operation and the time period is short. The plant will also consider core time to boiling, restrict draining operations and assure the capability to inject borated water during this time. This change is consistent with the guidance of NUREG-1431 as modified by TSTF-362, Revision 2.

3.9 REFUELING OPERATIONS

3.9.4 Containment Penetrations

LCO 3.9.4 The containment penetrations shall be in the following status:

a. The equipment hatch closed and held in place by ~~[~~four~~]~~ bolts;

b. One door in each air lock closed, or both doors in each air lock may be open with: CL3.9-62

1. containment (high flow) purge system isolated,

2. one air lock door OPERABLE and capable of being closed within 30 minutes, and

3. at least two containment fan coil unit fans capable of operating in the high speed mode; and

c. At least one isolation valve in e~~E~~ach penetration providing direct access from the containment atmosphere to the outside atmosphere either: CL3.9-128

1. OPERABLE or closed by a manual ~~or automatic isolation~~ valve, or blind flange, ~~or equivalent,~~ or CL3.9-65 R-10

2. capable of being closed by an OPERABLE Containment Ventilation ~~Purge and Exhaust~~ Isolation System. PA3.9-64

TA3.9-66

APPLICABILITY: ~~During CORE ALTERATIONS,~~
During movement of irradiated fuel assemblies within containment.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more containment penetrations not in required status.	A.1 ~~Suspend CORE ALTERATIONS.~~	Immediately
	~~AND~~	
	~~A.2~~ Suspend movement of irradiated fuel assemblies within containment.	~~Immediately~~

TA3.9-66

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.9.4.1	Verify each required containment penetration is in the required status.	7 days
SR 3.9.4.2	----------NOTE---------- Not required to be met for containment inservice (low flow) purge valve(s) in penetrations closed to comply with LCO 3.9.4.c.1. ---------- Verify each required containment inservice (low flow) purge system~~and exhaust~~ valve actuates to the isolation position on an actual or simulated actuation signal.	24~~[18]~~ months

TA3.9-67

PA3.9-64

X3.9-61

3.9 REFUELING OPERATIONS

3.9.5 Residual Heat Removal (RHR) and Coolant Circulation – High Water Level

LCO 3.9.5 One RHR loop shall be OPERABLE and in operation.

---NOTE---

The required RHR loop may be removed from operation for ≤ 1 hour per 8 hour period, provided no operations are permitted that would cause introduction into ~~reduction of~~ the Reactor Coolant System, coolant with boron concentration less than that required to meet the minimum required boron concentration of LCO 3.9.1.

R-10

TA3.9-94

APPLICABILITY: MODE 6 with the water level ≥ ~~20~~ 23 ft above the top of reactor vessel flange.

CL3.9-73

ACTIONS

3.9 REFUELING OPERATIONS

3.9.6 Residual Heat Removal (RHR) and Coolant Circulation – Low Water Level

LCO 3.9.6 Two RHR loops shall be OPERABLE, and one RHR loop shall be in operation.

---NOTES---

1. Both RHR pumps may be de-energized for ≤ 1 hour per 8 hour period, provided: CL3.9-74

   a. The core outlet temperature is maintained > 10 degrees F below saturation temperature;

   b. No operations are permitted that would cause a reduction of the Reactor Coolant System (RCS) boron concentration; and

   c. No draining operations to further reduce RCS water volume are permitted. TA3.9-76

2. One required RHR loop may be inoperable for up to 2 hours for surveillance testing, provided that the other RHR loop is OPERABLE and in operation.

R-10

APPLICABILITY: MODE 6 with the water level < ~~20~~ 23 ft above the top of reactor vessel flange. CL3.9-73

ACTIONS

B 3.9 REFUELING OPERATIONS

B 3.9.3 Nuclear Instrumentation

PA3.9-77

BASES

BACKGROUND

~~The source range n~~Neutron flux monitors are used during refueling operations to monitor the core reactivity condition. The installed ~~source range~~ neutron flux monitors are part of the Nuclear Instrumentation System (NIS). These detectors (N-31, N-32, N-51, and N-52) are located external to the reactor vessel and detect neutrons leaking from the core. CL3.9-57 CL3.9-90

The installed ~~source range~~ neutron flux monitors are: CL3.9-57

a. BF3 detectors operating in the proportional region of the gas filled detector characteristic curve; or CL3.9-90

b. Fission chambers.

