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**DTE Energy**



April 1, 2004  
NRC-04-0005

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

Reference: Fermi 2  
NRC Docket No. 50-341  
NRC License No. NPF-43

Subject: Application for Technical Specification Change Regarding Mode  
Change Limitations Using the Consolidated Line Item Improvement  
Process

Pursuant to 10 CFR 50.90, Detroit Edison hereby requests an amendment to the Technical Specifications (TS) for Fermi, Unit 2.

The proposed amendment would modify TS requirements for mode change limitations in Limiting Condition for Operation (LCO) 3.0.4 and Surveillance Requirement (SR) 3.0.4.

Attachment 1 provides a description of the proposed change, the requested confirmation of applicability, and plant-specific verifications. Attachment 2 provides the existing TS pages marked up to show the proposed change. Attachment 3 provides revised (clean) TS pages. Attachment 4 provides the existing TS Bases pages (for information only) marked up to show the proposed change.

Detroit Edison requests approval of the proposed License Amendment by September 30, 2004, with the amendment being implemented within the next 90 days.

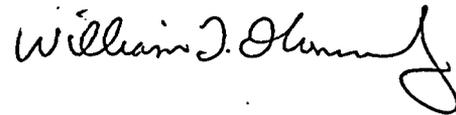
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In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the designated Michigan State Official.

If you should have any questions regarding this submittal, please contact Norman K. Peterson at (734) 586-4258.

Sincerely,



Attachments:

1. Description and Assessment
2. Proposed Technical Specification Changes
3. Revised Technical Specification Pages
4. Proposed Technical Specification Bases (for information only)

cc: M. A. Ring  
E. R. Duncan  
H. K. Chernoff  
D. P. Beaulieu  
NRC Resident Office  
Regional Administrator, Region III  
Supervisor, Electric Operators,  
Michigan Public Service Commission

I, WILLIAM T. O'CONNOR, JR., do hereby affirm that the foregoing statements are based on facts and circumstances which are true and accurate to the best of my knowledge and belief.

  
WILLIAM T. O'CONNOR, JR.  
Vice President - Nuclear Generation

On this 1st day of April, 2004 before me personally appeared William T. O'Connor, Jr., being first duly sworn and says that he executed the foregoing as his free act and deed.

  
Notary Public

NORMAN K. PETERSON  
NOTARY PUBLIC MONROE CO., MI  
MY COMMISSION EXPIRES JUL 24, 2008



## ATTACHMENT 1

### DESCRIPTION and ASSESSMENT

#### 1.0 DESCRIPTION

The proposed changes would modify TS requirements for mode change limitations in LCO 3.0.4 and SR 3.0.4. The proposed change will allow mode changes with inoperable equipment unless an LCO 3.0.4 exemption note specifically excludes it. The current LCO 3.0.4 requirement is to ensure all LCO requirements are met prior to a mode change unless a specific LCO 3.0.4 exemption note exists.

The changes are consistent with NRC-approved Industry/Technical Specification Task Force (TSTF) Standard Technical Specifications change TSTF-359, Revision 9 (Reference 1). 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 (Reference 2). That Federal Register notice announced the availability of this TS improvement through the Consolidated Line Item Improvement Process (CLIP). The Federal Register notice also requires that plants adopting TSTF-359 have a TS Bases Control Program consistent with Section 5.5 of the Improved Standard Technical Specifications (ISTS), and the equivalent of ISTS SR 3.0.1 and associated bases. These provisions are not being adopted as part of this license amendment request because they are already contained in the Fermi 2 Technical Specifications and Bases.

#### 2.0 ASSESSMENT

##### 2.1 Applicability of Published Safety Evaluation

Detroit Edison has reviewed the safety evaluation dated April 4, 2003, as part of the CLIP. This review included a review of the NRC staff's evaluation, as well as the supporting information provided to support TSTF-359 Revision 8, and included the updates made in TSTF-359, Revision 9. Detroit Edison has concluded that the justifications presented in the TSTF proposal and the safety evaluation prepared by the NRC staff are applicable to Fermi 2 and justify this amendment for the incorporation of the changes to the Fermi 2 Technical Specifications.

