



Nebraska Public Power District

"Always there when you need us"

50.90

NLS2008001
August 19, 2008

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

SUBJECT: Application for Technical Specification Change Regarding Mode Change
Limitations Using the Consolidated Line Item Improvement Process and Related
Changes
Cooper Nuclear Station, Docket No. 50-298, DPR-46

Dear Sir or Madam:

The purpose of this letter is for the Nebraska Public Power District (NPPD) to request an amendment to Facility Operating License DPR-46 in accordance with the provisions of 10 CFR 50.90 to revise the Technical Specifications (TS) for Cooper Nuclear Station (CNS). The proposed license amendment request (LAR) would modify TS requirements for mode change limitations in Limiting Condition for Operation 3.0.4 and Surveillance Requirement 3.0.4, in accordance with Nuclear Regulatory Commission (NRC)-approved Technical Specification Task Force (TSTF) traveler TSTF-359-A, "Increase Flexibility in MODE Restraints," Revision 9. TSTF-359-A, Revision 9, is the equivalent of TSTF-359, Revision 8, as modified by the notice in the Federal Register published on April 4, 2003 (68 FR 16579). The Notice of Availability for licensee adoption of TSTF-359-A using the NRC Consolidated Line Item Improvement Process (CLIIP) was published in the April 4, 2003 Federal Register.

The proposed LAR would also modify Example 1.4-1 in TS Section 1.4, Frequency, in accordance with Revision 0 of NRC-approved traveler TSTF-485-A, "Correct Example 1.4-1." This change is needed for consistency with the proposed revisions of TSTF-359-A. TSTF-485-A has been approved by the NRC for incorporation into the Standard TS for BWR4 plants (NUREG-1433) and adoption by licensees.

The current CNS TS 5.5.10, TS Bases Control Program, contains requirements for a TS Bases control program consistent with the requirements in Section 5.5.11 of NUREG-1433.

Attachment 1 provides a description of the proposed changes, the requested confirmation of applicability, and plant-specific verifications for adoption of TSTF-359-A in accordance with the CLIIP example application. Tables 1 and 2 in Attachment 1 provide summaries of the proposed changes to the TS and Bases, respectively. Attachment 2 provides description of changes, technical and regulatory analyses, and evaluations for the no significant hazards consideration and the environmental consideration, in support of the adoption of TSTF-485-A. Attachment 3 provides the existing TS pages marked-up to show the proposed changes. Attachment 4 provides the revised TS pages in final typed format. Attachment 5 provides the regulatory commitments made in this submittal. Attachment 6 provides the associated TS Bases changes for information.

NPPD requests NRC approval of the proposed TS change and issuance of the requested license amendment by August 1, 2009. The amendment will be implemented within 90 days following issuance.

In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the State of Nebraska official. Copies are also being provided to the NRC Region IV office and the CNS Resident Inspector in accordance with 10 CFR 50.4(b)(1).

The proposed TS changes have been reviewed by the necessary safety review committees (Station Operations Review Committee and Safety Review and Audit Board). Amendments to the CNS Facility Operating License through Amendment 231, dated June 30, 2008, have been incorporated into this request. This request is submitted under oath pursuant to 10 CFR 50.30(b).

If you have any questions concerning this matter, please contact David Van Der Kamp, Licensing Manager, at (402) 825-2904.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 19 Aug 08
(date)

Sincerely



Stewart B. Minahan
Vice President – Nuclear and
Chief Nuclear Officer

/rr

Attachments

cc: Regional Administrator w/ attachments
USNRC - Region IV

Cooper Project Manager w/ attachments
USNRC - NRR Project Directorate IV-1

Senior Resident Inspector w/ attachments
USNRC - CNS

Nebraska Health and Human Services w/ attachments
Department of Regulation and Licensure

NPG Distribution w/o attachments

CNS Records w/ attachments

ATTACHMENT 1

LICENSE AMENDMENT REQUEST TO ADOPT TSTF-359-A, REV. 9, “INCREASE FLEXIBILITY IN MODE RESTRAINTS”

DESCRIPTION AND ASSESSMENT

COOPER NUCLEAR STATION NRC DOCKET 50-298, LICENSE DPR-46

1.0 DESCRIPTION

The proposed amendment would modify the Cooper Nuclear Station (CNS) Technical Specification (TS) requirements for mode change limitations in Limiting Condition for Operation (LCO) 3.0.4 and Surveillance Requirement (SR) 3.0.4. The proposed changes are consistent with Nuclear Regulatory Commission (NRC) approved Technical Specification Task Force (TSTF) Standard TS change TSTF-359-A, “Increase Flexibility in MODE Restraints,” Revision 9. TSTF-359, Revision 9, is the equivalent of TSTF-359, Revision 8, as modified by the notice in the Federal Register published on April 4, 2003 (68 FR 16579). A summary of the TS and Bases changes is provided in Tables 1 and 2 in this attachment.

CNS TS are based on Revision 1 of the Improved Standard TS for BWR4 plants (NUREG-1433). Current CNS TS contains Section 5.5.10, TS Bases Control Program. Thus, these requirements do not need to be added as described in TSTF-359-A. Current CNS TS SR 3.0.1 and Bases for SR 3.0.1 are equivalent to those in the Improved Standard TS.

The availability of this proposed TS change using the consolidated line item improvement process (CLIIP) was announced in the April 4, 2003 Federal Register.

2.0 ASSESSMENT

2.1 Applicability of Published Safety Evaluation

Nebraska Public Power District (NPPD) has reviewed the safety evaluation (SE) published in the Federal Register, Vol. 68, No. 65, dated April 4, 2003, as part of the CLIIP Notice of Availability. This review included a review of the NRC staff’s evaluation, as well as the supporting information provided to support TSTF-359-A. NPPD has concluded that the justifications presented in the TSTF proposal and the model SE prepared by the NRC staff are applicable to CNS and justify this amendment for the incorporation of the changes to the CNS TS.

2.2 Optional Changes and Variations

NPPD is not proposing any variations or deviations from the TS changes described in the TSTF-359-A, Rev. 9, and the NRC staff's model SE, other than cases in which the CNS TS differ from the Standard Technical Specifications (STS). The numbering of some CNS TS sections differs from the STS. Tables 1 and 2 of Attachment 1 provide summaries of the changes made to the TS and the Bases, respectively.

The following TS Sections are addressed in the TSTF but are not included in this submittal for the reason specified.

1. STS 3.3.6.3, Low-Low Set Instrumentation. This section in the CNS TS does not contain the note regarding applicability of LCO 3.0.4 shown as deleted in TSTF-359-A.
2. STS 3.6.3.1, Primary Containment Hydrogen Recombiners. The CNS TS does not contain this section.
3. STS 3.6.3.2, Drywell Cooling System Fans. The CNS TS does not contain this section.
4. STS 3.6.3.4, Containment Atmosphere Dilution System. The CNS TS does not contain this section.
5. STS 3.7.3, Diesel Generator Standby Service Water System. The CNS TS does not contain this section.

3.0 REGULATORY ANALYSIS

3.1 No Significant Hazards Consideration Determination

NPPD has reviewed the proposed no significant hazards consideration determination published on April 4, 2003 (68 FR 16579) as part of the CLIIP. NPPD has concluded that the proposed determination presented in the notice is applicable to CNS and the determination is hereby incorporated by reference to satisfy the requirements of 10 CFR 50.91(a).

3.2 Verification and Commitments

As discussed in the Notice of Availability published in the Federal Register on April 4, 2003 for this TS improvement, plant-specific verifications were performed as follows:

The current CNS TS Bases for LCO 3.0.4 and SR 3.0.4 state that the provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to operable status before entering an associated mode or other specified condition in the Applicability. No change is proposed to that statement.

The proposed changes also include changes to the Bases for LCO 3.0.4 and SR 3.0.4 that provide details on how to implement the new requirements. The Bases changes include guidance for changing Modes or other specified conditions in the Applicability when an LCO is not met. The Bases changes describe in detail how: (1) LCO 3.0.4.a allows entry into a MODE or other specified condition in the Applicability with the LCO not met when the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time; (2) LCO 3.0.4.b allows entry into a MODE or other specified condition in the Applicability with the LCO not met after performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering the MODE or other specified condition in the Applicability, and establishment of risk management actions, if appropriate; and (3) LCO 3.0.4.c allows entry into a MODE or other specified condition in the Applicability with the LCO not met based on a Note in the Specification, which is typically applied to Specifications which describe values and parameters (e.g., RCS Specific Activity) though it may be applied to other Specifications based on NRC plant-specific approval.

The Bases also state that any risk impact should be managed through the program in place to implement 10 CFR 50.65(a)(4) and its implementation guidance, NRC Regulatory Guide 1.182, "Assessing and Managing Risks Before Maintenance Activities at Nuclear Power Plants," and that the results of the risk assessment shall be considered in determining the acceptability of entering the MODE or other specified condition in the Applicability, and any corresponding risk management actions. In addition, the Bases state that upon entry into a MODE or other specified condition in the Applicability with the LCO not met, LCO 3.0.1 and LCO 3.0.2 require entry into the applicable Conditions and Required Actions until the condition is resolved, until the LCO is met, or until the unit is not within the Applicability of the TS.

The Bases further state that SR 3.0.4 does not restrict changing MODES or other specified conditions of the Applicability when a Surveillance has not been performed within the specified Frequency, provided the requirement to declare the LCO not met has been delayed in accordance with SR 3.0.3.