The detectors monitor the neutron flux in counts per second. The instrument range used for monitoring changes in subcritical multiplication typically covers six decades of neutron flux ~~(1E+6 cps) with a [5]% instrument accuracy~~. The detectors ~~also~~ provide continuous visual indication in the control room. The installed BF3 neutron flux monitors provide ~~and~~ an audible indication~~alarm~~ to alert operators in containment to a possible dilution accident. The NIS is designed in accordance with the criteria presented in Reference 1. CL3.9-91 CL3.9-58 R-10

(continued)

BASES (continued)

APPLICABLE SAFETY ANALYSES

Two OPERABLE ~~source range~~ neutron flux monitors are required to provide a signal to alert the operator to unexpected changes in core reactivity such as with a boron dilution accident (Ref. 2) or an improperly loaded fuel assembly. ~~The need for a safety analysis for an uncontrolled boron dilution accident is eliminated by isolating all unborated water sources as required by LCO 3.9.2, "Unborated Water Source Isolation Valves."~~ CL3.9-57 CL3.9-92

The ~~source range~~ neutron flux monitors satisfy Criterion 3 of 10 CFR 50.36 (c)(2)(ii) ~~the NRC Policy Statement~~. CL3.9-57

LCO

This LCO requires that two ~~source range~~ neutron flux monitors, capable of monitoring subcritical neutron flux, be OPERABLE to ensure that redundant monitoring capability is available to detect changes in core reactivity. Neutron detectors N-31, N-32, N-51 and N-52 may be used to satisfy this LCO requirement. CL3.9-57

This LCO also requires that one audible countrate circuit, associated with either N-31 or N-32, be OPERABLE to ensure that audible indication is available to alert the operator in containment in the event of a dilution accident or improperly loaded fuel assembly. CL3.9-58

R-10

APPLICABILITY

In MODE 6, the ~~source range~~ neutron flux monitors must be OPERABLE to determine changes in core reactivity. There are no other direct means available to check core reactivity levels. In MODES 2, 3, 4, and 5, ~~these same~~ installed ~~source range~~ detectors and circuitry are also required to be OPERABLE by LCO 3.3.1, "Reactor Trip System (RTS) Instrumentation." CL3.9-57

(continued)

BASES

a. The equipment hatch is closed and held in place by at least 4 bolts;

b. One door in each air lock is closed, or both doors in each air lock may be open with: CL3.9-62

1. containment (high flow) purge system isolated,

2. one air lock door OPERABLE and capable of being closed within 30 minutes, and

3. at least two containment fan coil unit fans capable of operating in the high speed mode; and

c. At least one isolation valve in each penetration, including the containment (high flow) purge system and inservice (low flow) purge system, providing direct access from the containment atmosphere to the outside atmosphere is either:

1. OPERABLE or closed by a manual valve, or blind flange, or

2. capable of being closed by an OPERABLE Containment Ventilation Isolation System. PA3.9-64

A penetration with direct access from the containment atmosphere to the outside atmosphere includes all penetrations that have a flow path that leads anywhere outside containment.

The containment air lock doors may be open during movement of irradiated fuel in the containment provided that the LCO requirements are met. These requirements include CL3.9-62

(continued) R-10

BASES

one door OPERABLE, under procedural control and capable of being closed within 30 minutes following a fuel handling accident in containment and at least two fan coil unit fans are capable of operating in the high speed mode following a fuel handling accident in containment. Should a fuel handling accident occur inside containment, the fan coil unit fans will be operated in high speed and one door in each air lock will be closed following an evacuation of containment.

PA3.9-64

R-10

For the OPERABLE containment inservice purge and exhaust penetrations, this LCO ensures that these penetrations are isolable by the Containment Ventilation Isolation System. ~~Containment Purge and Exhaust Isolation System.~~ The OPERABILITY requirements for this LCO require~~ensure~~ that the automatic containment inservice purge and exhaust valve closure times specified in the IST Program~~FSAR~~ can be achieved and, therefore, meet the assumptions used in the safety analysis to ensure that releases through the valves are terminated, such that radiological doses are within the acceptance limit.