##### 2.2 Optional Changes and Variations

Detroit Edison is not proposing any variations or deviations from the TS changes described in the modified TSTF-359 Revision 8 and the NRC staff's model safety evaluation dated April 4, 2003.

However, due to minor differences between Fermi 2 TS/TS Bases and the model STS in NUREG-1433, Revision 2, Standard Technical Specifications, "General Electric Plants,

BWR/4”, small variances from the TSTF mark-up changes are necessary. These variances are discussed below and do not affect the adoption or application of TSTF-359, Revision 9.

- In the TSTF mark-ups, STS 3.3.6.3, “Low-Low Set (LLS) Instrumentation”, the Note in Required Action B.1, which is the LCO 3.0.4 non-applicability Note, is deleted. The equivalent Fermi 2 Note is in Required Action B.3, and the same change is made.
- In the TSTF mark-ups, STS 3.6.3.1, “Primary Containment Hydrogen Recombiners”, the Note is modified. Fermi 2 TS do not include this TS, so no changes are needed.
- In the TSTF mark-ups, STS 3.6.3.2, “Drywell Cooling System Fans”, the Note is modified. Fermi 2 TS do not include this TS, so no changes are needed.
- In the TSTF mark-ups, STS 3.6.3.4, “Containment Atmosphere Dilution System”, the Note is modified. Fermi 2 TS do not include this TS, so no changes are needed.
- In the TSTF mark-ups, STS 3.7.3, “Diesel Generator (DG) Standby Service Water (SSW) System”, the Note in Required Action A.1, which is the LCO 3.0.4 non-applicability Note, is deleted. The equivalent TS for Fermi 2 is TS 3.7.8, “Emergency Diesel Generator Service Water (EDGSW) System”, and does not contain an LCO 3.0.4 non-applicability Note, so no changes are needed.

### **3.0 REGULATORY ANALYSIS**

#### **3.1 No Significant Hazards Consideration Determination**

Detroit Edison has reviewed the proposed no significant hazards consideration determination (NSHCD) published in the Federal Register as part of the CLIIP. Detroit Edison has concluded that the proposed NSHCD presented in the Federal Register notice is applicable to Fermi 2 and 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:

Detroit Edison has established TS Bases for LCO 3.0.4 and SR 3.0.4 which state that use of the TS mode change limitation flexibility established by LCO 3.0.4 and SR 3.0.4 is not to 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 TS Applicability.

The modification also includes 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 provide guidance for changing Modes or other specified conditions in the Applicability when an LCO is not met. The bases changes describe in detail how: 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; 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 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 in to the applicable Conditions and Required Actions for no more than the duration of the applicable Completion Time or until the LCO is met or the unit is not within the Applicability of the TS. The bases also 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, the Fermi 2 TSs have a bases control program consistent with Section 5.5 of the STS, and the equivalent of STS SR 3.0.1 and associated bases.

#### **4.0 ENVIRONMENTAL EVALUATION**

Detroit Edison has reviewed the environmental evaluation included in the model safety evaluation dated April 4, 2003, as part of the CLIP. Detroit Edison has concluded that the staffs findings presented in that evaluation are applicable to Fermi 2 and the evaluation is hereby incorporated by reference for this application.

#### **5.0 REFERENCES**

1. Technical Specifications Task Force (TSTF) Standard Technical Specifications Change Traveler TSTF-359, Revision 9, Increase Flexibility in MODE Restraints.

2. Federal Register, Volume 68, Number 65, Notice of Availability of Model Application Concerning Technical Specification Improvement To Modify Requirements Regarding Mode Change Limitations Using the Consolidated Line Item Improvement Process," dated April 4, 2003

**ATTACHMENT 2 TO  
NRC-04-0005**

**Technical Specification Improvement Regarding Mode Change Limitations  
Using the Consolidated Line Item Improvement Process**

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

3.0 LCO APPLICABILITY (continued)

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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 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.~~

~~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.~~

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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.