Finally, as noted in Section 1.0 above, the CNS TS already contains a TS Bases control program (TS Section 5.5.10) consistent with Section 5.5 of the STS, and SR 3.0.1.

NPPD is making the following regulatory commitment:

"NPPD will establish the Technical Specification Bases as adopted with the applicable license amendment."

The deadline for this commitment is implementation of the license amendment.

4.0 **ENVIRONMENTAL EVALUATION**

NPPD has reviewed the environmental evaluation included in the model SE published in the Federal Register dated April 4, 2003 (68 FR 16579) as part of the CLIIP. NPPD has concluded that the staff's findings presented in that evaluation are applicable to CNS and the evaluation is hereby incorporated by reference for this application.

Table 1

TS Changes for TSTF-359-A, Revision 9

| STS Number | CNS TS Number | Description of Change |
|-------------------|----------------------|---|
| LCO 3.0.4 | LCO 3.0.4 | Those portions of the LCO that are affected by TSTF-359-A are replaced with Insert 1. |
| SR 3.0.4 | SR 3.0.4 | Those portions of the SR that are affected by TSTF-359-A are replaced with Insert 6. |
| 3.3.3.1 | 3.3.3.1 | ACTIONS Note 1, "LCO 3.0.4 is not applicable" is deleted. Note 2 is retained without a number. |
| 3.3.3.2 | 3.3.3.2 | ACTIONS Note 1, "LCO 3.0.4 is not applicable" is deleted. Note 2 is retained as an unnumbered Note. |
| 3.4.6 | 3.4.5 | The Note "LCO 3.0.4 is not applicable" in REQUIRED ACTION A.1 and B.1/B.2 is deleted. |
| 3.4.7 | 3.4.6 | The Note "LCO 3.0.4 is not applicable" in REQUIRED ACTION A.1/A.2 is replaced with Insert 5: "LCO 3.0.4.c is applicable." |
| 3.4.8 | 3.4.7 | ACTIONS Note 1, "LCO 3.0.4 is not applicable" is deleted. Note 2 is retained as an unnumbered Note. |
| 3.5.1 | 3.5.1 | New NOTE for ACTIONS is added as Insert 2: "LCO 3.0.4.b is not applicable to HPCI." |
| 3.5.3 | 3.5.3 | New NOTE for ACTIONS is added as Insert 3: "LCO 3.0.4.b is not applicable to RCIC." |
| 3.8.1 | 3.8.1 | New NOTE for ACTIONS is added as Insert 4: "LCO 3.0.4.b is not applicable to DGs." |

Table 2

Bases Changes for TSTF-359-A, Revision 9

The following are the revisions to the Bases that will be made as part of adopting TSTF-359-A. These changes will be made in accordance with 10 CFR 50.59 as part of implementing the license amendment following issuance.

| STS Bases Number | CNS TS Bases Number | Description of Change |
|-------------------------|----------------------------|---|
| LCO 3.0.4 | LCO 3.0.4 | Revised based on NRC-approved TSTF-359-A, Revision 9. Deleted text is shown in strikeout , added text is shown in bold . |
| SR 3.0.4 | SR 3.0.4 | Revised based on NRC-approved TSTF-359-A, Revision 9. Deleted text is shown in strikeout , added text is shown in bold . |
| 3.3.3.1 | 3.3.3.1 | Deleted discussion of Note 1 that excludes the MODE change restriction of LCO 3.0.4. (Note 1 was deleted from the TS). Reference to "Note 2" was revised to "A Note." |
| 3.3.3.2 | 3.3.3.2 | Deleted discussion of a Note that excludes MODE change restriction of LCO 3.0.4. (The Note was deleted from the TS). The discussion of Note 2 was revised from "Note 2..." to state "A Note..." |
| 3.4.6 | 3.4.5 | Deleted discussion of the Note regarding provisions of LCO 3.0.4 not being applicable from Required Action A.1 and Required Actions B.1 and B.2. |
| 3.4.7 | 3.4.6 | Deleted discussion of the Note regarding exclusion of MODE change restriction of LCO 3.0.4, and added discussion of a Note that permits use of the provisions of LCO 3.0.4.c. |
| 3.4.8 | 3.4.7 | Deleted discussion of a Note that excludes MODE change restriction of LCO 3.0.4. (The Note was deleted from the TS). Reference to a "second" Note was revised to simply "A" Note. |
| 3.5.1 | 3.5.1 | Added discussion of a Note that prohibits application of LCO 3.0.4.b to an inoperable HPCI system. |
| 3.5.3 | 3.5.3 | Added discussion of a Note that prohibits application of LCO 3.0.4.b to an inoperable RCIC system. |
| 3.8.1 | 3.8.1 | Added discussion of a Note that prohibits application of LCO 3.0.4.b to an inoperable DG. |

ATTACHMENT 2

**LICENSE AMENDMENT REQUEST TO ADOPT TSTF-485-A, Revision 0,
“CORRECT EXAMPLE 1.4-1”**

DESCRIPTION AND EVALUATION

**COOPER NUCLEAR STATION
NRC DOCKET 50-298, LICENSE DPR-46**

- 1.0 Description
- 2.0 Proposed Change
- 3.0 Background
- 4.0 Technical Analysis
- 5.0 Regulatory Safety Analysis
 - 5.1 No Significant Hazards Consideration (NSHC)
 - 5.2 Applicable Regulatory Requirements/Criteria
- 6.0 Environmental Consideration
- 7.0 References

1.0 Description

Example 1.4-1, in CNS TS Section 1.4, Frequency, is revised to be consistent with the requirements of the proposed revision of SR 3.0.4, as revised by TSTF-359-A, Revision 9 (Reference 7.1). This revision is proposed as part of the license amendment request (LAR) to adopt TSTF-359-A. This change is based on TSTF-485-A, "Correct Example 1.4-1," Revision 0 (Reference 7.2). TSTF-485-A was approved by the Nuclear Regulatory Commission (NRC) by letter from Thomas Boyce dated December 6, 2005 (Reference 7.3). The CNS TS are based on NUREG-1433, Standard TS for BWR4 Plants. Therefore, the discussion in the Description section of TSTF-485-A is applicable to CNS.

2.0 Proposed Change

CNS is adopting the change reflected in TSTF-485-A, Rev. 0, without deviation. As a result, the discussion in the Proposed Change section of TSTF-485-A is applicable to CNS.

3.0 Background

The discussion in the Background section of TSTF-485-A is applicable to CNS.

4.0 Technical Analysis

The discussion in the Technical Analysis section of TSTF-485-A is applicable to CNS.

5.0 Regulatory Safety Analysis

5.1 No Significant Hazards Consideration (NSHC)

10 CFR 50.91(a)(1) requires that licensee requests for operating license amendments be accompanied by an evaluation of no significant hazard posed by issuance of the amendment. Nebraska Public Power District (NPPD) has evaluated this proposed amendment with respect to the criteria given in 10 CFR 50.92 (c). The following is the evaluation required by 10 CFR 50.91(a)(1).

NPPD is requesting a revision to the Facility Operating License No. DPR-46 for Cooper Nuclear Station (CNS). The proposed change is to revise Technical Specification (TS) 1.4, Frequency, to be consistent with changes being made to Limiting Condition for Operation (LCO) 3.0.4 and Surveillance Requirement (SR) 3.0.4 by Technical Specification Task Force (TSTF) Traveler 359-A, "Increase Flexibility in MODE Restraints," Revision 9.

TS Section 1.4 defines proper use and application of Frequency requirements for SRs in TS. TS 1.4 contains four examples to illustrate the various ways that Frequencies are specified. The first example (Example 1.4-1) illustrates an SR that specifies an action to be performed once during a specific Frequency. The second paragraph of Example 1.4-1 discusses how the SR must be performed before entering a MODE or other specified condition if the SR was not performed within the specified Frequency during a period that the plant was in a MODE for which performance of the SR was not required.

The concept addressed by the second paragraph of Example 1.4-1 is impacted by the changes made in TSTF-359-A. Specifically, revising LCO 3.0.4 and SR 3.0.4 based on TSTF-359-A would make this paragraph inconsistent with the revised LCO 3.0.4 and SR 3.0.4. Thus, adoption of TSTF-359-A results in the need to revise this paragraph in order to avoid this inconsistency in TS.

The requested revision is based on changes to Boiling Water Reactor (BWR) 4 Standard Technical Specifications made in TSTF-485-A, "Correct Example 1.4-1," Revision 0. The Nuclear Regulatory Commission staff has approved the TSTF, thereby adopting the changes proposed therein into the STS for BWR4 plants.

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The basis for this response in TSTF-485-A is applicable to CNS.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The basis for this response in TSTF-485-A is applicable to CNS.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No.

The basis for this response in TSTF-485-A is applicable to CNS.

Based on the responses to the above questions, NPPD concludes that the proposed amendment presents no significant hazards consideration under the

standards set forth in 10 CFR 50.92(c) and, accordingly, a finding of “no significant hazards consideration” is justified.

5.2 Applicable Regulatory Requirements/Criteria

The discussion in the Applicable Regulatory Requirements/Criteria section of TSTF-485-A is applicable to CNS.

6.0 Environmental Consideration

The discussion in the Environmental Consideration section of TSTF-485-A is applicable to CNS.