TA3.9-66

APPLICABILITY The containment penetration requirements are applicable during ~~CORE ALTERATIONS or~~ movement of irradiated fuel assemblies within containment because this is when there is a potential for the limiting~~a~~ fuel handling accident.

In MODES 1, 2, 3, and 4, containment penetration requirements are addressed by LCO 3.6.1.

(continued)

BASES

In MODES 5 and 6, when ~~CORE ALTERATIONS or~~ movement of irradiated fuel assemblies within containment is ~~are~~ not being conducted, the potential for a fuel handling accident does not exist. Therefore, under these conditions no requirements are placed on containment penetration status.

PA3.9-64

ACTIONS

A.1 ~~and A.2~~

If the containment equipment hatch, air locks, or any containment penetration that provides direct access from the containment atmosphere to the outside atmosphere is not in the required status, including the Containment ~~Purge and Exhaust~~ Ventilation Isolation System not capable of automatic actuation when the inservice purge and exhaust valves are open, the unit must be placed in a condition where the isolation function is not needed. This is accomplished by immediately suspending ~~CORE ALTERATIONS and~~ movement of irradiated fuel assemblies within containment. Performance of these actions shall not preclude completion of movement of a fuel assembly~~component~~ to a safe position.

TA3.9-66

PA3.9-64

SURVEILLANCE REQUIREMENTS

SR 3.9.4.1

This Surveillance demonstrates that each of the containment penetrations required to be in its closed position is in that position. The Surveillance on the open inservice purge and exhaust valves will demonstrate that the valves will function if required during a fuel handling accident~~are not blocked from closing~~. Also the Surveillance will

TA3.9-66

(continued)

BASES

SURVEILLANCE REQUIREMENTS

~~SR 3.9.4.1 (continued)~~

demonstrate that each valve operator has motive power, which will ensure that each valve is capable of being closed by an OPERABLE automatic Ceontainment Ventilation~~purge and exhaust~~ I~~i~~solation signal. CL3.9-105

The Surveillance is performed every 7 days during ~~CORE ALTERATIONS or~~ movement of irradiated fuel assemblies within containment. The Surveillance interval is selected to be commensurate with the normal duration of time to complete fuel handling operations. A surveillance is to be conducted before the start of refueling operation and then in accordance with the frequency specified~~will provide two or three surveillance verifications during the applicable period for this LCO~~. As such, this Surveillance ensures that a postulated fuel handling accident that releases fission product radioactivity within the containment will not result in a release of significant fission product radioactivity to the environment. TA3.9-66 PA3.9-64 TA3.9-66 X3.9-61

SR 3.9.4.2

This Surveillance demonstrates that each containment inservice purge and exhaust valve actuates to its isolation position on manual initiation or on an actual or simulated high radiation signal. The 24~~18~~ month Frequency maintains consistency with other similar ESFAS instrumentation and valve testing requirements. In LCO 3.3.5~~6~~, the Containment Ventilation ~~Purge and Exhaust~~ Isolation instrumentation requires a CHANNEL CHECK every 12 hours and a COT every 92 days to ensure the channel OPERABILITY during refueling operations. Every 24~~18~~ months a CHANNEL CALIBRATION is TA3.9-66

(continued)

BASES (continued)

performed. ~~The system actuation response time is demonstrated every 18 months, during refueling, on a STAGGERED TEST BASIS.~~ SR 3.6.3.5 demonstrates that the isolation time of each valve is in accordance with the Inservice Testing Program requirements. These Surveillances, when performed, ~~during MODE 6~~ will ensure that the valves are capable of closing after a postulated fuel handling accident to limit a release of fission product radioactivity from the containment.

CL3.9-65

CL3.9-88

CL3.9-86

The SR is modified by a Note stating that this Surveillance is not required to be met for valves in isolated penetrations. The LCO provides the option to close penetrations in lieu of requiring automatic actuation capability.

REFERENCES

1. ~~GPU Nuclear Safety Evaluation SE-0002000-001, Rev. 0, May 20, 1988.~~

~~2.~~ UFSAR, Section 14.5~~[15.4.5]~~.