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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, an evaluation shall be performed 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)

**INSERT 1 (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:

- 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;
- 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.

**INSERT 2 (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.

3.0 LCO APPLICABILITY (continued)

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SR 3.0.3 If it is discovered that a Surveillance was not performed within its specified Frequency, then compliance with the requirement to declare the LCO not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified Frequency, whichever is greater. This delay period is permitted to allow performance of the Surveillance. A risk evaluation shall be performed for any Surveillance delayed greater than 24 hours and the risk impact shall be managed.

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.

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SR 3.0.4

Insert 2

~~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

- .....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 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 5.6.7. | Immediately     |
| C. ....NOTE.....<br>Not applicable to primary containment hydrogen and primary containment oxygen concentration channels.<br>.....<br>One or more Functions with two required channels inoperable. | C.1 Restore one required channel to OPERABLE status.        | 7 days          |

(continued)

3.3 INSTRUMENTATION

3.3.3.2 Remote Shutdown System

LCO 3.3.3.2 The Division I Remote Shutdown System Functions in Table 3.3.3.2-1 shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTIONS

- NOTES-----
- ~~1. LCO 3.0.4 is not applicable.~~
- X. 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        |

ACTIONS (continued)

| CONDITION   | REQUIRED ACTION   | COMPLETION TIME  |
|---|---|--|
| <p>B. ....NOTE.....<br/>Separate Condition entry is allowed for each SRV.<br/>.....</p> <p>One or more safety/relief valves (SRVs) with one or more Function 3 channel(s) inoperable.</p> | <p>B.1 Restore one tailpipe pressure switch for 11 OPERABLE SRVs to OPERABLE status.</p> <p><u>AND</u></p> <p>B.2 Restore one tailpipe pressure switch in each Division for an OPERABLE SRV in the lowest setpoint group, to OPERABLE status.</p> <p><u>AND</u></p> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p><del>.....NOTE.....<br/>LCO 3.0.4 is not applicable.<br/>.....</del></p> </div> <p>B.3 Restore both tailpipe pressure switches for 11 OPERABLE SRVs, including 4 of 5 OPERABLE SRVs with the lowest relief setpoints, to OPERABLE status.</p> | <p>24 hours</p> <p>24 hours</p> <p>Prior to entering MODE 2 or 3 from MODE 4</p> |
| <p>C. Required Action and associated Completion Time of Condition A or B not met.</p> <p><u>OR</u></p> <p>Two LLS valves inoperable due to inoperable channels.</p>                       | <p>C.1 Be in MODE 3.</p> <p><u>AND</u></p> <p>C.2 Be in MODE 4.</p>   | <p>12 hours</p> <p>36 hours</p>  |

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.6 RCS Leakage Detection Instrumentation

- LCO 3.4.6 The following RCS leakage detection instrumentation shall be OPERABLE:
- a. Drywell floor drain sump flow monitoring system;
  - b. The primary containment atmosphere gaseous radioactivity monitoring system channel; and
  - c. Drywell floor drain sump level monitoring system.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

-NOTE-

LCO 3.0.4 is not applicable.

| 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 primary containment atmosphere gaseous radioactivity monitoring system inoperable. | B.1 Analyze grab samples of primary containment atmosphere.                     | Once per 24 hours |

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.7 RCS Specific Activity

LCO 3.4.7 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.

Insert 3

| 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; padding: 5px; text-align: center;"> <del>NOTE<br/>LCO 3.0.4 is not applicable.</del> </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>   |                  |

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

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

LCO 3.4.8 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 RHR cut in permissive pressure.

ACTIONS

-----NOTES-----  
~~1. LCO 3.0.4 is not applicable.~~

~~X~~ Separate Condition entry is allowed for each RHR shutdown cooling subsystem.