7.0 References

- 7.1 TSTF-359-A, Revision 9, Increase Flexibility in MODE Restraints, dated August 4, 2003.
- 7.2 TSTF-485-A, Revision 0, Correct Example 1.4-1, dated December 6, 2005.
- 7.3 Letter from Thomas H. Boyce, U.S. Nuclear Regulatory Commission, to Technical Specification Task Force, Subject: Status of TSTF 343, 479, 482, 485, dated December 6, 2005 (ADAMS No. ML053460302).

ATTACHMENT 3

**PROPOSED TECHNICAL SPECIFICATION REVISIONS
(MARK-UP)**

**COOPER NUCLEAR STATION
NRC DOCKET 50-298, LICENSE DPR-46**

Technical Specification Pages

1.4-3
3.0-1
3.0-2
3.0-5
3.3-22
3.3-26
3.4-10
3.4-12
3.4-14
3.5-1
3.5-11
3.8-1

Inserts

Insert 1

When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made:

- a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time; or
- b. After performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering the MODE or other specified condition in the Applicability, and establishment of risk management actions, if appropriate; exceptions to this Specification are stated in the individual Specifications; or
- c. When an allowance is stated in the individual value, parameter, or other Specification.

Insert 2

----- NOTE -----
LCO 3.0.4.b is not applicable to HPCI.

Insert 3

----- NOTE -----
LCO 3.0.4.b is not applicable to RCIC.

Insert 4

----- NOTE -----
LCO 3.0.4.b is not applicable to DGs.

Insert 5

----- NOTE -----
LCO 3.0.4.c is applicable.

Insert 6

Entry into a MODE or other specified condition in the Applicability of an LCO shall only be made when the LCO's Surveillances have been met within their specified Frequency, except as provided by SR 3.0.3. When an LCO is not met due to Surveillances not having been met, entry into a MODE or other specified condition in the Applicability shall only be made in accordance with LCO 3.0.4.

1.4 Frequency

EXAMPLES

EXAMPLE 1.4-1 (continued)

otherwise modified (refer to Examples 1.4-3 and 1.4-4), then SR 3.0.3 becomes applicable.

then SR 3.0.4 becomes applicable.

If the interval as specified by SR 3.0.2 is exceeded while the unit is not in a MODE or other specified condition in the Applicability of the LCO for which performance of the SR is required, the Surveillance must be performed within the Frequency requirements of SR 3.0.2 prior to entry into the MODE or other specified condition. Failure to do so would result in a violation of SR 3.0.4.

as modified by SR 3.0.3,

or the LCO is considered not met (in accordance with SR 3.0.1) and LCO 3.0.4 becomes applicable.

EXAMPLE 1.4-2

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE | FREQUENCY |
|-------------------------------|--|
| Verify flow is within limits. | Once within 12 hours after ≥ 25% RTP <u>AND</u> 24 hours thereafter |

Example 1.4-2 has two Frequencies. The first is a one time performance Frequency, and the second is of the type shown in Example 1.4-1. The logical connector "AND" indicates that both Frequency requirements must be met. Each time reactor power is increased from a power level < 25% RTP to ≥ 25% RTP, the Surveillance must be performed within 12 hours.

The use of "once" indicates a single performance will satisfy the specified Frequency (assuming no other Frequencies are connected by "AND"). This type of Frequency does not qualify for the extension allowed by SR 3.0.2.

(continued)

3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

LCO 3.0.1 LCOs shall be met during the MODES or other specified conditions in the Applicability, except as provided in LCO 3.0.2 and LCO 3.0.7.

LCO 3.0.2 Upon discovery of a failure to meet an LCO, the Required Actions of the associated Conditions shall be met, except as provided in LCO 3.0.5 and LCO 3.0.6.

If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), completion of the Required Action(s) is not required, unless otherwise stated.

LCO 3.0.3 When an LCO is not met and the associated ACTIONS are not met, an associated ACTION is not provided, or if directed by the associated ACTIONS, the unit shall be placed in a MODE or other specified condition in which the LCO is not applicable. Action shall be initiated within 1 hour to place the unit, as applicable, in:

- a. MODE 2 within 7 hours;
- b. MODE 3 within 13 hours; and
- c. MODE 4 within 37 hours.

Exceptions to this Specification are stated in the individual Specifications.

Where corrective measures are completed that permit operation in accordance with the LCO or ACTIONS, completion of the actions required by LCO 3.0.3 is not required.

LCO 3.0.3 is only applicable in MODES 1, 2, and 3.

LCO 3.0.4

Insert
1 →

When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall not be made except when the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time. This

(continued)

3.0 LCO APPLICABILITY

LCO 3.0.4
(continued)

Specification shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

~~Exceptions to this Specification are stated in the individual Specifications. These exceptions allow entry into MODES or other specified conditions in the Applicability when the associated ACTIONS to be entered allow unit operation in the MODE or other specified condition in the Applicability only for a limited period of time.~~

~~LCO 3.0.4 is only applicable for entry into a MODE or other specified condition in the Applicability in MODES 1, 2, and 3.~~

LCO 3.0.5

Equipment removed from service or declared inoperable to comply with ACTIONS may be returned to service under administrative control solely to perform testing required to demonstrate its OPERABILITY or the OPERABILITY of other equipment. This is an exception to LCO 3.0.2 for the system returned to service under administrative control to perform the testing required to demonstrate OPERABILITY.

LCO 3.0.6

When a supported system LCO is not met solely due to a support system LCO not being met, the Conditions and Required Actions associated with this supported system are not required to be entered. Only the support system LCO ACTIONS are required to be entered. This is an exception to LCO 3.0.2 for the supported system. In this event, additional evaluations and limitations may be required in accordance with Specification 5.5.11, "Safety Function Determination Program (SFDP)." If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

(continued)

3.0 SR APPLICABILITY

SR 3.0.3
(continued)

If the Surveillance is not performed within the delay period, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered.

When the Surveillance is performed within the delay period and the Surveillance is not met, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered.

SR 3.0.4

Insert 6

Entry into a MODE or other specified condition in the Applicability of an LCO shall not be made unless the LCO's Surveillances have been met within their specified Frequency. This provision shall not prevent entry into MODES or other specified conditions in the Applicability that are required to comply with Actions or that are part of a shutdown of the unit.

SR 3.0.4 is only applicable for entry into a MODE or other specified condition in the Applicability in MODES 1, 2, and 3.

3.3 INSTRUMENTATION

3.3.3.1 Post Accident Monitoring (PAM) Instrumentation

LCO 3.3.3.1 The PAM instrumentation for each Function in Table 3.3.3.1-1 shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTIONS

- ~~1. LCO 3.0.4 is not applicable.~~ ~~NOTES~~
2. Separate Condition entry is allowed for each Function. For Function 5, separate Condition entry is allowed for each penetration flow path.

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|---|-----------------|
| A. One or more Functions with one required channel inoperable. | A.1 Restore required channel to OPERABLE status. | 30 days |
| B. Required Action and associated Completion Time of Condition A not met. | B.1 Initiate action in accordance with Specification 5.6.6. | Immediately |
| C. One or more Functions with two required channels inoperable. <u>OR</u> One Function 2.c channel inoperable. | C.1 Restore one required channel to OPERABLE status. | 7 days |

(continued)

3.3 INSTRUMENTATION

3.3.3.2 Alternate Shutdown System

LCO 3.3.3.2 The Alternate Shutdown System Functions shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTIONS

- NOTES
1. LCO 3.0.4 is not applicable.
 2. Separate Condition entry is allowed for each Function.

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|---|-----------------|
| A. One or more required Functions inoperable. | A.1 Restore required Function to OPERABLE status. | 30 days |
| B. Required Action and associated Completion Time not met. | B.1 Be in MODE 3. | 12 hours |

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE | FREQUENCY |
|--|-----------|
| SR 3.3.3.2.1 Perform CHANNEL CHECK for each required instrumentation channel that is normally energized. | 31 days |

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.5 RCS Leakage Detection Instrumentation

LCO 3.4.5 The following RCS leakage detection instrumentation shall be OPERABLE:

- a. Drywell floor drain sump flow monitoring system; and
- b. One channel of the drywell atmospheric particulate or atmospheric gaseous monitoring system.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|--|---|
| A. Drywell floor drain sump flow monitoring system inoperable. | <p>NOTE LCO 3.0.4 is not applicable.</p> <p>A.1 Restore drywell floor drain sump flow monitoring system to OPERABLE status.</p> | 30 days |
| B. Required drywell atmospheric monitoring system inoperable. | <p>NOTE LCO 3.0.4 is not applicable.</p> <p>B.1 Analyze grab samples of drywell atmosphere.</p> <p><u>AND</u></p> <p>B.2 Restore required drywell atmospheric monitoring system to OPERABLE status.</p> | <p>Once per 12 hours</p> <p>30 days</p> |

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.6 RCS Specific Activity

LCO 3.4.6 The specific activity of the reactor coolant shall be limited to DOSE EQUIVALENT I-131 specific activity $\leq 0.2 \mu\text{Ci/gm}$.

APPLICABILITY: MODE 1,
MODES 2 and 3 with any main steam line not isolated.