TA3.9-67

~~3. NUREG-0800, Section 15.7.4, Rev. 1, July 1981.~~

BASES

The flow path starts in one of the RCS hot legs and is returned to ~~a~~the ~~–~~RCS cold leg~~s~~. PA3.9-110

The LCO is modified by a Note that allows the required operating RHR loop to be removed from service for up to 1 hour per 8 hour period, provided no operations are permitted that would dilute ~~cause a reduction of~~ the RCS boron concentration with coolant at boron concentrations less than required to meet the minimum boron concentration of LCO 3.9.1. Boron concentration reduction, with coolant at boron concentrations less than required to assure the RCS boron concentration is maintained, is prohibited because uniform concentration distribution cannot be ensured without forced circulation. This permits operations such as core mapping or alterations in the vicinity of the reactor vessel hot leg nozzles and RCS to RHR isolation valve testing. During this 1 hour period, decay heat is removed by natural convection to the large mass of water in the refueling cavity. R-10 TA3.9-94

APPLICABILITY One RHR loop must be OPERABLE and in operation in MODE 6, with the water level ≥ 20~~3~~ ft above the top of the reactor vessel flange, to provide decay heat removal. ~~The 23 ft water level was selected because it corresponds to the 23 ft requirement established for fuel movement in~~

~~APPLICABILITY (continued)~~ ~~LCO 3.9.7, "Refueling Cavity Water Level."~~ CL3.9-73

Requirements for the RHR System in other MODES are covered by LCOs in Section 3.4, Reactor Coolant System (RCS), and

(continued)

BASES

The LCO contains two Notes which provide clarification of the LCO. CL3.9-74

Note 1 permits the RHR pumps to be de-energized for up to 1 hour per 8 hour period. The circumstances for stopping both RHR pumps are to be limited to situations when the outage time is short and the core outlet temperature is maintained > 10 degrees F below saturation temperature. The Note prohibits boron dilution or draining operatons when RHR forced flow is stopped.

Note 2 allows one RHR loop to be inoperable for a period of 2 hours provided the other loop is OPERABLE and in operation. Prior to declaring the loop inoperable, consideration should be given to the existing plant configuration. This consideration should include that the core time to boil is short, there is no draining operation to further reduce RCS water level and that the capability exists to inject borated water into the reactor vessel. This permits surveillance tests to be performed on the inoperable loop during a time when these tests are safe and possible. TA3.9-76

R-10

APPLICABILITY Two RHR loops are required to be OPERABLE, and one RHR loop must be in operation in MODE 6, with the water level < ~~203~~ ft above the top of the reactor vessel flange, to provide decay heat removal. Requirements for the RHR System in other MODES are covered by LCOs in Section 3.4, Reactor Coolant System (RCS), and Section 3.5, Emergency Core Cooling Systems (ECCS). RHR loop requirements in MODE 6 with the water level ≥ ~~203~~ ft are located in LCO 3.9.5, "Residual Heat Removal (RHR) and Coolant Circulation–High Water Level." CL3.9-73

(continued)

Difference Category	Difference Number 3.9-	Justification for Differences
CL	60	The COLR will specify multiple boron concentration limits for varying refueling conditions when the ITS is implemented. Thus, "limits" is specified as plural.
X	61	This ITS conversion LAR proposes to allow the PI refueling outages on a 24 month cycle. Accordingly the surveillance interval on this new SR is revised to 24 months.
CL	62	CTS LA 119/112 allows CORE ALTERATIONS with the containment air lock doors open. Changes to NUREG-1431 Specifications and Bases preserve this capability and include the CTS requirement for containment (high flow) purge system to be isolated (included in the requirements of LCO 3.9.4.c.1), inservice (low flow) purge system capable of automatic isolation (included in the requirements of LCO 3.9.4.c.2), one air lock door capable of being closed wihtin 30 minutes (included in the requirements of LCO 3.9.4.b.1) and two containment fan coil unit fans capable of operating in high speed (included in the requirements of LCO 3.9.4.b.2). This change is also consistent with the intent of approved TSTF-68 Revision 2. LA 119/112 demonstrated that the fission product release from the containment following a fuel handling accident will be within regulatory limits under the assumed containment penetration and air lock status. The associated Bases for LCO 3.9.4 provide further clarification that an air lock door will be under procedural controls and closed within 30 minutes, and at least two fan coil unit fans will be operated at high speed following a fuel handling accident in containment.