-----

| CONDITION  | REQUIRED ACTION   | COMPLETION TIME  |
|--|---|--|
| A. One or two required RHR shutdown cooling subsystems inoperable. | A.1 Initiate action to restore required RHR shutdown cooling subsystem(s) to OPERABLE status.<br><br><u>AND</u> | Immediately<br><br><br><br><br><br><br><br><br><br>(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 five 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  $\leq$  150 psig.

Insert 4

ACTIONS

| CONDITION  | REQUIRED ACTION  | COMPLETION TIME              |
|--|--|------------------------------|
| A. One low pressure ECCS injection/spray subsystem inoperable.                           | A.1 Restore low pressure ECCS injection/spray subsystem to OPERABLE status.  | 7 days                       |
| B. One LPCI pump in both LPCI subsystems inoperable.                                     | B.1 Restore both LPCI pumps to OPERABLE status.  | 7 days                       |
| C. One CSS subsystem inoperable.<br><br><u>AND</u><br><br>One LPCI subsystem inoperable. | C.1 Restore CSS subsystem to OPERABLE status.<br><br><u>OR</u><br><br>C.2 Restore LPCI subsystem to OPERABLE status. | 72 hours<br><br><br>72 hours |

(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.

Insert 5

ACTIONS

| CONDITION  | REQUIRED ACTION  | COMPLETION TIME |
|--|--|-----------------|
| A. RCIC System inoperable.                                 | A.1 Verify by administrative means High Pressure Coolant Injection System is OPERABLE. | Immediately     |
|  | <u>AND</u><br>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><br>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 emergency diesel generators (EDGs) per division.

APPLICABILITY: MODES 1, 2, and 3.

Insert 6

ACTIONS

| CONDITION                                       | REQUIRED ACTION  | COMPLETION TIME  |
|---|--|--|
| A. One or both EDGs in one division inoperable. | A.1 Perform SR 3.8.1.1 for OPERABLE offsite circuit(s).  | 1 hour.  |
|   | <u>AND</u>   | <u>AND</u>   |
|   | A.2 Declare required feature(s), supported by the inoperable EDGs, inoperable when the redundant required feature(s) are inoperable. | 4 hours from discovery of an inoperable EDG concurrent with inoperability of redundant required feature(s) |
|   | <u>AND</u>   |  |
|   | A.3 Verify the status of CTG 11-1.   | Once per 8 hours   |
|   | <u>AND</u>   |  |
|   |  | (continued)  |

**INSERT 3 (RCS SPECIFIC ACTIVITY)**

-----  
-NOTE-

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

**INSERT 4 (LCO 3.5.1, ECCS - OPERATING)**

-----  
-NOTE-

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

**INSERT 5 (LCO 3.5.3, RCIC SYSTEM)**

-----  
-NOTE-

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

**INSERT 6 (LCO 3.8.1, AC SOURCES - OPERATING)**

-----  
-NOTE-

LCO 3.0.4.b is not applicable to EDGs.  
-----

**ATTACHMENT 3 TO  
NRC-04-0005**

**Technical Specification Improvement Regarding Mode Change Limitations  
Using the Consolidated Line Item Improvement Process**

**PROPOSED TECHNICAL SPECIFICATION PAGES**

3.0 LCO APPLICABILITY (continued)

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- 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:
- 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;
  - 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.

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- 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, an evaluation shall be performed 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 LCO APPLICABILITY (continued)

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SR 3.0.3 If it is discovered that a Surveillance was not performed within its specified Frequency, then compliance with the requirement to declare the LCO not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified Frequency, whichever is greater. This delay period is permitted to allow performance of the Surveillance. A risk evaluation shall be performed for any Surveillance delayed greater than 24 hours and the risk impact shall be managed.

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.

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SR 3.0.4 Entry into a MODE or other specified condition in the Applicability of an LCO shall not 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.