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|---|------------------|
| A. Reactor coolant specific activity $> 0.2 \mu\text{Ci/gm}$ and $\leq 4.0 \mu\text{Ci/gm}$ DOSE EQUIVALENT I-131. | <div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;"> <p style="text-align: center;">NOTE LCO 3.0.4 is not applicable.</p> </div> <p>A.1 Determine DOSE EQUIVALENT I-131.</p> | Once per 4 hours |
| | <p><u>AND</u></p> <p>A.2 Restore DOSE EQUIVALENT I-131 to within limits.</p> | 48 hours |
| B. Required Action and associated Completion Time of Condition A not met. | B.1 Determine DOSE EQUIVALENT I-131. | Once per 4 hours |
| | <p><u>AND</u></p> <p>B.2.1 Isolate all main steam lines.</p> | 12 hours |
| <p><u>OR</u></p> <p>Reactor Coolant specific activity $> 4.0 \mu\text{Ci/gm}$ DOSE EQUIVALENT I-131.</p> | <p><u>OR</u></p> | (continued) |

Insert 5

TSTF-359-A

RHR Shutdown Cooling System — Hot Shutdown
3.4.7

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.7 Residual Heat Removal (RHR) Shutdown Cooling System — Hot Shutdown

LCO 3.4.7 Two RHR shutdown cooling subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem shall be in operation.

- NOTES-----
1. Both RHR shutdown cooling subsystems and recirculation pumps may be removed from operation for up to 2 hours per 8 hour period.
 2. One RHR shutdown cooling subsystem may be inoperable for up to 2 hours for the performance of Surveillances.
-

APPLICABILITY: MODE 3, with reactor steam dome pressure less than the shutdown cooling permissive pressure.

ACTIONS

- NOTES-----
1. LCO 3.0.4 is not applicable.
 2. Separate Condition entry is allowed for each RHR shutdown cooling subsystem.
-

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|---|--|-----------------|
| A. One or two RHR shutdown cooling subsystems inoperable. | A.1 Initiate action to restore RHR shutdown cooling subsystem(s) to OPERABLE status. | Immediately |
| | <u>AND</u> | (continued) |

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS) AND REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM

3.5.1 ECCS — Operating

LCO 3.5.1 Each ECCS injection/spray subsystem and the Automatic Depressurization System (ADS) function of six safety/relief valves shall be OPERABLE.

APPLICABILITY: MODE 1,
MODES 2 and 3, except high pressure coolant injection (HPCI)
and ADS valves are not required to be OPERABLE with reactor
steam dome pressure ≤ 150 psig.

Insert 2

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|--|------------------------------|
| A. One low pressure ECCS injection/spray subsystem inoperable. <u>OR</u> One LPCI pump in both LPCI subsystems inoperable. | A.2 Restore low pressure ECCS injection/spray subsystem(s) to OPERABLE status. | 7 days |
| B. Required Action and associated Completion Time of Condition A not met. | B.1 Be in MODE 3. <u>AND</u> B.2 Be in MODE 4. | 12 hours 36 hours |
| C. HPCI System inoperable. | C.1 Verify by administrative means RCIC System is OPERABLE. <u>AND</u> C.2 Restore HPCI System to OPERABLE status. | 1 hour 14 days |

(continued)

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS) AND REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM

3.5.3 RCIC System

LCO 3.5.3 The RCIC System shall be OPERABLE.

APPLICABILITY: MODE 1,
MODES 2 and 3 with reactor steam dome pressure > 150 psig.

ACTIONS

Insert 3

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|--|-----------------|
| A. RCIC System inoperable. | A.1 Verify by administrative means High Pressure Coolant Injection System is OPERABLE. | 1 hour |
| | <u>AND</u> A.2 Restore RCIC System to OPERABLE status. | 14 days |
| B. Required Action and associated Completion Time not met. | B.1 Be in MODE 3. | 12 hours |
| | <u>AND</u> B.2 Reduce reactor steam dome pressure to ≤ 150 psig. | 36 hours |

3.8 ELECTRICAL POWER SYSTEMS

3.8.1 AC Sources — Operating

LCO 3.8.1 The following AC electrical power sources shall be OPERABLE:

- a. Two qualified circuits between the offsite transmission / network and the onsite Class 1E AC Electrical Power Distribution System; and
- b. Two diesel generators (DGs).

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

Insert 4

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|------------------------------------|---|--|
| A. One offsite circuit inoperable. | A.1 Perform SR 3.8.1.1 for OPERABLE offsite circuit. | 1 hour |
| | <u>AND</u> | <u>AND</u> |
| | A.2 Declare required feature(s) with no offsite power available inoperable when the redundant required feature(s) are inoperable. | Once per 8 hours thereafter |
| | <u>AND</u> | 24 hours from discovery of no offsite power to one division concurrent with inoperability of redundant required feature(s) |
| | | (continued) |

ATTACHMENT 4

**PROPOSED TECHNICAL SPECIFICATION REVISIONS
(FINAL TYPED)**

**COOPER NUCLEAR STATION
NRC DOCKET 50-298, LICENSE DPR-46**

Technical Specification Pages

1.4-3
3.0-1
3.0-2
3.0-5
3.3-22
3.3-26
3.4-10
3.4-12
3.4-14
3.5-1
3.5-2*
3.5-3*
3.5-11
3.8-1

* Page impacted by pagination only.

1.4 Frequency

EXAMPLES

EXAMPLE 1.4-1 (continued)

otherwise modified (refer to Examples 1.4-3 and 1.4-4), then SR 3.0.3 becomes applicable.

If the interval as specified by SR 3.0.2 is exceeded while the unit is not in a MODE or other specified condition in the Applicability of the LCO for which performance of the SR is required, then SR 3.0.4 becomes applicable. The Surveillance must be performed within the Frequency requirements of SR 3.0.2, as modified by SR 3.0.3, prior to entry into the MODE or other specified condition, or the LCO is considered not met (in accordance with SR 3.0.1) and LCO 3.0.4 becomes applicable.

EXAMPLE 1.4-2SURVEILLANCE REQUIREMENTS

| SURVEILLANCE | FREQUENCY |
|-------------------------------|---|
| Verify flow is within limits. | Once within 12 hours after $\geq 25\%$ RTP <u>AND</u> 24 hours thereafter |

Example 1.4-2 has two Frequencies. The first is a one time performance Frequency, and the second is of the type shown in Example 1.4-1. The logical connector "AND" indicates that both Frequency requirements must be met. Each time reactor power is increased from a power level $< 25\%$ RTP to $\geq 25\%$ RTP, the Surveillance must be performed within 12 hours.

The use of "once" indicates a single performance will satisfy the specified Frequency (assuming no other Frequencies are connected by "AND"). This type of Frequency does not qualify for the extension allowed by SR 3.0.2.

(continued)

3.0 LIMITING CONDITION FOR OPERATION (LCO) APPLICABILITY

LCO 3.0.1 LCOs shall be met during the MODES or other specified conditions in the Applicability, except as provided in LCO 3.0.2 and LCO 3.0.7.

LCO 3.0.2 Upon discovery of a failure to meet an LCO, the Required Actions of the associated Conditions shall be met, except as provided in LCO 3.0.5 and LCO 3.0.6.

If the LCO is met or is no longer applicable prior to expiration of the specified Completion Time(s), completion of the Required Action(s) is not required, unless otherwise stated.

LCO 3.0.3 When an LCO is not met and the associated ACTIONS are not met, an associated ACTION is not provided, or if directed by the associated ACTIONS, the unit shall be placed in a MODE or other specified condition in which the LCO is not applicable. Action shall be initiated within 1 hour to place the unit, as applicable, in:

- a. MODE 2 within 7 hours;
- b. MODE 3 within 13 hours; and
- c. MODE 4 within 37 hours.

Exceptions to this Specification are stated in the individual Specifications.

Where corrective measures are completed that permit operation in accordance with the LCO or ACTIONS, completion of the actions required by LCO 3.0.3 is not required.

LCO 3.0.3 is only applicable in MODES 1, 2, and 3.

LCO 3.0.4 When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made:

(continued)

3.0 LCO APPLICABILITY

LCO 3.0.4 (continued)

- a. When the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time; or
- b. After performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering the MODE or other specified condition in the Applicability, and establishment of risk management actions, if appropriate; exceptions to this Specification are stated in the individual Specifications; or
- c. When an allowance is stated in the individual value, parameter, or other Specification.

This Specification shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

LCO 3.0.5 Equipment removed from service or declared inoperable to comply with ACTIONS may be returned to service under administrative control solely to perform testing required to demonstrate its OPERABILITY or the OPERABILITY of other equipment. This is an exception to LCO 3.0.2 for the system returned to service under administrative control to perform the testing required to demonstrate OPERABILITY.

LCO 3.0.6 When a supported system LCO is not met solely due to a support system LCO not being met, the Conditions and Required Actions associated with this supported system are not required to be entered. Only the support system LCO ACTIONS are required to be entered. This is an exception to LCO 3.0.2 for the supported system. In this event, additional evaluations and limitations may be required in accordance with Specification 5.5.11, "Safety Function Determination Program (SFDP)." If a loss of safety function is determined to exist by this program, the appropriate Conditions and Required Actions of the LCO in which the loss of safety function exists are required to be entered.

(continued)

3.0 SR APPLICABILITY

SR 3.0.3
(continued)

If the Surveillance is not performed within the delay period, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered.

When the Surveillance is performed within the delay period and the Surveillance is not met, the LCO must immediately be declared not met, and the applicable Condition(s) must be entered.

SR 3.0.4

Entry into a MODE or other specified condition in the Applicability of an LCO shall only be made when the LCO's Surveillances have been met within their specified Frequency, except as provided by SR 3.0.3. When an LCO is not met due to Surveillances not having been met, entry into a MODE or other specified condition in the Applicability shall only be made in accordance with LCO 3.0.4.