Difference Category	Difference Number 3.9-	Justification for Differences
	63	Not used.
PA	64	The PI name for the instrumentation system which automatically isolates containment ventilation during fuel handling is the "Containment Ventilation Isolation System" and the Specification for this system is 3.3.5, "Containment Ventilation Isolation Instrumentation". The system which is isolated is the "containment inservice (low flow) purge system", thus this name is used in SR 3.9.4.2 and throughout the Bases. The parenthetical modifier "(low flow)" may be included to assure that the operators do not confuse this system with the containment purge system.
CL	65	The "or equivalent" option in NUREG-1431 is not included in the PI ITS. The Specification and Bases have been revised. PI does not currently have this flexibility and the evaluations which support it have not been performed, thus this is not included.

Difference Category	Difference Number 3.9-	Justification for Differences
TA	66	This change incorporates approved TSTF-51, Revision 2. The accidents postulated to occur during core alteration, in addition to fuel handling accidents, are: inadvertant criticality (due to a control rod removal error or continuous rod withdrawal error during refueling or boron dilution) and the inadvertent loading of, and subsequent operation with a fuel assembly in an improper location. These events have been analyzed at PI and do not result in fuel cladding integrity damage. Since the only accident postulated to occur during CORE ALTERATIONS that results in a significant radioactive release is the fuel handling accident, this Specification is revised to only apply during fuel handling. This TSTF also includes an option of limiting the Specification to only apply to "recently discharged" irradiated fuel. PI has not performed the calculations to support this limitation and thus this option is not included with the incorporation of this TSTF.
TA	67	This change incorporates TSTF-284, Revision 3.
	68	Not used.

Difference Category	Difference Number 3.9-	Justification for Differences
TA	69	Incorporates TSTF-197, Revision 2. This change provides more definitive guidance to the operators for the actions which must be taken. The changes also include plant specific terminology for further clarification. See PA3.9-116 for further discussion of exceptions to TSTF-197. The "or equivalent" option in NUREG-1431, as modified by TSTF-197, is not included in the PI ITS. PI does not currently have this flexibility and the evaluations which support it have not been performed, thus this is not included.
PA	70	New Required Actions (RA), C.2 and C.3, have been included to be consistent with the intent of TSTF-268, Revision 2 which was not considered when TSTF-23 was written. New RA C.2 implements CTS 3.8.A.2 requirements as applied to CTS 3.8.A.1.c. New RA C.3 provides further assurance that there are not unplanned boron concentration changes while the audible countrate circuit is inoperable.

Difference Category	Difference Number 3.9-	Justification for Differences
CL	71	SR 3.9.5.1 and SR 3.9.6.1 and their Bases were revised to remove the flow rate for the RHR loop in operation. The PI safety analysis for boron dilution in MODE 6 assumes uniform mixing of the borated coolant as a result of a RHR pump being in operation and does not specify a flow rate. Therefore, there is no basis for inclusion of a flow rate in the SR. The phrase "and circulating reactor coolant" was not included since this is an implied function for an RHR loop in operation and is consistent the safety analysis. This change is also consistent with the guidance of the letter to Mr. James Davis, NEI from William D. Beckner, NRC, dated April 29, 1999,
	72	Not used.
CL	73	The water level in 3.9.5 and 3.9.6 Applicability Statements below which two RHR pumps are required to be operable has been changed to 20 ft to retain the CTS requirement. The level of 23 ft as specified in NUREG-1431 is not practical at PI since it does not allow sufficient operating flexibility. The 23 ft level in NUREG-1431, per the Bases, was selected as a matter of convenience. (See change A3.9-32 for further discussion). This change has also been made in the Bases.

Difference Category	Difference Number 3.9-	Justification for Differences
CL	74	Note 1 has been added to LCO 3.9.6 in accordance with approved TSTF-349, Revision 1 with one exception. CTS TS.3.1.A.1.c and 3.1.A.1.d allow both RHR pumps to not be operating when the RCS temperature is below 350 F and cooling is provided by the RHR system for up to one hour provided restrictions similar to those included in LCO 3.9.6 Note 1 are met. CTS 3.8.A.1.f allows both RHR pumps to be shutdown for 1 hour during CORE ALTERATIONS regardless of refueling cavity water level to allow plant refueling evolutions. Therefore the TSTF-349 restriction of 15 minutes for switching from one pump to another has not been included. LCO Note 1 has been revised in ITS LCO 3.9.6 to preserve the CTS allowed operating conditions. Associated Bases for this Note have also been provided.
	75	Not used.
TA	76	This change incorporates TSTF-361, Revision 2.

Difference Category	Difference Number 3.9-	Justification for Differences
CL	128	The LCO statement for ITS 3.9.4 has been revised to be consistent with CTS and the plant design. Prairie Island does not have automatic actuation of process line penetrations during fuel handling, therefore the use of "automatic isolation valve" is not correct. In accordance with CTS, process line penetrations have an OPERABLE valve which can be closed following a fuel handling accident in containment. This proposed wording preserves the CTS and current licensing basis requirements which are also compatible with the plant design.

Part G

PACKAGE 3.9

REFUELING OPERATIONS

NO SIGNIFICANT HAZARDS DETERMINATION AND ENVIRONMENTAL ASSESSMENT

NO SIGNIFICANT HAZARDS DETERMINATION

The proposed changes to the Operating License have been evaluated to determine whether they constitute a significant hazards consideration as required by 10CFR Part 50, Section 50.91 using the standards provided in Section 50.92.

For ease of review, the changes are evaluated in groupings according to the type of change involved. A single generic evaluation may suffice for some of the changes while others may require specific evaluation in which case the appropriate reference change numbers are provided.

A - Administrative (GENERIC NSHD)
(A3.9-00, A3.9-02, A3.9-03, A3.9-05, A3.9-06, A3.9-07, A3.9-10, A3.9-12, A3.9-14, A3.9-26, A3.9-28, A3.9-47, A3.9-48, A3.9-50, A3.9-52)

Most administrative changes have not been marked-up in the Current Technical Specifications, and may not be specifically referenced to a discussion of change. This No Significant Hazards Determination (NSHD) may be referenced in a discussion of change by the prefix "A" if the change is not obviously an administrative change and requires an explanation.

These proposed changes are editorial in nature. They involve reformatting, renaming, renumbering, or rewording of existing Technical Specifications to provide consistency with NUREG-1431 or conformance with the Writer's Guide, or change of current plant terminology to conform to NUREG-1431. Some administrative changes involve relocation of requirements within the Technical Specifications without affecting their technical content. Clarifications within the new Prairie Island Improved Technical

M - More restrictive (GENERIC NSHD)
(M3.9-08, M3.9-16, M3.9-21, M3.9-22, M3.9-23, M3.9-24, M3.9-32, M3.9-33, M3.9-36, M3.9-37, M3.9-43, M3.9-51, M3.9-53)

This proposed Technical Specifications revision involves modifying the Current Technical Specifications to impose more stringent requirements upon plant operations to achieve consistency with the guidance of NUREG-1431, correct discrepancies or remove ambiguities from the specifications. These more restrictive Technical Specifications have been evaluated against the plant design, safety analyses, and other Technical Specifications requirements to ensure the plant will continue to operate safely with these more stringent specifications.

1. The proposed amendment will not involve a significant increase in the probability or consequences of an accident previously evaluated.

   The proposed changes provide more stringent requirements for operation of the plant. These more stringent requirements do not result in operation that will increase the probability of initiating an analyzed event and do not alter assumptions relative to mitigation of an accident or transient event.

   These more restrictive requirements continue to ensure process variables, structures, systems, and components are maintained consistent with the safety analyses and licensing basis. Therefore, these changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. The proposed amendment will not create the possibility of a new or different kind of accident from any accident previously analyzed.

   The proposed changes do not involve a physical alteration of the plant; that is, no new or different type of equipment will be installed, nor do they change the methods governing normal plant operation.