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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.  
-----

| 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 5.6.7. | Immediately     |
| C. -----NOTE-----<br>Not applicable to primary containment hydrogen and primary containment oxygen concentration channels.<br>-----<br>One or more Functions with two required channels inoperable. | C.1 Restore one required channel to OPERABLE status.        | 7 days          |

(continued)

3.3 INSTRUMENTATION

3.3.3.2 Remote Shutdown System

LCO 3.3.3.2 The Division I Remote Shutdown System Functions in Table 3.3.3.2-1 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        |



RCS Leakage Detection Instrumentation  
3.4.6

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.6 RCS Leakage Detection Instrumentation

LCO 3.4.6 The following RCS leakage detection instrumentation shall be OPERABLE:

- a. Drywell floor drain sump flow monitoring system;
- b. The primary containment atmosphere gaseous radioactivity monitoring system channel; and
- c. Drywell floor drain sump level 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 primary containment atmosphere gaseous radioactivity monitoring system inoperable. | B.1 Analyze grab samples of primary containment atmosphere.                     | Once per 24 hours |

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.7 RCS Specific Activity

LCO 3.4.7 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-----<br>LCO 3.0.4.c is applicable.<br>-----             |                  |
|  | A.1 Determine DOSE EQUIVALENT I-131.                              | Once per 4 hours |
|  | <u>AND</u><br>A.2 Restore DOSE EQUIVALENT I-131 to within limits. | 48 hours         |

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.8 Residual Heat Removal (RHR) Shutdown Cooling System- Hot Shutdown

LCO 3.4.8 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 RHR cut in permissive pressure.

ACTIONS

-----NOTE-----

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

-----

| CONDITION  | REQUIRED ACTION   | COMPLETION TIME |
|--|---|-----------------|
| A. One or two required RHR shutdown cooling subsystems inoperable. | A.1 Initiate action to restore required 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 five 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  $\leq$  150 psig.

ACTIONS

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

| CONDITION  | REQUIRED ACTION  | COMPLETION TIME          |
|--|--|--------------------------|
| A. One low pressure ECCS injection/spray subsystem inoperable.                       | A.1 Restore low pressure ECCS injection/spray subsystem to OPERABLE status.                                      | 7 days                   |
| B. One LPCI pump in both LPCI subsystems inoperable.                                 | B.1 Restore both LPCI pumps to OPERABLE status.  | 7 days                   |
| C. One CSS subsystem inoperable.<br><br><u>AND</u><br>One LPCI subsystem inoperable. | C.1 Restore CSS subsystem to OPERABLE status.<br><br><u>OR</u><br>C.2 Restore LPCI subsystem to OPERABLE status. | 72 hours<br><br>72 hours |

(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. | Immediately     |
|  | <u>AND</u><br>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><br>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 emergency diesel generators (EDGs) per division.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

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

| CONDITION                                       | REQUIRED ACTION  | COMPLETION TIME  |
|---|--|--|
| A. One or both EDGs in one division inoperable. | A.1 Perform SR 3.8.1.1 for OPERABLE offsite circuit(s).  | 1 hour<br><u>AND</u><br>Once per 8 hours thereafter  |
|   | <u>AND</u>   |  |
|   | A.2 Declare required feature(s), supported by the inoperable EDGs, inoperable when the redundant required feature(s) are inoperable. | 4 hours from discovery of an inoperable EDG concurrent with inoperability of redundant required feature(s) |
|   | <u>AND</u>   |  |
|   | A.3 Verify the status of CTG 11-1.   | Once per 8 hours   |
|   | <u>AND</u>   |  |
|   |  | (continued)  |

**ATTACHMENT 4 TO  
NRC-04-0005**

**Technical Specification Improvement Regarding Mode Change Limitations  
Using the Consolidated Line Item Improvement Process**

**PROPOSED TECHNICAL SPECIFICATION BASES CHANGES (MARK-UP)  
(For Information Only)**

BASES

LCO 3.0.3 (continued)

ACTIONS of individual Specifications sufficiently define the remedial measures to be taken.