This provision shall not prevent entry into MODES or other specified conditions in the Applicability that are required to comply with ACTIONS or that are part of a shutdown of the unit.

3.3 INSTRUMENTATION

3.3.3.1 Post Accident Monitoring (PAM) Instrumentation

LCO 3.3.3.1 The PAM instrumentation for each Function in Table 3.3.3.1-1 shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each Function. For Function 5, separate Condition entry is allowed for each penetration flow path.

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|---|-----------------|
| A. One or more Functions with one required channel inoperable. | A.1 Restore required channel to OPERABLE status. | 30 days |
| B. Required Action and associated Completion Time of Condition A not met. | B.1 Initiate action in accordance with Specification 5.6.6. | Immediately |
| C. One or more Functions with two required channels inoperable. <u>OR</u> One Function 2.c channel inoperable. | C.1 Restore one required channel to OPERABLE status. | 7 days |

(continued)

3.3 INSTRUMENTATION

3.3.3.2 Alternate Shutdown System

LCO 3.3.3.2 The Alternate Shutdown System Functions shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each Function.

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|---|-----------------|
| A. One or more required Functions inoperable. | A.1 Restore required Function to OPERABLE status. | 30 days |
| B. Required Action and associated Completion Time not met. | B.1 Be in MODE 3. | 12 hours |

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE | FREQUENCY |
|--|-----------|
| SR 3.3.3.2.1 Perform CHANNEL CHECK for each required instrumentation channel that is normally energized. | 31 days |

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.5 RCS Leakage Detection Instrumentation

LCO 3.4.5 The following RCS leakage detection instrumentation shall be OPERABLE:

- a. Drywell floor drain sump flow monitoring system; and
- b. One channel of the drywell atmospheric particulate or atmospheric gaseous monitoring system.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|--|-------------------|
| A. Drywell floor drain sump flow monitoring system inoperable. | A.1 Restore drywell floor drain sump flow monitoring system to OPERABLE status. | 30 days |
| B. Required drywell atmospheric monitoring system inoperable. | B.1 Analyze grab samples of drywell atmosphere. | Once per 12 hours |
| | <u>AND</u> B.2 Restore required drywell atmospheric monitoring system to OPERABLE status. | 30 days |

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.6 RCS Specific Activity

LCO 3.4.6 The specific activity of the reactor coolant shall be limited to DOSE EQUIVALENT I-131 specific activity $\leq 0.2 \mu\text{Ci/gm}$.

APPLICABILITY: MODE 1,
MODES 2 and 3 with any main steam line not isolated.

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|---|------------------|
| A. Reactor coolant specific activity $> 0.2 \mu\text{Ci/gm}$ and $\leq 4.0 \mu\text{Ci/gm}$ DOSE EQUIVALENT I-131. | -----NOTE----- LCO 3.0.4.c is applicable. ----- | |
| | A.1 Determine DOSE EQUIVALENT I-131. | Once per 4 hours |
| | <u>AND</u> A.2 Restore DOSE EQUIVALENT I-131 to within limits. | 48 hours |
| B. Required Action and associated Completion Time of Condition A not met. <u>OR</u> Reactor Coolant specific activity $> 4.0 \mu\text{Ci/gm}$ DOSE EQUIVALENT I-131. | B.1 Determine DOSE EQUIVALENT I-131. | Once per 4 hours |
| | <u>AND</u> B.2.1 Isolate all main steam lines. | 12 hours |
| | <u>OR</u> | (continued) |

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.7 Residual Heat Removal (RHR) Shutdown Cooling System—Hot Shutdown

LCO 3.4.7 Two RHR shutdown cooling subsystems shall be OPERABLE, and, with no recirculation pump in operation, at least one RHR shutdown cooling subsystem shall be in operation.

- NOTES-----
1. Both RHR shutdown cooling subsystems and recirculation pumps may be removed from operation for up to 2 hours per 8 hour period.
 2. One RHR shutdown cooling subsystem may be inoperable for up to 2 hours for the performance of Surveillances.
-

APPLICABILITY: MODE 3, with reactor steam dome pressure less than the shutdown cooling permissive pressure.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each RHR shutdown cooling subsystem.

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|---|--|------------------------------------|
| A. One or two RHR shutdown cooling subsystems inoperable. | A.1 Initiate action to restore RHR shutdown cooling subsystem(s) to OPERABLE status. <u>AND</u> | Immediately (continued) |

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS) AND REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM

3.5.1 ECCS — Operating

LCO 3.5.1 Each ECCS injection/spray subsystem and the Automatic Depressurization System (ADS) function of six safety/relief valves shall be OPERABLE.

APPLICABILITY: MODE 1,
MODES 2 and 3, except high pressure coolant injection (HPCI)
and ADS valves are not required to be OPERABLE with reactor
steam dome pressure ≤ 150 psig.

ACTIONS

-----NOTE-----
LCO 3.0.4.b is not applicable to HPCI

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|---|---------------------------------|
| <p>A. One low pressure ECCS injection/spray subsystem inoperable.</p> <p>OR</p> <p>One LPCI pump in both LPCI subsystems inoperable.</p> | <p>A.1 Restore low pressure ECCS injection/spray subsystem(s) to operable status.</p> | <p>7 days</p> |
| <p>B. Required Action and associated Completion Time of Condition A not met.</p> | <p>B.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>B.2 Be in MODE 4.</p> | <p>12 hours</p> <p>36 hours</p> |

(continued)

ACTIONS (continued)

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|--|-----------------|
| C. HPCI System inoperable. | C.1 Verify by administrative means RCIC System is OPERABLE. | 1 hour |
| | <u>AND</u> C.2 Restore HPCI System to OPERABLE status. | 14 days |
| D. HPCI System inoperable. <u>AND</u> Condition A entered. | D.1 Restore HPCI System to OPERABLE status. | 72 hours |
| | <u>OR</u> D.2 Restore low pressure ECCS injection/spray subsystem to OPERABLE status. | 72 hours |
| E. One ADS valve inoperable. | E.1 Restore ADS valve to OPERABLE status. | 14 days |
| F. One ADS valve inoperable. <u>AND</u> Condition A entered. | F.1 Restore ADS valve to OPERABLE status. | 72 hours |
| | <u>OR</u> F.2 Restore low pressure ECCS injection/spray subsystem to OPERABLE status. | 72 hours |

(continued)

ACTIONS (continued)

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|---|---------------------------------|
| <p>G. Required Action and associated Completion Time of Condition C, D, E, or F not met.</p> <p><u>OR</u></p> <p>Two or more ADS valves inoperable.</p> | <p>G.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>G.2 Reduce reactor steam dome pressure to ≤ 150 psig.</p> | <p>12 hours</p> <p>36 hours</p> |
| <p>H. Two or more low pressure ECCS injection/spray subsystems inoperable for reasons other than condition A.</p> <p><u>OR</u></p> <p>HPCI System and one or more ADS valves inoperable.</p> | <p>H.1 Enter LCO 3.0.3.</p> | <p>Immediately</p> |

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE | FREQUENCY |
|--|----------------|
| <p>SR 3.5.1.1 Verify, for each ECCS injection/spray subsystem, the piping is filled with water from the pump discharge valve to the injection valve.</p> | <p>31 days</p> |

(continued)

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS) AND REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM

3.5.3 RCIC System

LCO 3.5.3 The RCIC System shall be OPERABLE.

APPLICABILITY: MODE 1,
MODES 2 and 3 with reactor steam dome pressure > 150 psig.

ACTIONS

NOTE

LCO 3.0.4.b is not applicable to RCIC.

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|--|-----------------|
| A. RCIC System inoperable. | A.1 Verify by administrative means High Pressure Coolant Injection System is OPERABLE. | 1 hour |
| | <u>AND</u> A.2 Restore RCIC System to OPERABLE status. | 14 days |
| B. Required Action and associated Completion Time not met. | B.1 Be in MODE 3. | 12 hours |
| | <u>AND</u> B.2 Reduce reactor steam dome pressure to \leq 150 psig. | 36 hours |

3.8 ELECTRICAL POWER SYSTEMS

3.8.1 AC Sources — Operating

LCO 3.8.1 The following AC electrical power sources shall be OPERABLE:

- a. Two qualified circuits between the offsite transmission network and the onsite Class 1E AC Electrical Power Distribution System; and
- b. Two diesel generators (DGs).

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

NOTE

LCO 3.0.4.b is not applicable to DGs

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|------------------------------------|---|--|
| A. One offsite circuit inoperable. | A.1 Perform SR 3.8.1.1 for OPERABLE offsite circuit. | 1 hour |
| | <u>AND</u> | <u>AND</u> |
| | A.2 Declare required feature(s) with no offsite power available inoperable when the redundant required feature(s) are inoperable. | Once per 8 hours thereafter |
| | <u>AND</u> | 24 hours from discovery of no offsite power to one division concurrent with inoperability of redundant required feature(s) |
| | | (continued) |

ATTACHMENT 5

REGULATORY COMMITMENTS

**COOPER NUCLEAR STATION
NRC DOCKET 50-298, LICENSE DPR-46**

| COMMITMENT | COMMITTED DATE |
|---|---|
| Nebraska Public Power District will establish the Technical Specification Bases as adopted with the applicable license amendment. | Implementation of the license amendment |

ATTACHMENT 6

**PROPOSED TECHNICAL SPECIFICATIONS BASES REVISIONS
MARKUP FORMAT**

**COOPER NUCLEAR STATION
NRC DOCKET 50-298, LICENSE DPR-46**

Technical Specification Bases Pages

B 3.0-5
B 3.0-6
B 3.0-7
B 3.0-8
B 3.0-18
B 3.0-19
B 3.0-20
B 3.3-69
B 3.3-76
B 3.4-26
B 3.4-27
B 3.4-31
B 3.4-35
B 3.5-6
B 3.5-26
B 3.8-6

Note: TS Bases pages are provided for information only. Following approval of the proposed TS change, the Bases changes will be implemented in accordance with TS 5.5.10, "Technical Specification (TS) Bases Control Program."