   These more stringent requirements do impose different operating restrictions. However, these operating restrictions are consistent with the boundaries established by the assumptions made in the plant safety analyses and licensing bases. Therefore, these changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

LR - Less restrictive, Relocated details (GENERIC NSHD)
(LR3.9-01, LR3.9-13, LR3.9-17, LR3.9-18, LR3.9-27, LR3.9-44, LR3.9-46)

Some information in the Prairie Island Current Technical Specifications that is descriptive in nature regarding the equipment, system(s), actions or surveillances identified by the specification has been removed from the proposed specification and relocated to the proposed Bases, Updated Safety Analysis Report or licensee controlled procedures. The relocation of this descriptive information to the Bases of the Improved Technical Specifications, Updated Safety Analysis Report or licensee controlled procedures is acceptable because these documents will be controlled by the Improved Technical Specifications required programs, procedures or 10CFR50.59. Therefore, the descriptive information that has been moved continues to be maintained in an appropriately controlled manner.

1. The proposed amendment will not involve a significant increase in the probability or consequences of an accident previously evaluated.

   The proposed changes relocate detailed, descriptive requirements from the Technical Specifications to the Bases, Updated Safety Analysis Report or licensee controlled procedures. These documents containing the relocated requirements will be maintained under the provisions of 10CFR50.59, a program or procedure based on 10CFR50.59 evaluation of changes, or NRC approved methodologies. Since these documents to which the Technical Specifications requirements have been relocated are evaluated under 10CFR50.59 or its guidance, or in accordance with NRC approved methodologies, no increase in the probability or consequences of an accident previously evaluated will be allowed without prior NRC approval. Therefore, these changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. The proposed amendment will not create the possibility of a new or different kind of accident from any accident previously analyzed.

   These proposed changes do not necessitate physical alteration of the plant; that is, no new or different type of equipment will be installed, or change parameters governing normal plant operation. The proposed changes will not impose any different requirements and adequate control of the information will be maintained. Thus, these changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

Specific NSHD for Change L3.9-54

The proposed change would allow one RHR loop to be inoperable for 2 hours to perform testing when the water level in the refueling cavity is less than 20 feet above the reactor vessel flange. This change is acceptable because the other RHR loop is operable and this is a short time period. This change is consistent with the guidance of NUREG-1431 as modified by TSTF-361.

1. The proposed amendment will not involve a significant increase in the probability or consequences of an accident previously evaluated.

   The proposed change allows one RHR loop to be inoperable for 2 hours to perform testing when the water level in the refueling cavity is less than 20 feet above the reactor vessel flange. The RHR system is not an assumed accident initiator, therefore this change does not involve a significant increase in the probability of a previously evaluated accident. The other RHR loop is OPERABLE and operating during the time that the RHR loop is shut down. Accident analyses only depend on one RHR loop to perform the required cooling, therefore this change does not involve a significant increase in the consequences of an accident previously evaluated.

2. The proposed amendment will not create the possibility of a new or different kind of accident from any accident previously analyzed.

   The proposed change does not involve a physical alteration of the plant; that is, no new or different type of equipment will be installed. This proposed change does not introduce any new mode of plant operation or change the methods governing normal plant operation. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

Specific NSHD for Change L3.9-54 (continued)

3. The proposed amendment will not involve a significant reduction in the margin of safety.

The proposed change would allow one RHR loop to be inoperable for 2 hours to perform testing when the water level in the refueling cavity is less than 20 feet above the reactor vessel flange. The two hour time period is a short time and the other RHR train is OPERABLE and operating. In accordance with the Bases for Specification 3.9.4, the plant will also consider plant conditions prior to shut down of the RHR loop such as core time to boiling, restrictions on draining operations and capability to inject borated water. Therefore the proposed change does not result in a significant reduction in the margin of safety.

Therefore it is concluded this proposed change does not involve a significant hazards consideration. This change is consistent with the guidance of NUREG-1431 as modified by TSTF-361, Revision 2.

ENVIRONMENTAL ASSESSMENT

The Nuclear Management Company has evaluated the proposed changes and determined that:

1. The changes do not involve a significant hazards consideration, or

2. The changes do not involve a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or

3. The changes do not involve a significant increase in individual or cumulative occupational radiation exposure.

Accordingly, the proposed changes meet the eligibility criteria for categorical exclusion set forth in 10 CFR Part 51 Section 51.22(c)(9). Therefore, pursuant to 10 CFR Part 51 Section 51.22(b), an environmental assessment of the proposed changes is not required.