Exceptions to LCO 3.0.3 are provided in instances where requiring a unit shutdown, in accordance with LCO 3.0.3, would not provide appropriate remedial measures for the associated condition of the unit. An example of this is in LCO 3.7.7, "Spent Fuel Storage Pool Water Level." LCO 3.7.7 has an Applicability of "During movement of irradiated fuel 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 3.7.7 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 3.7.7 of "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 placing the unit in a MODE or other specified condition stated in that Applicability (e.g., Applicability desired to be entered) when 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.

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

Insert B1

BASES

LCO 3.0.4 (continued)

in accordance with the provisions of the Required Actions. 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.

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

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. In some cases (none currently in Fermi-2 Technical Specifications) these ACTIONS provide a Note that states "While this LCO is not met, entry into a MODE or other specified condition in the Applicability is not permitted, unless required to comply with ACTIONS." This Note is a requirement explicitly precluding entry into a MODE or other specified condition of the Applicability.

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 LCO 3.0.4 or where an exception to LCO 3.0.4 is stated, is not a violation of

BASES

LCO 3.0.4 (continued)

~~SR 3.0.1 or SR 3.0.4 for those Surveillances that do not have to be performed 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 3.0.5

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 required testing to demonstrate:

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

The administrative controls ensure the time the equipment is returned to service in conflict with the requirements of the ACTIONS is limited to the time absolutely necessary to perform the required testing to demonstrate OPERABILITY. This Specification does not provide time to perform any other preventive or corrective maintenance.

An example of demonstrating the OPERABILITY of the equipment being returned to service is reopening a containment isolation valve that has been closed to comply with Required Actions and must be reopened to perform the required testing.

An example of demonstrating the OPERABILITY of other equipment is taking an inoperable channel or trip system out of the tripped condition to prevent the trip function from occurring during the performance of required testing on another channel in the other trip system. A similar example of demonstrating the OPERABILITY of other equipment is taking an inoperable channel or trip system out of the tripped condition to permit the logic to function and indicate the appropriate response during the performance of required testing on another channel in the same trip system.

## **INSERT B1 (LCO 3.0.4 BASES)**

LCO 3.0.4 establishes limitations on changes in MODES or other specified conditions in the Applicability when an LCO is not met. It 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.

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.

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.

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 to 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.

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 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.

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.

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, utilizing LCO 3.0.4, is not a violation of SR 3.0.1 or SR 3.0.4 for any Surveillances that have not been performed on 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.

BASES

SR 3.0.3 (continued)

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.

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.

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 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.

The provisions of SR 3.0.4 shall not prevent changes in MODES or other specified conditions in the Applicability

Insert B2

BASES

SR 3.0.4 (continued)

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.

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 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.

## **INSERT B2 (SR 3.0.4 BASES)**

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.

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.

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 Surveillance not being met in accordance with LCO 3.0.4.

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 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.

The provisions of SR 3.0.4 shall not prevent entry into 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's 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.

**BASES**

**LCO (continued)**

**10. Primary Containment Isolation Valve (PCIV) Position**

PCIV position is a Type B, Category I variable, and is provided for verification of containment integrity. In the case of PCIV position, the important information is the isolation status of the containment penetration. The LCO requires one channel of valve position indication in the control room to be OPERABLE for each active PCIV in a containment penetration flow path, i.e., two total channels of PCIV position indication for a penetration flow path with two active valves. For containment penetrations with only one control room indication, Note (b) requires a single channel of valve position indication to be OPERABLE. This is sufficient to redundantly verify the isolation status of each isolable penetration via indicated status of the active valve, as applicable, and prior knowledge of passive valve or system boundary status. If a penetration flow path is isolated, position indication for the PCIV(s) in the associated penetration flow path is not needed to determine status. Therefore, the position indication for valves in an isolated penetration flow path is not required to be OPERABLE. The PCIV position PAM instrumentation consists of position switches, wiring, cabling, and control room indicating lamps for active PCIVs. Therefore, the PAM specification deals specifically with these instrument channels.

**APPLICABILITY**

The PAM instrumentation LCO is applicable in MODES 1 and 2. These variables are related to the diagnosis and preplanned actions required to mitigate DBAs. The applicable DBAs are assumed to occur in MODES 1 and 2. In MODES 3, 4, and 5, 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~~

BASES

ACTIONS (continued)

~~diagnose an accident using alternative instruments and methods, and the low probability of an event requiring these instruments.~~

A—Note X 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. As such, a Note has been provided that allows separate Condition entry for each inoperable PAM 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 Function), the passive nature of the instrument (no critical automatic action is assumed to occur from these instruments), and the low probability of an event requiring PAM instrumentation during this interval.

B.1

If a channel has not been restored to OPERABLE status in 30 days, this Required Action specifies initiation of action in accordance with Specification 5.6.7, which requires a written report to be submitted to the NRC. This report discusses the results of the root cause evaluation of the inoperability and identifies proposed restorative actions.

BASES

APPLICABILITY (continued)

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 TS do 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.~~

A Note <sup>✓</sup> has been provided to modify the ACTIONS related to Remote 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 Remote 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 Remote Shutdown System Function.

A.1

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

The Required Action is to restore the Function to OPERABLE status within 30 days. The Completion Time is based on operating experience and the low probability of an event that would require evacuation of the control room.

BASES

ACTIONS (continued)

instrument channels inoperable. Therefore, it is acceptable for plant operation to continue provided that within 24 hours, per Required Action B.1 and B.2, verification and/or restoration is made to ensure at least: a) one tailpipe pressure switch in each Division OPERABLE on one OPERABLE SRV in the lowest SRV setpoint group; and b) at least 11 OPERABLE SRVs have at least one OPERABLE tailpipe pressure switch. Therefore, it is acceptable for plant operation to continue even with only one tailpipe pressure switch OPERABLE on each SRV. However, this is only acceptable provided each LLS valve is OPERABLE. (Refer to Required Action A.1 and C.1 Bases).

Required Action B.3 requires restoration of both tailpipe pressure switches on  $\geq 11$  OPERABLE SRVs, including 4 SRVs out of the 5 lowest relief setpoint OPERABLE SRVs, to OPERABLE status, prior to entering MODE 2 or 3 from MODE 4. This will ensure that sufficient switches are OPERABLE at the beginning of a reactor startup (this is because the switches are not accessible during plant operation). The Required Actions do not allow placing the channel in trip since this action could result in an inadvertent LLS valve actuation. ~~As noted, LCO 3.0.4 is not applicable, thus allowing entry into MODE 1 or 2 from MODE 2 or 3 with inoperable channels. This allowance is needed since the channels only have to be repaired prior to entering MODE 2 or MODE 3 from MODE 4.~~

A Note has been provided in the Condition to modify the Required Actions and Completion Times conventions related to LLS Function 3 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 LLS Function 3 channels provide appropriate compensatory measures for separate inoperable Condition entry for each SRV with inoperable tailpipe pressure switches.

**BASES**

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**LCO** The drywell floor drain sump flow monitoring system is required to quantify the unidentified LEAKAGE from the RCS. The other monitoring systems provide early alarms to the operators so closer examination of other detection systems will be made to determine the extent of any corrective action that may be required. With the leakage detection systems inoperable, monitoring for LEAKAGE in the RCPB is degraded.

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**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.

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**ACTIONS**

~~The 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 one or two of the primary containment sump flow monitoring system, primary containment atmosphere gaseous radioactivity monitoring system, and the drywell floor drain sump level monitoring system are inoperable. This allowance is provided because other instrumentation is available to monitor RCS leakage.~~

A.1

With the drywell floor drain sump flow monitoring system inoperable, the plant has lost one means to quantify leakage. However, the primary containment atmosphere gaseous radioactivity monitoring system and the drywell floor drain sump level monitoring system 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.

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.

RCS Specific Activity  
B 3.4.7

BASES

ACTIONS (continued)

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.

allowance

~~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. This exception 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.~~

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.

The Completion Time of once every 4 hours is the time needed to take and analyze a sample. The 12 hour Completion Time is reasonable, based on operating experience, to isolate the main steam lines in an orderly manner and without challenging plant systems. Also, the allowed Completion Times for Required Actions B.2.2.1 and B.2.2.2 for placing the unit in MODES 3 and 4 are reasonable, based on operating experience, to achieve the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

BASES

APPLICABILITY (continued)

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 MODE 4 are discussed in LCO 3.4.9, "Residual Heat Removal (RHR) Shutdown Cooling System—Cold Shutdown"; and for MODE 5 are discussed in 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 3.6.4. 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.

BASES

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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  $\leq 150$  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."

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ACTIONS

Insert B3

A.1

If any one low pressure ECCS injection/spray subsystem is inoperable, the inoperable subsystem 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 based on a reliability study (Ref. 12) 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 (i.e., Completion Times).

B.1

If one LPCI pump in both LPCI subsystems is inoperable, both inoperable pumps must be restored to OPERABLE status within 7 days. (Note the first inoperable LPCI pump resulted in entry into Condition A, and will require restoration within 7 days of entry into Condition A, which may be more restrictive than the requirements of Required Action B.1.) In this Condition, the remaining OPERABLE subsystems provide adequate core cooling during a LOCA, even assuming an additional single failure, however, overall ECCS reliability is reduced. The 7 day Completion Time is based on a reliability study (Ref. 12) 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

BASES

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ACTIONS

Insert B4

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 immediately 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 based on a reliability study (Ref. 3) 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.

B.1 and B.2

If the RCIC System cannot be restored to OPERABLE status within the associated Completion Time, or if the HPCI System is simultaneously inoperable, the plant must be brought to a condition 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 reactor steam dome pressure reduced to  $\leq 150$  psig within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

BASES

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ACTIONS

A.1

Insert B5

To ensure a highly reliable power source remains with one or both EDGs in one division inoperable, it is necessary to verify the availability of the OPERABLE offsite circuits on a more frequent basis. Since the Required Action only specifies "perform," a failure of SR 3.8.1.1 acceptance criteria does not result in a Required Action being not met. However, if a circuit fails to pass SR 3.8.1.1, it is inoperable. Upon offsite circuit inoperability, additional Conditions must then be entered.

A.2

Required Action A.2 is intended to provide assurance that a loss of offsite power, during the period that one or both EDGs in one division is inoperable, does not result in a complete loss of safety function of critical systems. These features are designed with redundant safety related divisions (i.e., single division systems are not included). Redundant required features failures consist of inoperable features associated with a division redundant to the division that has an inoperable EDG.

The Completion Time is intended to allow the operator time to evaluate and repair any discovered inoperabilities. This Completion Time also allows for an exception to the normal "time zero" for beginning the allowed outage time "clock." In this Required Action the Completion Time only begins on discovery that both:

- a. An inoperable EDG exists; and
- b. A required feature on the other division (Division 1 or 2) that is redundant to a feature supported by the inoperable EDG(s) is inoperable.

If, at any time during the existence of this Condition (one or both EDGs in one division inoperable), a required feature subsequently becomes inoperable, this Completion Time begins to be tracked.

Discovering one required EDG inoperable coincident with one or more inoperable redundant required support or supported features, or both, that are associated with the OPERABLE EDGs results in starting the Completion Time for the Required Action. Four hours from the discovery of these

**INSERT B3 (LCO 3.5.1, ECCS - OPERATING)**

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.

**INSERT B4 (LCO 3.5.3, RCIC SYSTEM)**

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.

**INSERT B5 (LCO 3.8.1, AC SOURCES - OPERATING)**

A Note prohibits the application of LCO 3.0.4.b to an inoperable EDG. There is an increased risk associated with entering a MODE or other specified condition in the Applicability with an inoperable EDG 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.