BASES

LCO 3.0.3 (continued)

assemblies in the spent fuel storage pool." Therefore, this LCO can be applicable in any or all MODES. If the LCO and the Required Actions of LCO 3.7.6 are not met while in MODE 1, 2, or 3, there is no safety benefit to be gained by placing the unit in a shutdown condition. The Required Action of LCO 3.7.6 to "Suspend movement of irradiated fuel assemblies in the spent fuel storage pool" is the appropriate Required Action to complete in lieu of the actions of LCO 3.0.3. These exceptions are addressed in the individual Specifications.

LCO 3.0.4

LCO 3.0.4 establishes limitations on changes in MODES or other specified conditions in the Applicability when an LCO is not met. It ~~precludes~~ allows placing the unit in a MODE or other specified condition stated in that Applicability (e.g., the Applicability desired to be entered) when unit conditions are such that the requirements of the LCO would not be met, in accordance with LCO 3.0.4.a, LCO 3.0.4.b, or LCO 3.0.4.c, the following exist:

- a. ~~Unit conditions are such that the requirements of the LCO would not be met in the Applicability desired to be entered; and~~
- b. ~~Continued noncompliance with the LCO requirements, if the Applicability were entered, would result in the unit being required to exit the Applicability desired to be entered to comply with the Required Actions.~~

Added

LCO 3.0.4.a allows entry into a MODE or other specified condition in the Applicability with the LCO not met when the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time. Compliance with Required Actions that permit continued operation of the unit for an unlimited period of time in a MODE or other specified condition provides an acceptable level of safety for continued operation. This is without regard to the status of the unit before or after the MODE change. Therefore, in such cases, entry into a MODE or other specified condition in the Applicability may be made in accordance with the provisions of the Required Actions.

BASES

LCO 3.0.4 (continued)

LCO 3.0.4.b allows entry into a MODE or other specified condition in the Applicability with the LCO not met after performance of a risk assessment addressing inoperable systems and components, consideration of the results, determination of the acceptability of entering the MODE or other specified condition in the Applicability, and establishment of risk management actions, if appropriate.

Added The risk assessment may use quantitative, qualitative, or blended approaches, and the risk assessment will be conducted using the plant program, procedures, and criteria in place to implement 10 CFR 50.65(a)(4), which requires that risk impacts of maintenance activities be assessed and managed. The risk assessment, for the purposes of LCO 3.0.4.b, must take into account all inoperable Technical Specification equipment regardless of whether the equipment is included in the normal 10 CFR 50.65(a)(4) risk assessment scope. The risk assessments will be conducted using the procedures and guidance endorsed by Regulatory Guide 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants." Regulatory Guide 1.182 endorses the guidance in Section 11 of NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." These documents address general guidance for conduct of the risk assessment, quantitative and qualitative guidelines for establishing risk management actions, and example risk management actions. These include actions to plan and conduct other activities in a manner that controls overall risk, increased risk awareness by shift and management personnel, actions to reduce the duration of the condition, actions to minimize the magnitude of risk increases (establishment of backup success paths or compensatory measures), and determination that the proposed MODE change is acceptable. Consideration should also be given to the probability of completing restoration such that the requirements of the LCO would be met prior to the expiration of ACTIONS Completion Times that would require exiting the Applicability.

LCO 3.0.4.b may be used with single, or multiple systems and components unavailable. NUMARC 93-01 provides guidance relative to consideration of simultaneous unavailability of multiple systems and components.

The results of the risk assessment shall be considered in determining the acceptability of entering the MODE or other specified condition in the Applicability, and any corresponding risk management actions. The LCO 3.0.4.b risk assessments do not have to be documented.

BASES

LCO 3.0.4 (continued)

The Technical Specifications allow continued operation with equipment unavailable in MODE 1 for the duration of the Completion Time. Since this is allowable, and since in general the risk impact in that particular MODE bounds the risk of transitioning into and through the applicable MODES or other specified conditions in the Applicability of the LCO, the use of the LCO 3.0.4.b allowance should be generally acceptable, as long as the risk is assessed and managed as stated above. However, there is a small subset of systems and components that have been determined to be more important to risk and use of the LCO 3.0.4.b allowance is prohibited. The LCOs governing these systems and components contain Notes prohibiting the use of LCO 3.0.4.b by stating that LCO 3.0.4.b is not applicable.

LCO 3.0.4.c allows entry into a MODE or other specified condition in the Applicability with the LCO not met based on a Note in the Specification which states that LCO 3.0.4.c is applicable. These specific allowances permit entry into MODES or other specified conditions in the Applicability when the associated ACTIONS to be entered do not provide for continued operation for an unlimited period of time and a risk assessment has not been performed. This allowance may apply to all the ACTIONS or to a specific Required Action of a Specification. The risk assessments performed to justify the use of LCO 3.0.4.b usually only consider systems and components. For this reason LCO 3.0.4.c is typically applied to Specifications which describe values and parameters (e.g., RCS Specific Activity) and may be applied to other Specifications based on NRC plant-specific approval.

The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

The provisions of LCO 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS. In addition, the provisions of LCO 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that result from any unit shutdown. In this context, a unit shutdown is defined as a change in MODE or other specified condition in the Applicability associated with transitioning from MODE 1 to MODE 2, MODE 2 to MODE 3, and MODE 3 TO MODE 4.

Added

BASES

LCO 3.0.4 (continued)

Exceptions to LCO 3.0.4 are stated in the individual Specifications. Exceptions may apply to all the ACTIONS or to a specific Required Action of a Specification.

Upon entry into a MODE or other specified condition in the Applicability with the LCO not met, LCO 3.0.1 and LCO 3.0.2 require entry into the applicable Conditions and Required Actions until the Condition is resolved, until the LCO is met, or until the unit is not within the Applicability of the Technical Specification.

Added

Surveillances do not have to be performed on the associated inoperable equipment (or on variables outside the specified limits), as permitted by SR 3.0.1. Therefore, changing MODES or other specified conditions while in an ACTIONS Condition, either in compliance with utilizing LCO 3.0.4 or where an exception to LCO 3.0.4 is stated, is not a violation of SR 3.0.1 or SR 3.0.4 for those (any) Surveillances that do not have (not been) to be performed (on) due to the associated inoperable equipment. However, SRs must be met to ensure OPERABILITY prior to declaring the associated equipment OPERABLE (or variable within limits) and restoring compliance with the affected LCO.

LCO 3.0.4 is only applicable when entering MODE 3 from MODE 4, MODE 2 from MODE 3 or 4, or MODE 1 from MODE 2. Furthermore, LCO 3.0.4 is applicable when entering any other specified condition in the Applicability only while operating in MODE 1, 2, or 3. The requirements of LCO 3.0.4 do not apply in MODES 4 and 5, or in other specified conditions of the Applicability (unless in MODE 1, 2, or 3) because the ACTIONS of individual specifications sufficiently define the remedial measures to be taken.

LCO 3.0.5

LCO 3.0.5 establishes the allowance for restoring equipment to service under administrative controls when it has been removed from service or declared inoperable to comply with ACTIONS. The sole purpose of this Specification is to provide an exception to LCO 3.0.2 (e.g., to not comply with the applicable Required Action(s)) to allow the performance of SRs to demonstrate:

- a. The OPERABILITY of the equipment being returned to service; or
- b. The OPERABILITY of other equipment.

BASES

SR 3.0.3 (continued)

This Regulatory Guide addresses consideration of temporary and aggregate risk impacts, determination of risk management action thresholds, and risk management action up to and including plant shutdown. The missed Surveillance should be treated as an emergent condition as discussed in the Regulatory Guide. The risk evaluation may use quantitative, qualitative, or blended methods. The degree of depth and rigor of the evaluation should be commensurate with the importance of the component. Missed Surveillances for important components should be analyzed quantitatively. If the results of the risk evaluation determine the risk increase is significant, this evaluation should be used to determine the safest course of action. All missed Surveillances will be placed in the licensee's Corrective Action Program.

If a Surveillance is not completed within the allowed delay period, then the equipment is considered inoperable or the variable is considered outside the specified limits and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon expiration of the delay period. If a Surveillance is failed within the delay period, then the equipment is inoperable, or the variable is outside the specified limits and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon the failure of the Surveillance.

Completion of the Surveillance within the delay period allowed by this Specification, or within the Completion Time of the ACTIONS, restores compliance with SR 3.0.1.

SR 3.0.4

SR 3.0.4 establishes the requirement that all applicable SRs must be met before entry into a MODE or other specified condition in the Applicability.

Added

However, a provision is included to allow entry into a MODE or other specified condition in the Applicability when an LCO is not met due to an SR not being met if the entry is made in accordance with LCO 3.0.4.

This Specification ensures that system and component OPERABILITY requirements and variable limits are met before entry into MODES or other specified conditions in the Applicability for which these systems and components ensure safe operation of the unit.

The provisions of this Specification should not be interpreted as endorsing the failure to exercise the good practice of restoring systems or components to OPERABLE status before entering an associated MODE or other specified condition in the Applicability.

BASES

SR 3.0.4 (continued)

However, in certain circumstances, failing to meet an SR will not result in SR 3.0.4 restricting a MODE change or other specified condition change. When a system, subsystem, division, component, device, or variable is inoperable or outside its specified limits, the associated SR(s) are not required to be performed per SR 3.0.1, which states that Surveillances do not have to be performed on inoperable equipment. When equipment is inoperable, SR 3.0.4 does not apply to the associated SR(s) since the requirement for the SR(s) to be performed is removed. Therefore, failing to perform the Surveillance(s) within the specified Frequency, on equipment that is inoperable, does not result in an SR 3.0.4 restriction to changing MODES or other specified conditions of the Applicability.

However, since the LCO is not met in this instance, LCO 3.0.4 will govern any restrictions that may (or may not) apply to MODE or other specified condition changes. SR 3.0.4 does not restrict changing MODES or other specified conditions of the Applicability when a Surveillance has not been performed within the specified Frequency, provided the requirement to declare the LCO not met has been delayed in accordance with SR 3.0.3.

Added

The provisions of SR 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS. In addition, the provisions of SR 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability that result from any unit shutdown. In this context, a unit shutdown is defined as a change in MODE or other specified condition in the Applicability associated with transitioning from MODE 1 to MODE 2, MODE 2 to MODE 3, and MODE 3 to MODE 4.

The precise requirements for performance of SRs are specified such that exceptions to SR 3.0.4 are not necessary. The specific time frames and conditions necessary for meeting the SRs are specified in the Frequency, in the Surveillance, or both. This allows performance of Surveillances when the prerequisite condition(s) specified in a Surveillance procedure require entry into the MODE or other specified condition in the Applicability of the associated LCO prior to the performance or completion of a Surveillance. A Surveillance that could not be performed until after entering the LCO Applicability would have its Frequency specified such that it is not "due" until the specific conditions needed are met. Alternately, the Surveillance may be stated in the form of a Note as not required (to be met or performed) until a particular event, condition, or time has been reached. Further discussion of the specific formats of SRs' annotation is found in Section 1.4, Frequency.

~~SR 3.0.4 is only applicable when entering MODE 3 from MODE 4, MODE 2 from MODE 3 or 4, or MODE 1 from MODE 2. Furthermore, SR 3.0.4 is applicable when entering any other specified condition in the Applicability only while operating in MODE 1, 2, or 3. The requirements~~

BASES

~~of SR 3.0.4 do not apply in MODES 4 and 5, or in other specified conditions of the Applicability (unless in MODE 1, 2, or 3) because the ACTIONS of individual Specifications sufficiently define the remedial measures to be taken.~~

BASES

| | |
|------------------------------|--|
| APPLICABILITY (continued) | plant conditions are such that the likelihood of an event that would require PAM instrumentation is extremely low; therefore, PAM instrumentation is not required to be OPERABLE in these MODES. |
|------------------------------|--|

ACTIONS

~~Note 1 has been added to the ACTIONS to exclude the MODE change restriction of LCO 3.0.4. This exception allows entry into the applicable MODE while relying on the ACTIONS even though the ACTIONS may eventually require plant shutdown. This exception is acceptable due to the passive function of the instruments, the operator's ability to diagnose an accident using alternative instruments and methods, and the low probability of an event requiring these instruments.~~

Added

A Note 2 has been provided to modify the ACTIONS related to PAM instrumentation channels. Section 1.3, Completion Times, specifies that once a Condition has been entered, subsequent divisions, subsystems, components, or variables expressed in the Condition discovered to be inoperable or not within limits, will not result in separate entry into the Condition. Section 1.3 also specifies that Required Actions of the Condition continue to apply for each additional failure, with Completion Times based on initial entry into the Condition. However, the Required Actions for inoperable PAM instrumentation channels provide appropriate compensatory measures for separate Functions and for separate penetration flow paths for the PCIV Position Function. As such, a Note has been provided that allows separate Condition entry for each inoperable PAM Function, including separate Condition entry for each penetration flow path for the PCIV Position Function.

A.1

When one or more Functions have one required channel that is inoperable, the required inoperable channel must be restored to OPERABLE status within 30 days. The 30 day Completion Time is based on operating experience and takes into account the remaining OPERABLE channels (or, in the case of a Function that has only one required channel, other non-Regulatory Guide 1.97 instrument channels to monitor the

BASES (continued)

APPLICABILITY

The Alternate Shutdown System LCO is applicable in MODES 1 and 2. This is required so that the plant can be placed and maintained in a safe shutdown condition for an extended period of time from a location other than the control room.

This LCO is not applicable in MODES 3, 4, and 5. In these MODES, the plant is already subcritical and in a condition of reduced Reactor Coolant System energy. Under these conditions, considerable time is available to restore necessary instrument control Functions if control room instruments or control becomes unavailable. Consequently, the LCO does not require OPERABILITY in MODES 3, 4, and 5.

ACTIONS

~~A Note is included that excludes the MODE change restriction of LCO 3.0.4. This exception allows entry into an applicable MODE while relying on the ACTIONS even though the ACTIONS may eventually require a plant shutdown. This exception is acceptable due to the low probability of an event requiring this system.~~

Added

A Note 2 has been provided to modify the ACTIONS related to Alternate Shutdown System Functions. Section 1.3, Completion Times, specifies that once a Condition has been entered, subsequent divisions, subsystems, components, or variables expressed in the Condition, discovered to be inoperable or not within limits, will not result in separate entry into the Condition. Section 1.3 also specifies that Required Actions of the Condition continue to apply for each additional failure, with Completion Times based on initial entry into the Condition. However, the Required Actions for inoperable Alternate Shutdown System Functions provide appropriate compensatory measures for separate Functions. As such, a Note has been provided that allows separate Condition entry for each inoperable Alternate Shutdown System Function.

A.1

Condition A addresses the situation where one or more required Functions of the Alternate Shutdown System is inoperable. This includes any Function listed in Table B 3.3.3.2-1.

(continued)

BASES

| | |
|--------------------|---|
| LCO (continued) | the leakage detection systems inoperable, monitoring for LEAKAGE in the RCPB is degraded. |
|--------------------|---|

| | |
|---------------|---|
| APPLICABILITY | In MODES 1, 2, and 3, leakage detection systems are required to be OPERABLE to support LCO 3.4.4. This Applicability is consistent with that for LCO 3.4.4. |
|---------------|---|

ACTIONS

A.1

With the drywell floor drain sump flow monitoring system inoperable, no other form of sampling can provide the equivalent information to quantify leakage. However, the drywell atmospheric activity monitor will provide indication of changes in leakage.

With the drywell floor drain sump flow monitoring system inoperable, but with RCS unidentified and total LEAKAGE being determined every 12 hours (SR 3.4.4.1), operation may continue for 30 days. The 30 day Completion Time of Required Action A.1 is acceptable, based on operating experience, considering the multiple forms of leakage detection that are still available. ~~Required Action A.1 is modified by a Note that states that the provisions of LCO 3.0.4 are not applicable. As a result, a MODE change is allowed when the drywell floor drain sump flow monitoring system is inoperable. This allowance is provided because other instrumentation is available to monitor RCS leakage.~~

B.1 and B.2

With all three of the gaseous and particulate drywell atmospheric monitoring channels inoperable, grab samples of the drywell atmosphere must be taken and analyzed to provide periodic leakage information. Provided a sample is obtained and analyzed once every 12 hours, the plant may be operated for up to 30 days to allow restoration of at least one of the required monitors.

The 12 hour interval provides periodic information that is adequate to detect LEAKAGE. The 30 day Completion Time for

BASES

ACTIONS

B.1 and B.2 (continued)

restoration recognizes that at least one other form of leakage detection is available.

~~The Required Actions are modified by a Note that states that the provisions of LCO 3.0.4 are not applicable. As a result, a MODE change is allowed when all three of the gaseous and particulate drywell atmospheric monitoring channels are inoperable. This allowance is provided because other instrumentation is available to monitor RCS leakage.~~

C.1 and C.2

If any Required Action and associated Completion Time of Condition A or B cannot be met, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to perform the actions in an orderly manner and without challenging plant systems.

D.1

With all required monitors inoperable, no required automatic means of monitoring LEAKAGE are available, and immediate plant shutdown in accordance with LCO 3.0.3 is required.

SURVEILLANCE REQUIREMENTS

SR 3.4.5.1

This SR is for the performance of a CHANNEL CHECK of the required drywell atmospheric monitoring system. The check gives reasonable confidence that the channel is operating properly. The Frequency of 12 hours is based on instrument reliability and is reasonable for detecting off normal conditions.

BASES

ACTIONS

A.1 and A.2

When the reactor coolant specific activity exceeds the LCO DOSE EQUIVALENT I-131 limit, but is $\leq 4.0 \mu\text{Ci/gm}$, samples must be analyzed for DOSE EQUIVALENT I-131 at least once every 4 hours. In addition, the specific activity must be restored to the LCO limit within 48 hours. The Completion Time of once every 4 hours is based on the time needed to take and analyze a sample. The 48 hour Completion Time to restore the activity level provides a reasonable time for temporary coolant activity increases (iodine spikes or crud bursts) to be cleaned up with the normal processing systems.

~~A Note to the Required Actions of Condition A excludes the MODE change restriction of LCO 3.0.4. This exception allows entry into the applicable MODE(S) while relying on the ACTIONS even though the ACTIONS may eventually require plant shutdown.~~ **A Note permits the use of the provisions of LCO 3.0.4.c. This allowance permits entry into the applicable MODE(S) while relying on the ACTIONS.** This exception allowance is acceptable due to the significant conservatism incorporated into the specific activity limit, the low probability of an event which is limiting due to exceeding this limit, and the ability to restore transient specific activity excursions while the plant remains at, or proceeds to power operation.

Added

B.1, B.2.1, B.2.2.1, and B.2.2.2

If the DOSE EQUIVALENT I-131 cannot be restored to $\leq 0.2 \mu\text{Ci/gm}$ within 48 hours, or if at any time it is $> 4.0 \mu\text{Ci/gm}$, it must be determined at least once every 4 hours and all the main steam lines must be isolated within 12 hours. Isolating the main steam lines precludes the possibility of releasing radioactive material to the environment in an amount that is more than a small fraction of the requirements of 10 CFR 100 during a postulated MSLB accident.

Alternatively, the plant can be placed in MODE 3 within 12 hours and in MODE 4 within 36 hours. This option is provided for those instances when isolation of main steam lines is not desired (e.g., due to the decay heat loads). In MODE 4, the requirements of the LCO are no longer applicable.

BASES

APPLICABILITY (continued)

typically accomplished by condensing the steam in the main condenser. Additionally, in MODE 2 below this pressure, the OPERABILITY requirements for the Emergency Core Cooling Systems (ECCS) (LCO 3.5.1, "ECCS — Operating") do not allow placing the RHR shutdown cooling subsystem into operation.

The requirements for decay heat removal in MODES 4 and 5 are discussed in LCO 3.4.8, "Residual Heat Removal (RHR) Shutdown Cooling System — Cold Shutdown"; LCO 3.9.7, "Residual Heat Removal (RHR) — High Water Level"; and LCO 3.9.8, "Residual Heat Removal (RHR) — Low Water Level."

ACTIONS

~~A Note to the ACTIONS excludes the MODE change restriction of LCO 3.0.4. This exception allows entry into the applicable MODE(S) while relying on the ACTIONS even though the ACTIONS may eventually require plant shutdown. This exception is acceptable due to the redundancy of the OPERABLE subsystems, the low pressure at which the plant is operating, the low probability of an event occurring during operation in this condition, and the availability of alternate methods of decay heat removal capability.~~

A second Note has been provided to modify the ACTIONS related to RHR shutdown cooling subsystems. Section 1.3, Completion Times, specifies once a Condition has been entered, subsequent divisions, subsystems, components or variables expressed in the Condition, discovered to be inoperable or not within limits, will not result in separate entry into the Condition. Section 1.3 also specifies Required Actions of the Condition continue to apply for each additional failure, with Completion Times based on initial entry into the Condition. However, the Required Actions for inoperable shutdown cooling subsystems provide appropriate compensatory measures for separate inoperable shutdown cooling subsystems. As such, a Note has been provided that allows separate Condition entry for each inoperable RHR shutdown cooling subsystem.

A.1, A.2, and A.3

With one required RHR shutdown cooling subsystem inoperable for decay heat removal, except as permitted by LCO Note 2, the inoperable subsystem must be restored to OPERABLE status

(continued)

BASES (continued)

APPLICABILITY All ECCS subsystems are required to be OPERABLE during MODES 1, 2, and 3, when there is considerable energy in the reactor core and core cooling would be required to prevent fuel damage in the event of a break in the primary system piping. In MODES 2 and 3, when reactor steam dome pressure is ≤ 150 psig, ADS and HPCI are not required to be OPERABLE because the low pressure ECCS subsystems can provide sufficient flow below this pressure. ECCS requirements for MODES 4 and 5 are specified in LCO 3.5.2, "ECCS — Shutdown."

ACTIONS

Added

A Note prohibits the application of LCO 3.0.4.b to an inoperable HPCI system. There is an increased risk associated with entering a MODE or other specified condition in the Applicability with an inoperable HPCI system and the provisions of LCO 3.0.4.b, which allow entry into a MODE or other specified condition in the Applicability with the LCO not met after performance of a risk assessment addressing inoperable systems and components, should not be applied in this circumstance.

A.1

If any one low pressure ECCS injection/spray subsystem is inoperable, or if one LPCI pump in both LPCI subsystems is inoperable, the inoperable subsystem(s) must be restored to OPERABLE status within 7 days. In this condition, the remaining OPERABLE subsystems provide adequate core cooling during a LOCA. However, overall ECCS reliability is reduced, because a single failure in one of the remaining OPERABLE subsystems, concurrent with a LOCA, may result in the ECCS not being able to perform its intended safety function. The 7 day Completion Time is consistent with the recommendations provided in a reliability study (Ref. 11) that evaluated the impact on ECCS availability, assuming various components and subsystems were taken out of service. The results were used to calculate the average availability of ECCS equipment needed to mitigate the consequences of a LOCA as a function of allowed Completion Times.

B.1 and B.2

If the inoperable low pressure ECCS subsystem cannot be restored to OPERABLE status within the associated Completion Time, the plant must

(continued)

BASES (continued)

ACTIONS

Added

A Note prohibits the application of LCO 3.0.4.b to an inoperable RCIC system. There is an increased risk associated with entering a MODE or other specified condition in the Applicability with an inoperable RCIC system and the provisions of LCO 3.0.4.b, which allow entry into a MODE or other specified condition in the Applicability with the LCO not met after performance of a risk assessment addressing inoperable systems and components, should not be applied in this circumstance.

A.1 and A.2

If the RCIC System is inoperable during MODE 1, or MODE 2 or 3 with reactor steam dome pressure > 150 psig, and the HPCI System is verified to be OPERABLE, the RCIC System must be restored to OPERABLE status within 14 days. In this Condition, loss of the RCIC System will not affect the overall plant capability to provide makeup inventory at high reactor pressure since the HPCI System is the only high pressure system assumed to function during a loss of coolant accident (LOCA). OPERABILITY of HPCI is therefore verified within 1 hour when the RCIC System is inoperable. This may be performed as an administrative check, by examining logs or other information, to determine if HPCI is out of service for maintenance or other reasons. It does not mean it is necessary to perform the Surveillances needed to demonstrate the OPERABILITY of the HPCI System. If the OPERABILITY of the HPCI System cannot be verified, however, Condition B must be immediately entered. For transients and certain abnormal events with no LOCA, RCIC (as opposed to HPCI) is the preferred source of makeup coolant because of its relatively small capacity, which allows easier control of the RPV water level. Therefore, a limited time is allowed to restore the inoperable RCIC to OPERABLE status.

The 14 day Completion Time is consistent with the recommendations in a reliability study (Ref. 4) that evaluated the impact on ECCS availability, assuming various components and subsystems were taken out of service. The results were used to calculate the average availability of ECCS equipment needed to mitigate the consequences of a LOCA as a function of allowed outage times (AOTs). Because of similar functions of HPCI and RCIC, the AOTs (i.e., Completion Times) determined for HPCI are also applied to RCIC.

(continued)

BASES

LCO (continued)

Additionally, power to the critical buses is allowed to be supplied from the NSST. In this case, the SSST offsite circuit is considered OPERABLE provided the automatic transfer capability from the NSST to the SSST is OPERABLE for both of the critical buses. For the ESST to be considered OPERABLE, the automatic transfer capability from the NSST to the ESST must be OPERABLE for both critical buses (the automatic transfer capability from the NSST to the ESST is allowed to go through an intermediate step of transferring to the first offsite source, i.e., SSST).

A verification of OPERABILITY is an administrative check, by examination of appropriate plant records (logs, surveillance test records), to determine that a system, subsystem, train, component or device is not inoperable. Such verification does not preclude the demonstration (testing) of a given system, subsystem, train, component or device to determine OPERABILITY.

APPLICABILITY

The AC sources are required to be OPERABLE in MODES 1, 2, and 3 to ensure that:

- a. Acceptable fuel design limits and reactor coolant pressure boundary limits are not exceeded as a result of abnormal operational transients; and
- b. Adequate core cooling is provided and containment OPERABILITY and other vital functions are maintained in the event of a postulated DBA.

The AC power requirements for MODES 4 and 5 are covered in LCO 3.8.2, "AC Sources — Shutdown."

ACTIONS

A Note prohibits the application of LCO 3.0.4.b to an inoperable DG. There is an increased risk associated with entering a MODE or other specified condition in the Applicability with an inoperable DG and the provisions of LCO 3.0.4.b, which allow entry into a MODE or other specified condition in the Applicability with the LCO not met after performance of a risk assessment addressing inoperable systems and components, should not be applied in this circumstance.

Added →

A.1

To ensure a highly reliable power source remains with one offsite circuit inoperable, it is necessary to verify the availability of the remaining offsite circuit

Correspondence Number: NLS2008001

The following table identifies those actions committed to by Nebraska Public Power District (NPPD) in this document. Any other actions discussed in the submittal represent intended or planned actions by NPPD. They are described for information only and are not regulatory commitments. Please notify the Licensing Manager at Cooper Nuclear Station of any questions regarding this document or any associated regulatory commitments.

| COMMITMENT | COMMITMENT NUMBER | COMMITTED DATE OR OUTAGE |
|---|----------------------|---|
| Nebraska Public Power District will establish the Technical Specification Bases as adopted with the applicable license amendment. | NLS2008001-01 | Implementation of the license amendment |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |