Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37384-2000

December 2, 2004

TVA-SQN-TS-03-13 10 CFR 50.90

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

Gentlemen:

In the Matter of	)	Docket Nos. 50-327
Tennessee Valley Authority	)	50-328

SEQUOYAH NUCLEAR PLANT (SQN) - UNITS 1 AND 2 - TECHNICAL SPECIFICATIONS (TS) CHANGE 03-13, "APPLICATION FOR TECHNICAL SPECIFICATION CHANGE REGARDING MODE CHANGE LIMITATIONS USING THE CONSOLIDATED LINE ITEM IMPROVEMENT PROCESS (CLIIP)"

Pursuant to 10 CFR 50.90, Tennessee Valley Authority (TVA) is submitting a request for a TS change (TS 03-13) to Licenses DPR-77 and DPR-79 for SQN Units 1 and 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) 4.0.4. The proposed changes are consistent with Nuclear Regulatory Commission (NRC) approved Industry/Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-359 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. That *Federal Register* notice announced the availability of this TS improvement through the consolidated line item improvement process (CLIIP). The TS Bases Control Program described in

A001

Section 5.5 of NUREG-1431, Revision 2, and the Standard TS requirements and associated Bases for SR 3.0.1 have been proposed, NRC approved, and implemented into the SQN TSs as Amendments 280 and 271 for Units 1 and 2, respectively.

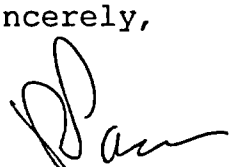
Enclosure 1 provides a description of the proposed change (including a table of affected TSs with a brief descriptor of the change), the requested confirmation of applicability, and plant-specific verifications. Enclosure 2 provides the existing TS pages marked-up to show the proposed change. Enclosure 3 provides the existing TS Bases pages marked-up to reflect the proposed change. Enclosure 4 provides a summary of the regulatory commitments made in this submittal. In accordance with 10 CFR 50.91(b)(1), TVA is sending a copy of this letter and enclosures to the Tennessee State Department of Public Health.

TVA does not have specific schedule needs for this proposed change and processing can be pursued as appropriate. TVA requests that the implementation of the revised TS be within 45 days of NRC approval.

If you have any questions about this change, please contact me at 843-7170 or Jim Smith at 843-6672.

I declare under penalty of perjury that the foregoing is true and correct. Executed on this 2nd day of December 2004.

Sincerely,



P. L. Pace
Manager, Site Licensing
and Industry Affairs

Enclosures:
1. TVA Evaluation of the Proposed Changes
2. Proposed Technical Specifications Changes (mark-up)
3. Changes to Technical Specifications Bases Pages
4. Regulatory Commitments

cc: See page 3

Enclosures
cc (Enclosures):
Framatome ANP, Inc.
P. O. Box 10935
Lynchburg, Virginia 24506-0935
ATTN: Mr. Frank Masseth

Mr. Lawrence E. Nanney, Director
Division of Radiological Health
Third Floor
L&C Annex
401 Church Street
Nashville, Tennessee 37243-1532

Mr. Douglas V. Pickett, Senior Project Manager
U.S. Nuclear Regulatory Commission
Mail Stop O-7A15
One White Flint North
11555 Rockville Pike
Rockville, Maryland 20852-2739

ENCLOSURE 1

TENNESSEE VALLEY AUTHORITY (TVA)
SEQUOYAH NUCLEAR PLANT (SQN)
UNITS 1 AND 2

Description and Assessment

1.0 DESCRIPTION

The proposed amendment would modify technical specification (TS) requirements for mode change limitations in Limiting Condition for Operation (LCO) 3.0.4 and Surveillance Requirement (SR) 4.0.4. A table is included at the end of this enclosure indicating the affected portions of the TSs and Bases and the impact to each portion. The TS Bases Control Program described in Section 5.5 of NUREG-1431, Revision 2, and the Standard TS (STS) requirements and associated Bases for Surveillance Requirement 3.0.1 have been proposed, NRC approved, and implemented into the SQN TSs as Amendments 280 and 271 for Units 1 and 2, respectively.

The proposed changes are consistent with Nuclear Regulatory Commission (NRC) approved Industry/Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-359 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. That *Federal Register* notice announced the availability of this TS improvement through the consolidated line item improvement process (CLIIP).

2.0 ASSESSMENT

2.1 Applicability of Published Safety Evaluation

TVA has reviewed the safety evaluation published on April 4, 2003 (68 FR 16579) as part of the CLIIP. This review included a review of the NRC staff's evaluation, as well as the supporting information provided to support TSTF-359. TVA has concluded that the justifications presented in the TSTF proposal and the safety evaluation prepared by the NRC staff are applicable to SQN Units 1 and 2, and justify this amendment for the incorporation of the changes to the SQN TSs.

2.2 Optional Changes and Variations

TVA is not proposing any variations or deviations from the TS changes described in TSTF-359, Revision 9 or the

NRC staff's model safety evaluation published on April 4, 2003. TVA has not converted the SQN TSs to the latest version of STS in NUREG-1431 nor has TVA incorporated the latest application of TS 3.0.4 endorsed by NRC Generic Letter 87-09. For these reasons, the changes affect additional portions of the TSs than found in TSTF-359. However, the application is identical in intent to the proposed changes in TSTF-359 and the NRC approved CLIIP. The proposed SQN TS changes require the deletion of several additional exceptions to TS 3.0.4 than is currently found in the STS and TSTF-359.

TSTF-359 also includes recommended changes to the associated Bases section to support the proposed specification changes. TVA has incorporated these Bases changes in the current SQN's Bases discussions and has included additional discussions consistent with the STS to fully implement the proposed Bases additions. TVA has included all necessary Bases changes to completely implement the recommendations of the TSTF and CLIIP with one exception. The following paragraph in STS SR 3.0.4 Bases is not applicable to the SQN units because the individual SQN TSs do not have surveillance frequencies that allow entry into the condition of applicability without performing the surveillance. Therefore, the current exceptions in the SQN TSs to the requirements of SR 4.0.4 will continue to be utilized and the proposed SQN Bases for SR 4.0.4 does not include this paragraph that is found in TSTF-359 for STS SR 3.0.4.

> "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."

3.0 REGULATORY ANALYSIS

3.1 No Significant Hazards Determination

TVA has reviewed the proposed no significant hazards consideration determination published on April 4, 2003 (68 FR 16579) as part of the CLIIP. TVA has concluded that the proposed determination presented in the notice is applicable to SQN and the determination is herby 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 licenses has established TS Bases for LCO 3.0.4 and SR 4.0.4, which state that use of the TS mode change limitation flexibility established by LCO 3.0.4 and SR 4.0.4 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 4.0.4 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., Containment Air Temperature, Containment

Pressure, Moderator Temperature Coefficient), 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. 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 Specifications. The Bases also state that SR 4.0.4 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 4.0.3. TVA has implemented 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

TVA has reviewed the environmental evaluation included in the model safety evaluation published on April 4, 2003 (68 FR 16579) as part of the CLIIP. TVA has concluded that the NRC staff's findings presented in that evaluation are applicable to SQN and the evaluation is hereby incorporated by reference for this application.

TECHNICAL SPECIFICATION AND BASES IMPACTS

Specification	Page *	Change Description	Comments
LCO 3.0.4	3/4 0-1	Delete current LCO 3.0.4 requirements and replace with new TSTF-359 requirements.	
SR 4.0.4	3/4 0-2	Delete current SR 4.0.4 requirements and replace with new TSTF-359 requirements.	
LCO 3.2.4	3/4 2-14	Delete Action f due to new LCO 3.0.4 requirements replacing this provision.	
Table 3.3-1	3/4 3-2 3/4 3-3 3/4 3-5	Delete the # footnote to this table that provided a LCO 3.0.4 exception for Items 2, 3, 4, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, and 18.	
Table 3.3-3	3/4 3-15 through 3/4 3-20 3/4 3-22	Delete the * footnote to this table that provided a LCO 3.0.4 exception for Items 1.c, 1.d, 1.f, 3.c.1), 3.c.3) 4.d, 4.e, 5.a, 6.c.i.a, 6.c.i.b, 6.c.i.c, 6.c.i.d, 6.c.ii.a, 6.c.ii.b, 6.c.ii.c, 6.c.ii.d, 6.f, 6.g, 6.h.1, and 6.h.2.	
Table 3.3-3	3/4 3-22	Delete the LCO 3.0.4 exception from the #### footnote to this table due to new LCO 3.0.4 requirements replacing this provision.	This footnote is proposed to be deleted in TS Change 04-01
LCO 3.3.3.1	3/4 3-39	Delete the LCO 3.0.4 portion of Action c due to new LCO 3.0.4 requirements replacing this provision.	
LCO 3.3.3.2	3/4 3-43	Delete the LCO 3.0.4 portion of the action due to new LCO 3.0.4 requirements replacing this provision.	
LCO 3.3.3.4	3/4 3-47	Delete the LCO 3.0.4 portion of Action b due to new LCO 3.0.4 requirements replacing this provision.	
LCO 3.3.3.5	3/4 3-50	Delete Action b due to new LCO 3.0.4 requirements replacing this provision and the label for Action a is removed.	

* Unit 1 page numbers indicated.

TECHNICAL SPECIFICATION AND BASES IMPACTS (continued)

Specification	Page *	Change Description	Comments
Table 3.3-10	3/4 3-57 3/4 3-57a 3/4 3-57b	Delete Action 1.c, 2.d, 3.c, 4.b, and 5.c due to new LCO 3.0.4 requirements replacing this provision and the label for Action 4.a is removed.	
LCO 3.3.3.10	3/4 3-71	Delete the LCO 3.0.4 portion of Action c due to new LCO 3.0.4 requirements replacing this provision.	
LCO 3.4.3.2	3/4 4-4a	Delete Action e due to new LCO 3.0.4 requirements replacing this provision.	
LCO 3.4.6.1	3/4 4-13	Delete the LCO 3.0.4 portion of Actions a and b due to new LCO 3.0.4 requirements replacing this provision.	
LCO 3.4.8	3/4 4-19	Add a new LCO 3.0.4.c provision to Action a consistent with the recommendations of TSTF-359.	
LCO 3.4.11	3/4 4-28	Delete Action b due to new LCO 3.0.4 requirements replacing this provision and the label for Action a is removed.	
LCO 3.4.12	3/4 4-30	The provisions of Action f are revised to not allow the use of the new LCO 3.0.4.b provision when entering MODE 4 consistent with TSTF-359.	
LCO 3.5.3	3/4 5-8	A statement is added to Action a that LCO 3.0.4.b is not applicable consistent with TSTF-359.	

* Unit 1 page numbers indicated.

TECHNICAL SPECIFICATION AND BASES IMPACTS (continued)

Specification	Page *	Change Description	Comments
LCO 3.6.1.3	3/4 6-7	Delete Action a.4 due to new LCO 3.0.4 requirements replacing this provision.	
LCO 3.6.1.9	3/4 6-15	Delete the LCO 3.0.4 portion of Action b due to new LCO 3.0.4 requirements replacing this provision.	
LCO 3.6.3	3/4 6-17	Delete Action e due to new LCO 3.0.4 requirements replacing this provision.	
LCO 3.7.1.1	3/4 7-1	Delete the LCO 3.0.4 portion of Action a due to new LCO 3.0.4 requirements replacing this provision.	
LCO 3.7.1.2	3/4 7-5	A new Action e is added that states LCO 3.0.4.b is not applicable consistent with TSTF-359.	
LCO 3.7.1.5	3/4 7-10	Delete Action c due to new LCO 3.0.4 requirements replacing this provision and Action d is relabeled as Action c.	
LCO 3.7.1.6	3/4 7-10a	Delete the LCO 3.0.4 portion of Action f due to new LCO 3.0.4 requirements replacing this provision.	
LCO 3.7.7	3/4 7-17	Delete Action c for MODES 5, 6, and fuel movement due to new LCO 3.0.4 requirements replacing this provision.	
LCO 3.7.10	3/4 7-29	Delete the LCO 3.0.4 portion of Action b due to new LCO 3.0.4 requirements replacing this provision.	
LCO 3.8.1.1	3/4 8-2	A new Action f is added that states LCO 3.0.4.b is not applicable to diesel generators consistent with TSTF-359.	

* Unit 1 page numbers indicated.

TECHNICAL SPECIFICATION AND BASES IMPACTS (continued)

Specification	Page *	Change Description	Comments
LCO 3.9.2	3/4 9-2	Delete the LCO 3.0.4 portion of Action c due to new LCO 3.0.4 requirements replacing this provision.	
LCO 3.9.9	3/4 9-9	Delete the LCO 3.0.4 portion of the action due to new LCO 3.0.4 requirements replacing this provision.	
LCO 3.9.12	3/4 9-12	Delete the LCO 3.0.4 portion of Action b due to new LCO 3.0.4 requirements replacing this provision.	
LCO 3.11.1.4	3/4 11-2	Delete the LCO 3.0.4 portion of Action b due to new LCO 3.0.4 requirements replacing this provision.	
LCO 3.11.2.5	3/4 11-4	Delete the LCO 3.0.4 portion of Action c due to new LCO 3.0.4 requirements replacing this provision.	
LCO 3.11.2.6	3/4 11-5	Delete the LCO 3.0.4 portion of Action b due to new LCO 3.0.4 requirements replacing this provision.	
Bases for LCO 3.0.4	B 3/4 0-1	Delete current LCO 3.0.4 discussions and replace with new TSTF-359 discussions.	
Bases for SR 4.0.4	B 3/4 0-5	Delete current SR 4.0.4 discussions and replace with new TSTF-359 discussions.	
Bases for LCO 3.4.6.1	B 3/4 4-4d and 4-4e	Delete the LCO 3.0.4 portion of Actions a and b due to new LCO 3.0.4 requirements replacing this provision.	
Bases for LCO 3.4.8	B 3/4 4-5	New discussions for the LCO 3.0.4.c addition are included as proposed by TSTF-359 with additional Standard TS discussions included for completeness.	

* Unit 1 page numbers indicated.

TECHNICAL SPECIFICATION AND BASES IMPACTS (continued)

Specification	Page *	Change Description	Comments
Bases for LCO 3.4.12	B 3/4 4-21	New discussions for the LCO 3.0.4.b addition are included as proposed by TSTF-359 to Action f.	
Bases for LCO 3.5.3	B 3/4 5-2	New discussions for the LCO 3.0.4.b addition for the centrifugal charging pumps and flow path are included as proposed by TSTF-359 to Action a.	The TSTF-359 use of "high head subsystem" is equivalent to "charging pumps and flow path" in SQN's TS.
Bases for LCO 3.7.1.2	B 3/4 7-2b	New discussions for the LCO 3.0.4.b addition are included as proposed by TSTF-359 to Action e and this provision applies to all applicable modes.	The SQN design utilizes the auxiliary feedwater system for start-up activities and therefore this LCO 3.0.4.b provision applies to all applicable modes.
Bases for LCO 3.8.1.1	B 3/4 8-1a	New discussions for the LCO 3.0.4.b addition are included as proposed by TSTF-359 to Action f for diesel generators.	

*** Unit 1 page numbers indicated.**

ENCLOSURE 2

TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT (SQN)
UNITS 1 AND 2

Proposed Technical Specification Changes (mark-up)

I. AFFECTED PAGE LIST

Unit 1		Unit 2	
3/4 0-1	3/4 4-13	3/4 0-1	3/4 4-8
3/4 0-2	3/4 4-19	3/4 0-2	3/4 4-17
3/4 2-14	3/4 4-28	3/4 2-12	3/4 4-24
3/4 3-2	3/4 4-30	3/4 3-2	3/4 4-33
3/4 3-3	3/4 5-8	3/4 3-3	3/4 4-35
3/4 3-5	3/4 6-7	3/4 3-3a	3/4 5-8
3/4 3-15	3/4 6-15	3/4 3-5	3/4 6-7
3/4 3-16	3/4 6-17	3/4 3-15	3/4 6-15
3/4 3-17	3/4 7-1	3/4 3-16	3/4 6-17
3/4 3-18	3/4 7-5	3/4 3-17	3/4 7-1
3/4 3-19	3/4 7-10	3/4 3-18	3/4 7-5
3/4 3-19a	3/4 7-10a	3/4 3-19	3/4 7-10
3/4 3-20	3/4 7-17	3/4 3-19a	3/4 7-10a
3/4 3-22	3/4 7-29	3/4 3-20	3/4 7-17
3/4 3-39	3/4 8-2	3/4 3-22	3/4 7-41
3/4 3-43	3/4 9-2	3/4 3-40	3/4 8-2
3/4 3-47	3/4 9-9	3/4 3-44	3/4 9-3
3/4 3-50	3/4 9-12	3/4 3-48	3/4 9-11
3/4 3-57	3/4 11-2	3/4 3-51	3/4 9-14
3/4 3-57a	3/4 11-4	3/4 3-58	3/4 11-2
3/4 3-57b	3/4 11-5	3/4 3-58a	3/4 11-4
3/4 3-71		3/4 3-58b	3/4 11-5
3/4 4-4a		3/4 3-69	

II. MARKED PAGES

See attached.

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;

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

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 4.0.3. 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.

Insert 3

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 system 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., Reactor Coolant System 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, MODE 3 to MODE 4, and MODE 4 to MODE 5.

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 4.0.1. Therefore, utilizing LCO 3.0.4 is not a violation of SR 4.0.1 or SR 4.0.4 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.

Insert 4

SR 4.0.4 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 4.0.4 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 4.0.1, which states that surveillances do not have to be performed on inoperable equipment. When equipment is inoperable, SR 4.0.4 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 4.0.4 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 4.0.4 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 4.0.3.

The provisions of SR 4.0.4 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 4.0.4 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, MODE 3 to MODE 4, and MODE 4 to MODE 5.

Insert 5

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 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 operations.

Insert 6

Action f

Action f prohibits the application of LCO 3.0.4.b to an inoperable LTOP system. There is an increased risk associated with entering MODE 4 from MODE 5 with LTOP inoperable 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 7

A note to Action a prohibits the application of LCO 3.0.4.b to an inoperable ECCS centrifugal charging pump or flow path from the refueling water storage tank when entering MODE 4. There is an increased risk associated with entering MODE 4 from MODE 5 with an inoperable ECCS centrifugal charging pump

or flow path from the refueling water storage tank 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 8

Action e prohibits the application of LCO 3.0.4.b to an inoperable AFW train. There is an increased risk associated with entering a MODE or other specified condition in the Applicability with an AFW train inoperable 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 9

Action f prohibits the application of LCO 3.0.4.b to an inoperable diesel generator. There is an increased risk associated with entering a MODE or other specified condition in the Applicability with an inoperable diesel generator 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.

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

3/4.0 APPLICABILITY

LIMITING CONDITION FOR OPERATION

3.0.1 Compliance with the Limiting Conditions for Operation contained in the succeeding Specifications is required during the OPERATIONAL MODES or other conditions specified therein; except that upon failure to meet the Limiting Conditions for Operation, the associated ACTION requirements shall be met.

3.0.2 Noncompliance with a Specification shall exist when the requirements of the Limiting Condition for Operation and associated ACTION requirements are not met within the specified time intervals. If the Limiting Conditions for Operation is restored prior to expiration of the specified time intervals, completion of the ACTION requirements is not required.

3.0.3 When a Limiting Condition for Operation is not met, except as provided in the associated ACTION requirements, within one hour action shall be initiated to place the unit in a MODE in which the Specification does not apply by placing it, as applicable, in:

1. At least HOT STANDBY within the next 6 hours,
2. At least HOT SHUTDOWN within the following 6 hours, and
3. At least COLD SHUTDOWN within the subsequent 24 hours.

Where corrective measures are completed that permit operation under the ACTION requirements, the ACTION may be taken in accordance with the specified time limits as measured from the time of failure to meet the Limiting Condition for Operation. Exceptions to these requirements are stated in the individual Specifications.

Insert 1

~~3.0.4 Entry into an OPERATIONAL MODE or other specified condition shall not be made unless the conditions for the Limiting Condition for Operation are met without reliance on provisions contained in the ACTION requirements. This provision shall not prevent passage through OPERATIONAL MODES as required to comply with ACTION requirements. Exceptions to these requirements are stated in the individual Specifications.~~

3.0.5 When a system, subsystem, train, component or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered OPERABLE for the purpose of satisfying the requirements of its applicable Limiting Condition for Operation, provided: (1) its corresponding normal or emergency power source is OPERABLE; and (2) all of its redundant system(s), subsystem(s), train(s), component(s) and device(s) are OPERABLE, or likewise satisfy the requirements of this Specification. Unless both conditions (1) and (2) are satisfied, within 2 hours action shall be initiated to place the unit in a MODE in which the applicable Limiting Condition for Operation does not apply by placing it as applicable in:

1. At least HOT STANDBY within the next 6 hours,
2. At least HOT SHUTDOWN within the following 6 hours, and
3. At least COLD SHUTDOWN within the subsequent 24 hours.

This Specification is not applicable in MODES 5 or 6.

3.0.6 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 3.0.1 and 3.0.2 for the system returned to service under administrative control to perform the testing required to demonstrate OPERABILITY.

APPLICABILITY

SURVEILLANCE REQUIREMENTS

4.0.1 Surveillance Requirements shall be met during the MODES or other specified conditions in the Applicability for individual Limiting Condition for Operation, unless otherwise stated in the individual Surveillance Requirement. Failure to meet a Surveillance Requirement, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the Limiting Condition for Operation. Failure to perform a Surveillance within the specified surveillance interval shall be failure to meet the Limiting Conditions for Operation except as provided in Specification 4.0.3. Surveillances do not have to be performed on inoperable equipment or variables outside specified limits.

4.0.2 Each Surveillance Requirement shall be performed within the specified surveillance interval with a maximum allowable extension not to exceed 25 percent of the specified surveillance interval.

4.0.3 If it is discovered that a Surveillance was not performed within its specified surveillance interval (including the allowed extension per Specification 4.0.2), then compliance with the requirement to declare the Limiting Condition for Operation not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified surveillance interval, 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 Limiting Condition for Operation must immediately be declared not met, and the applicable ACTION(s) must be entered. When the Surveillance is performed within the delay period and the Surveillance is not met, the Limiting Condition for Operation must immediately be declared not met, and the applicable ACTION(s) must be entered.

~~4.0.4 Entry into an OPERATIONAL MODE or other specified condition shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been performed within the specified surveillance interval or as otherwise specified. This provision shall not prevent passage through or to OPERATIONAL MODES as required to comply with ACTION requirements.~~

4.0.5 Surveillance Requirements for inservice inspection and testing of ASME Code Class 1, 2 and 3 components shall be as follows:

Insert 2

Inservice Inspection Program

This program provides controls for inservice inspection of ASME Code Class 1, 2, and 3 components, including applicable supports. The program shall include the following:

a. Provisions that inservice testing of ASME Code Class 1, 2 and 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50.55a;

b. The provisions of SR 4.0.2 are applicable to the frequencies for performing inservice inspection activities;

c. Inspection of each reactor coolant pump flywheel per the recommendation of Regulation Position c.4.b of Regulatory Guide 1.14, Revision 1, August 1975 or in lieu of Position c.4.b(1) and c.4.b(2), a qualified in-place ultrasonic examination over the volume from the inner bore of the flywheel to the circle one-half of the outer radius or a surface examination (magnetic particle and/or liquid penetrant) of exposed surfaces of the removed flywheels may be conducted at 20-year intervals (the provisions of SR 4.0.2 are not applicable); and

d. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirement of any TS.

ACTION: (Continued)

2. Reduce THERMAL POWER to less than 50% of RATED THERMAL POWER within 2 hours and reduce the Power Range Neutron Flux-High Trip Setpoints to less than or equal to 55% of RATED THERMAL POWER within the next 4 hours.

3. Identify and correct the cause of the out of limit condition prior to increasing THERMAL POWER; subsequent POWER OPERATION above 50% of RATED THERMAL POWER may proceed provided that the QUADRANT POWER TILT RATIO is verified within its limit at least once per hour for 12 hours or until verified at 95% or greater RATED THERMAL POWER.

d. With the indicated QUADRANT POWER TILT RATIO not confirmed as required by Surveillance Requirement 4.2.4.2, reduce THERMAL POWER to less than 75 percent RATED THERMAL POWER within 6 hours.

e. With the QUADRANT POWER TILT RATIO not monitored as required by Surveillance Requirement 4.2.4.1, reduce THERMAL POWER to less than 50 percent of RATED THERMAL POWER within the next 6 hours.

~~f. The provisions of Specification 3.0.4 are not applicable.~~

SURVEILLANCE REQUIREMENTS

4.2.4.1 The QUADRANT POWER TILT RATIO shall be determined to be within the limit above 50% of RATED THERMAL POWER by:

a. Calculating the ratio at least once per 7 days when the alarm is OPERABLE.

b. Calculating the ratio at least once per 12 hours during steady state operation when the alarm is inoperable.

4.2.4.2 The QUADRANT POWER TILT RATIO shall be determined to be within the limit when above 75 percent of RATED THERMAL POWER with one Power Range Channel inoperable by using the movable incore detectors to confirm that the normalized symmetric power distribution, obtained from the 4 pairs of symmetric thimble locations or from performance of a full core map, is consistent with the indicated QUADRANT POWER TILT RATIO at least once per 12 hours.

TABLE 3.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION

	FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1.	Manual Reactor Trip	2	1	2	1, 2, and *	1
2.	Power Range, Neutron Flux	4	2	3	1, 2	2#
3.	Power Range, Neutron Flux High Positive Rate	4	2	3	1, 2	2#
4.	Power Range, Neutron Flux, High Negative Rate	4	2	3	1, 2	2#
5.	Intermediate Range, Neutron Flux	2	1	2	1, 2, and *	3
6.	Source Range, Neutron Flux					
	A. Startup	2	1	2	2##, and *	4
	B. Shutdown	2	0	1	3, 4 and 5	5
7.	Overtemperature ΔT Four Loop Operation	4	2	3	1, 2	6#
8.	Overpower ΔT Four Loop Operation	4	2	3	1, 2	6#
9.	Pressurizer Pressure-Low	4	2	3	1, 2	6#
10.	Pressurizer Pressure—High	4	2	3	1, 2	6#
11.	Pressurizer Water Level—High	3	2	2	1, 2	6#

TABLE 3. 3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

	FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
12.	Loss of Flow - Single Loop (Above P-8)	3/loop	2/loop in any operating loop	2/loop in each operating loop	1	6#
13.	Loss of Flow - Two Loops (Above P-7 and below P-8)	3/loop	2/loop in two operating loops	2/loop in each operating loop	1	6#
14.	Main Steam Generator Water Level--Low-Low					
	A. Steam Generator Water Level--Low-Low (Adverse)	3/Stm. Gen.	2/Stm. Gen. in any operating Stm. Gen	2/Stm. Gen. in each Operating Stm. Gen.	1,2	9#
	B. Steam Generator Water Level--Low-Low (EAM)	3/Stm. Gen.	2/Stm. Gen. in any operating Stm. Gen.	2/Stm. Gen. in each operating Stm. Gen.	1,2	9#
	C. RCS Loop ΔT	4 (1/loop)	2	3	1,2	10#
	D. Containment Pressure (EAM)	4	2	3	1,2	11#
15.	Deleted					
16.	Undervoltage-Reactor Coolant Pumps	4-1/bus	2	3	1	6#
17.	Underfrequency-Reactor Coolant Pumps	4-1/bus	2	3	1	6#
18.	Turbine Trip					
	A. Low Fluid Oil Pressure	3	2	2	1	6#
	B. Turbine Stop Valve Closure	4	4	4	1	6#

TABLE 3.3-1 (Continued)

TABLE NOTATION

*With the reactor trip system breakers in the closed position, the control rod drive system capable of rod withdrawal, and fuel in the reactor vessel.

#~~The provisions of Specification 3.0.4 are not applicable.~~

##Source Range outputs may be disabled above the P-6 (Block of Source Range Reactor Trip) setpoint.

ACTION STATEMENTS

ACTION 1 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in HOT STANDBY within the next 6 hours and/or open the reactor trip breakers.

ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 6 hours.

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.1.1.1.

c. The QUADRANT POWER TILT RATIO is monitored in accordance with Technical Specification 3.2.4.

TABLE 3.3-3

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1. SAFETY INJECTION, TURBINE TRIP AND FEEDWATER ISOLATION					
a. Manual Initiation	2	1	2	1, 2, 3, 4	20
b. Automatic Actuation Logic	2	1	2	1, 2, 3, 4	15
c. Containment Pressure-High	3	2	2	1, 2, 3	17*
d. Pressurizer Pressure-Low	3	2	2	1, 2, 3#	17*
e. Deleted					

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
f. Steam Line Pressure-Low	3/steam line	2/steam line in any steam line	2/steam line	1, 2, 3#	17
2. CONTAINMENT SPRAY					
a. Manua1	2	1**	2	1, 2, 3, 4	20
b. Automatic Actuation Logic	2	1	2	1, 2, 3, 4	15
c. Containment Pressure--High-High	4	2	3	1, 2, 3	18
3. CONTAINMENT ISOLATION					
a. Phase "A" Isolation					
1) Manual	2	1	2	1, 2, 3, 4	20
2) From Safety Injection Automatic Actuation Logic	2	1	2	1, 2, 3, 4	15

**Two switches must be operated simultaneously for actuation.

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
b. Phase "B" Isolation					
1) Manual	2	1**	2	1, 2, 3, 4	20
2) Automatic Actuation Logic	2	1	2	1, 2, 3, 4	15
3) Containment Pressure-High-High	4	2	3	1, 2, 3	18
c. Containment Ventilation Isolation					
1) Manua1	2	1	2	1, 2, 3, 4	19
2) Automatic Isolation Logic	2	1	2	1, 2, 3, 4	15
3) Containment Purge Air Exhaust Monitor Radioactivity-High	2	1	1	1, 2, 3, 4	19

**Two switches must be operated simultaneously for actuation.

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
4. STEAM LINE ISOLATION					
a. Manual	1/steam line	1/steam line	1/operating steam line	1, 2, 3	25
b. Automatic Actuation Logic	2	1	2	1, 2, 3	23
c. Containment Pressure--High-High	4	2	3	1, 2, 3	18
d. Steam Line Pressure- Low	3/steam line	2/steam line in any steam line	2/steam line	1, 2, 3#	17
e. Negative Steam Line Pressure Rate-High	3/steam line	2/steam line in any steam lines	2/steam line	3##	17*

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
5. TURBINE TRIP & FEEDWATER ISOLATION					
a. Steam Generator Water Level—High-High	3/loop	2/loop in any operating loop	2/loop in each operating loop	1, 2, 3	17*
b. Automatic Actuation Logic	2	1	2	1, 2, 3	23
6. AUXILIARY FEEDWATER					
a. Manual Initiation	2	1	2	1, 2, 3	24
b. Automatic Actuation Logic	2	1	2	1, 2, 3	23
c. Main Stm. Gen. Water Level—Low-Low					
i. Start Motor-Driven Pumps					
a. Steam Generator Water Level--Low-Low (Adverse)	3/Stm. Gen.	2/Stm. Gen. in any operating Stm. Gen.	2/Stm. Gen. in each operating Stm. Gen.	1, 2, 3	36
b. Steam Gen. Water Level--Low-Low (EAM)	3/Stm. Gen.	2/Stm. Gen. in any operating Stm. Gen.	2/Stm. Gen. in each operating Stm. Gen.	1, 2, 3	36*
c. RCS LoopΔT	4(1/loop)	2	3	1, 2, 3	37*
d. Containment Pressure (EAM)	4	2	3	1, 2, 3	38

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
ii. Start Turbine Driven Pump					
a. Steam Generator Water Level-- Low-Low (Adverse)	3/Stm. Gen.	2/Stm. Gen. in any 2 Stm. Gen.	2/Stm. Gen. in each operating Stm. Gen.	1, 2, 3	36
b. Steam Generator Water Level-- Low-Low (EAM)	3/Stm. Gen.	2/Stm. Gen. in any 2 Stm. Gen.	2/Stm. Gen. in each operating Stm. Gen.	1, 2, 3	36
c. RCS Loop ΔT	4(1/loop)	2	3	1, 2, 3	37
d. Containment Pressure (EAM)	4	2	3	1, 2, 3	38
d. S.I. Start Motor-Driven Pumps and Turbine Driven Pump	See 1 above (all S.I. initiating functions and requirements)				

Minimum channels operable is proposed to be 1/shutdown board by TS Change 02-01

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
e. Loss of Power Start					
1. Voltage Sensors	3/shutdown board**	2/shutdown board**	3/shutdown board**	1, 2, 3	35
2. Load Shed Timer	2/shutdown board**	1/shutdown board**	2/shutdown board**	1, 2, 3	35
f. Trip of Main Feedwater Pumps Start Motor-Driven Pumps and Turbine Driven Pump	1/pump	1/pump	1/pump	1, 2	20
g. Auxiliary Feedwater Suction Pressure- Low	3/pump	2/pump	3/pump	1, 2, 3	21
h. Auxiliary Feedwater Suction Transfer Time Delays					
1. Motor-Driven Pump	1/pump	1/pump	1/pump	1, 2, 3	21
2. Turbine-Driven Pump	2/pump	1/pump	2/pump	1, 2, 3	21

**Unit 1 shutdown boards only

TABLE 3.3-3 (Continued)

TABLE NOTATION

#Trip function may be bypassed in this MODE below P-11 (Pressurizer Pressure Block of Safety Injection) setpoint.

##Trip function automatically blocked above P-11 and may be blocked below P11 when Safety Injection on Steam Line Pressure-Low is not blocked.

Footnote deleted by TS Change 04-01

####When Associated Diesel Generator is required to be OPERABLE by LCO 3.8.1.2, "AC Sources-Shutdown." ~~The Provisions of Specification 3.0.4 are not applicable.~~

~~*The provisions of Specification 3.0.4 are not applicable.~~

ACTION STATEMENTS

ACTION 15 - With the number of OPERABLE Channels one less than the Total Number of Channels, be in at least HOT STANDBY within 12 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.1 provided the other channel is OPERABLE.

ACTION 16 - Deleted.

ACTION 17 - With the number of OPERABLE Channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 6 hours.

b. The Minimum Channels OPERABLE requirements is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.2.1.1.

ACTION 18 - With the number of OPERABLE Channels one less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the bypassed condition within 6 hours and the Minimum Channels OPERABLE requirement is met; one additional channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.1.

ACTION 19 - With less than the Minimum Channels OPERABLE, operation may continue provided the containment purge supply and exhaust valves are maintained closed.

ACTION 20 - With the number of OPERABLE Channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

3/4.3.3 MONITORING INSTRUMENTATION

RADIATION MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.1 The radiation monitoring instrumentation channels shown in Table 3.3-6 shall be OPERABLE with their alarm/trip setpoints within the specified limits.

APPLICABILITY: As shown in Table 3.3-6.

ACTION:

a. With a radiation monitoring channel alarm/trip setpoint exceeding the value shown in Table 3.3-6, adjust the setpoint to within the limit within 4 hours or declare the channel inoperable.

b. With one or more radiation monitoring channels inoperable, take the ACTION shown in Table 3.3-6.

c. The provisions of Specifications 3.0.3 ~~and 3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.1 Each radiation monitoring instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations for the MODES and at the frequencies shown in Table 4.3-3.

INSTRUMENTATION

MOVABLE INCORE DETECTORS

LIMITING CONDITION FOR OPERATION

3.3.3.2 The movable incore detection system shall be OPERABLE with:

a. At least 75% of the detector thimbles,

b. A minimum of 2 detector thimbles per core quadrant, and

c. Sufficient movable detectors, drive, and readout equipment to map these thimbles.

APPLICABILITY: When the movable incore detection system is used for:

a. Recalibration of the excore neutron flux detection system,

b. Monitoring the QUADRANT POWER TILT RATIO, or

c. Measurement of $F^N_{\Delta H}$ and $F_Q(Z)$.

ACTION:

With the movable incore detection system inoperable, do not use the system for the above applicable monitoring or calibration functions. The provisions of Specifications 3.0.3 ~~and 3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.2 The movable incore detection system shall be demonstrated OPERABLE by normalizing each detector output when required for:

a. Recalibration of the excore neutron flux detection system, or

b. Monitoring the QUADRANT POWER TILT RATIO, or

c. Measurement of $F^N_{\Delta H}$ and $F_Q(Z)$.

INSTRUMENTATION

METEOROLOGICAL INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.4 The meteorological monitoring instrumentation channels shown in Table 3.3-8 shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

a. With one or more required meteorological monitoring channels inoperable for more than 7 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the channel(s) to OPERABLE status.

b. The provisions of Specifications 3.0.3 ~~and 3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.4 Each of the above meteorological monitoring instrumentation channels shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-5.

INSTRUMENTATION

REMOTE SHUTDOWN INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.5 The remote shutdown monitoring instrumentation channels shown in Table 3.3-9 shall be OPERABLE with readouts displayed external to the control room.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

a. With the number of OPERABLE remote shutdown monitoring channels less than required by Table 3.3-9, restore the inoperable channel(s) to OPERABLE status within 7 days, or be in HOT SHUTDOWN within the next 12 hours.

~~b. The provisions of Specification 3.0.4 are not applicable.~~

SURVEILLANCE REQUIREMENTS

4.3.3.5 Each remote shutdown monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-6.

TABLE 3.3-10 (Continued)

ACTION STATEMENTS

ACTION 1 - NOTE: Also refer to the applicable action requirements from Tables 3.3-1 and 3.3-3, and LCO 3.3.3.5 since they may contain more restrictive actions.

a. With the number of channels one less than the minimum channels required, restore the inoperable channel to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours, and in HOT SHUTDOWN within the next 6 hours.

b. With the number of channels two less than the minimum channels required, restore at least one inoperable channel to OPERABLE status within 7 days, or be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the next 6 hours.

~~c. The provisions of Specification 3.0.4 are not applicable.~~

ACTION 2 - NOTE: Also refer to the applicable action requirements from Tables 3.3-1 since it may contain more restrictive actions.

a. With the number of channels one less than the minimum channels required, restore the inoperable channel to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the next 6 hours.

b. With the number of channels two less than the minimum channels required, restore at least one inoperable channel to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the next 6 hours.

c. With the number of channels three less than the minimum channels required, restore one channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the next 6 hours.

~~d. The provisions of Specification 3.0.4 are not applicable.~~

ACTION 3 - NOTE: Also refer to the applicable action requirements from LCO 3.6.3 since it may contain more restrictive actions.

a. With the accident monitoring indication for one of the penetration inboard or outboard valve(s) inoperable, restore the inoperable valve(s) accident indication to OPERABLE status within 30 days, or isolate each affected penetration within 30 days by use of at least one deactivated automatic valve secured in the isolated position, or isolate each

TABLE 3.3-10 (Continued)

ACTION STATEMENTS
(Continued)

affected penetration within 30 days by use of at least one closed manual valve or blind flange, or be in at least HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the next 6 hours.

b. With the accident monitoring indication for both an inboard and outboard valve(s) on the same penetration inoperable, restore at least the inboard or outboard inoperable valve(s) indication to OPERABLE status within 7 days, or isolate each affected penetration within 7 days by use of at least one deactivated automatic valve secured in the isolated position, or isolate each affected penetration within 7 days by use of at least one closed manual valve or blind flange, or be in at least HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the next 6 hours.

~~c. The provisions of Specification 3.0.4 are not applicable.~~

On a penetration where accident indication is declared INOPERABLE on a valve but on the opposite side of the penetration an accident indication valve does not exist (such as with a closed system or a check valve), only ACTION 3(a) must be entered. However, valves FCV-63-158 & -172 are both inboard penetration valves, but if both valves have inoperable accident indication, ACTION 3(b) must be entered until at least one of the valve's accident indication is restored to OPERABLE status. Valves FCV-30-46 & VLV-30-571, FCV-30-47 & VLV-30-572, and FCV-30-48 & VLV-30-573 are all outboard penetration valves, but if both valves have inoperable accident indication, ACTION 3(b) must be entered until at least one of the valve's accident indication is restored to OPERABLE status.

TABLE 3.3-10 (Continued)

ACTION STATEMENTS
(Continued)

ACTION 4 - a. With the number of channels less than the minimum channels required, initiate an alternate method of monitoring containment area radiation within 72 hours and either restore the inoperable channel(s) to OPERABLE status within 30 days, or prepare and submit a special report to the Commission pursuant to Specification 6.9.2.1 within the next 14 days that provides actions taken, cause of the inoperability, and plans and schedule for restoring the channels to OPERABLE status.

b. The provisions of Specification 3.0.4 are not applicable.

ACTION 5 - NOTE: Also refer to the applicable action requirements from LCO 3.3.3.5 since it may contain more restrictive actions.

a. With the number of channels on one or more steam generators less than the minimum channels required for either flow rate or valve position, restore the inoperable channel to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the next 6 hours.

b. With the number of channels on one or more steam generators less than the minimum channels required for flow rate and valve position, restore the inoperable channel(s) to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the next 6 hours.

c. The provisions of Specification 3.0.4 are not applicable.

INSTRUMENTATION

EXPLOSIVE GAS MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.10 The explosive gas monitoring instrumentation channels shown in Table 3.3-13 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of Specification 3.11.2.5 are not exceeded.

APPLICABILITY: As shown in Table 3.3-13

ACTION:

a. With an explosive gas monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above Specification, declare the channel inoperable and take the ACTION shown in Table 3.3-13.

b. With less than the minimum number of explosive gas monitoring instrumentation channels OPERABLE, take the ACTION shown in Table 3.3-13. Restore the inoperable instrumentation to OPERABLE status within 30 days and, if unsuccessful, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2.1 to explain why this inoperability was not corrected in a timely manner.

c. The provisions of Specifications 3.0.3 ~~and 3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.10 Each explosive gas monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, CHANNEL CALIBRATION, and CHANNEL FUNCTIONAL TEST at the frequencies shown in Table 4.3-9.

REACTOR COOLANT SYSTEM

RELIEF VALVES - OPERATING

LIMITING CONDITION FOR OPERATION

3.4.3.2 Two power relief valves (PORVs) and their associated block valves shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

a. With one or more PORV(s) inoperable, but capable of RCS pressure control, within 1 hour either restore the PORV(s) to OPERABLE status or close the associated block valve(s); otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. With one PORV inoperable and incapable of RCS pressure control, within 1 hour either restore the PORV to OPERABLE status or close the associated block valve and remove power from the block valve; restore the PORV to OPERABLE status within the following 72 hours or be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

c. With both PORVs inoperable and incapable of RCS pressure control, within 1 hour either restore each of the PORVs to OPERABLE status or close their associated block valves and remove power from the block valves and be in HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 6 hours.

d. With one or more block valve(s) inoperable, within 1 hour: (1) restore the block valve(s) to OPERABLE status, or close the block valve(s) and remove power from the block valve(s), or close the PORV(s) and remove power from its associated solenoid valve(s); and (2) apply the ACTION b. or c. above, as appropriate, for the isolated PORV(s).

~~e. The provisions of Specification 3.0.4 are not applicable.~~

SURVEILLANCE REQUIREMENTS

4.4.3.2.1 In addition to the requirements of Specification 4.0.5, each PORV shall be demonstrated OPERABLE at least once per 18 months by:

a. Performance of a CHANNEL CALIBRATION, and

This surveillance is proposed for deletion by TS Change 04-03

b. Operating the valve through one complete cycle of full travel during Mode 3, 4, or 5 with a steam bubble in the pressurizer.

4.4.3.2.2 Each block valve shall be demonstrated OPERABLE at least once per 92 days by operating the valve through one complete cycle of full travel.

REACTOR COOLANT SYSTEM

3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE

LEAKAGE DETECTION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.4.6.1 The following Reactor Coolant System leakage detection instrumentation shall be OPERABLE:

a. Two lower containment atmosphere radioactivity monitoring (gaseous and particulate), and

b. The containment pocket sump level monitor.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a. With both containment pocket sump monitors inoperable, operation may continue for up to 30 days provided SR 4.4.6.2.1 is performed once per 24 hours*; otherwise, be in at least HOT ~~STANDBY within the next 6 hours and in COLD SHUTDOWN~~ within the following 30 hours. ~~The provisions of Specification 3.0.4 are not applicable.~~

b. With either or both the gaseous or particulate lower containment atmosphere radioactivity monitors inoperable, operation may continue for up to 30 days provided grab samples of the lower containment atmosphere are analyzed once per 24 hours or SR 4.4.6.2.1 is performed once per 24 hours*; otherwise, be in at least HOT STANDBY within ~~the next 6 hours~~ and in ~~COLD SHUTDOWN~~ within ~~the~~ following 30 hours. ~~The provisions of Specification 3.0.4 are not applicable.~~

c. With both containment pocket sump monitors and both lower containment atmosphere radioactivity monitors inoperable, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.4.6.1 The leakage detection instrumentation shall be demonstrated OPERABLE by:

a. Performance of the lower containment atmosphere gaseous and particulate monitor CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST at the frequencies specified in Table 4.3-3, and

b. Performance of containment pocket sump level monitor CHANNEL CALIBRATION at least once per 18 months.

* Surveillance performance not required until 12 hours after establishment of steady state operation.

REACTOR COOLANT SYSTEM

3/4.4.8 SPECIFIC ACTIVITY

LIMITING CONDITION FOR OPERATION

3.4.8 The specific activity of the primary coolant shall be limited to:

a. Less than or equal to 0.35 microcuries/gram DOSE EQUIVALENT I-131, and

b. Less than or equal to 100/$\bar{E}$ microcuries/gram.

APPLICABILITY: MODES 1, 2, 3, 4 and 5

ACTION:

LCO 3.0.4.c is applicable.

MODES 1, 2 and 3*

a. With the specific activity of the primary coolant greater than 0.35 microcuries/gram DOSE EQUIVALENT I-131 for more than 48 hours during one continuous time interval or exceeding the limit line shown on Figure 3.4-1, be in at least HOT STANDBY with T_{avg} less than 500°F within 6 hours.

b. With the specific activity of the primary coolant greater than 100/$\bar{E}$ microcuries/gram, be in at least HOT STANDBY with T_{avg} less than 500°F within 6 hours.

MODES 1, 2, 3, 4 and 5

a. With the specific activity of the primary coolant greater than 0.35 microcuries/gram DOSE EQUIVALENT I-131 or greater than 100/$\bar{E}$ microcuries/gram, perform the sampling and analysis requirements of item 4a of Table 4.4-4 until the specific activity of the primary coolant is restored to within its limits.

*With T_{avg} greater than or equal 500°F.

REACTOR COOLANT SYSTEM

3/4.4.11 REACTOR COOLANT SYSTEM HEAD VENTS

LIMITING CONDITION FOR OPERATION

3.4.11 At least one Reactor Coolant System Head Vent (RCSHV) path shall be OPERABLE.*

APPLICABILITY: MODES 1, 2, and 3 ACTION:

a. With no RCSHV path OPERABLE*, restore at least one path to OPERABLE status within 30 days or be in HOT STANDBY within 6 hours and HOT SHUTDOWN within the following 6 hours.

b. ~~The provisions of Specification 3.0.4 are not applicable.~~

SURVEILLANCE REQUIREMENTS

4.4.11 Each RCSHV path shall be demonstrated OPERABLE at least once per 18 months by:

a. Verifying that the upstream manual isolation valves are locked in the open position,

b. Operating each remotely controlled valve through at least one cycle from the control room, and

c. Verifying flow through each RCSHV path.

* Inoperable paths must be maintained closed with power removed from the valve actuators. If any RCSHV path is declared inoperable while in an applicable MODE, power shall be removed from the valve actuators within one hour.

ACTION (Continued)

e. With two required PORVs inoperable, or the Actions (a), (b), (c) , or (d) not met, or the LTOP System inoperable for any reason other than (a), (b), (c), or (d), depressurize the RCS and establish RCS vent of ≥ 3.0 square inches within 12 hours.

f. ~~The provisions of Specification 3.0.4 are not applicable~~

LCO 3.0.4.b is not applicable when entering MODE 4.

SURVEILLANCE REQUIREMENTS

4.4.12.1 Each PORV shall be demonstrated OPERABLE by:

a. Performance of a CHANNEL FUNCTIONAL TEST*, but excluding valve operation,at least once per 31 days;

b. Performance of a CHANNEL CALIBRATION on each required PORV actuation channel at least once per 18 months; and

c. Verifying the PORV block valve is open for each required PORV at least once per 72 hours.

4.4.12.2 Verify no safety injection pumps are capable of injecting into the RCS within 4 hours after entering MODE 4 from MODE 3 prior to the temperature of one or more RCS cold legs decreasing below 325°F, and every 12 hours thereafter.

4.4.12.3 Verify a maximum of one charging pump is capable of injecting into the RCS within 4 hours after entering MODE 4 from MODE 3 prior to the temperature of one or more RCS cold legs decreasing below 325°F, and every 12 hours thereafter.

4.4.12.4 Verify each accumulator is isolated at least once per 12 hours

4.4.12.5 Verify# required RCS vent ≥ 3.0 square inches open at least:

a. Once every 12 hours for unlocked open vent valve(s) and,

b. Once every 31 days for other vent path(s)

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* Not required to be performed until 12 hours after decreasing RCS cold leg temperatures to ≤ the LTOP arming temperature in the PTLR.

\# Only required to be met when complying with LCO 3.4.12.b.

EMERGENCY CORE COOLING SYSTEMS (ECCS)

3/4.5.3 ECCS SUBSYSTEMS - T_{avg} Less Than 350°F

LIMITING CONDITION FOR OPERATION

3.5.3 As a minimum, one ECCS subsystem comprised of the following shall be OPERABLE:

a. One OPERABLE centrifugal charging pump,

b. One OPERABLE residual heat removal heat exchanger,

c. One OPERABLE residual heat removal pump, and

d. An OPERABLE flow path capable of taking suction from the refueling water storage tank upon being manually realigned and automatically transferring suction to the containment sump during the recirculation phase of operation.

APPLICABILITY: MODE 4.

ACTION:

LCO 3.0.4.b is not applicable

a. With no ECCS subsystem OPERABLE because of the inoperability of either the centrifugal charging pump or the flow path from the refueling water storage tank, restore at least one ECCS subsystem to OPERABLE status within 1 hour or be in COLD SHUTDOWN within the next 20 hours.

b. With no ECCS subsystem OPERABLE because of the inoperability of either the residual heat removal heat exchanger or residual heat removal pump, restore at least one ECCS subsystem to OPERABLE status or maintain the Reactor Coolant System T_{avg} less than 350°F by use of alternate heat removal methods.

CONTAINMENT SYSTEMS

CONTAINMENT AIR LOCKS

LIMITING CONDITION FOR OPERATION

3.6.1.3 Each containment air lock shall be OPERABLE* with both doors closed except when the air lock is being used for normal transit entry and exit through the containment, then at least one air lock door shall be closed.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a. With one containment air lock door inoperable:

1. Maintain at least the OPERABLE air lock door closed and either restore the inoperable air lock door to OPERABLE status within 24 hours or lock the OPERABLE air lock door closed.

2. Operation may then continue until performance of the next required overall air lock leakage test provided that the OPERABLE air lock door is verified to be locked closed at least once per 31 days.

3. Otherwise, be in at least HOT STANDBY within the next six hours and in COLD SHUTDOWN within the following 30 hours.

~~4. The provisions of Specification 3.0.4 are not applicable.~~

b. With the containment air lock inoperable, except as the result of an inoperable air lock door, maintain at least one air lock door closed; restore the inoperable air lock to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next six hours and in COLD SHUTDOWN within the following 30 hours.

*1. An inoperable air lock door does not invalidate the previous successful performance of the overall air lock leakage test.

2. Enter the ACTION of LCO 3.6.1.1, "Primary Containment" when air lock leakage results in exceeding the overall containment leakage rate acceptance criteria.

CONTAINMENT SYSTEMS

CONTAINMENT VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.1.9 One pair (one purge supply line and one purge exhaust line) of containment purge system lines may be open; the containment purge supply and exhaust isolation valves in all other containment purge lines shall be closed. Operation with purge supply or exhaust isolation valves open for either purging or venting shall be limited to less than or equal to 1000 hours per 365 days. The 365 day cumulative time period will begin every January 1.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

a. With a purge supply or exhaust isolation valve open in excess of the above cumulative limit, or with more than one pair of containment purge system lines open, close the isolation valve(s) in the purge line(s) within one hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With a containment purge supply and/or exhaust isolation valve having a measured leakage rate in excess of 0.05 L_a, restore the inoperable valve to OPERABLE status or isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange within 24 hours. Verify** the affected penetration flow path is isolated once per 31 days for isolation devices outside containment and prior to entering Mode 4 from Mode 5 if not performed within the previous 92 ~~days for isolation devices inside containment. Otherwise~~ be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. ~~The provisions of Specification 3.0.4 do not apply.~~

SURVEILLANCE REQUIREMENTS

4.6.1.9.1 The position of the containment purge supply and exhaust isolation valves shall be determined at least once per 31 days.

4.6.1.9.2 The cumulative time that the purge supply and exhaust isolation valves are open over a 365 day period shall be determined at least once per 7 days.

4.6.1.9.3 At least once per 3 months, each containment purge supply and exhaust isolation valve shall be demonstrated OPERABLE by verifying that the measured leakage rate is less than or equal to 0.05 L_a.*

* Enter the ACTION of LCO 3.6.1.1, "Primary Containment" when purge valve leakage results in exceeding the overall containment leakage rate acceptance criteria.

** Isolation devices in high radiation areas may be verified by use of administrative means. Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means.

CONTAINMENT SYSTEMS

3/4.6.3 CONTAINMENT ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.6.3 Each containment isolation valve shall be OPERABLE.*

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a. With one or more penetration flow paths with one containment isolation valve inoperable; except for containment vacuum relief isolation valves(s), isolate each affected penetration within 4 hours by use of at least one closed deactivated automatic valve, closed manual valve, blind flange, or check valve## with flow through the valve secured; and, verify# the affected penetration flow path is isolated once per 31 days for isolation devices outside containment, and prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days for isolation devices inside containment.

b. With one or more penetration flow paths with two containment isolation valves inoperable; except for containment vacuum relief isolation valves(s), isolate each affected penetration within 1 hour by use of at least one closed deactivated automatic valve, closed manual valve, or blind flange and verify# the affected penetration flow path is isolated once per 31 days.

c. With one or more containment vacuum relief isolation valve(s) inoperable, the valve(s) must be returned to OPERABLE status within 72 hours.

d. With any of the above ACTIONS not met, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

~~e. The provisions of Specification 3.0.4 do not apply.~~

SURVEILLANCE REQUIREMENTS

4.6.3.1 Deleted

*1. Penetration flow path(s) may be unisolated intermittently under administrative controls.

2. Enter the ACTION of LCO 3.6.1.1, "Primary Containment" when containment isolation valve leakage results in exceeding the overall containment leakage rate acceptance criteria.

#3. Isolation devices in high radiation areas may be verified by use of administrative means.

#4. Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means.

##5. A check valve with flow through the valve secured is only applicable to penetration flow paths with two containment isolation valves.

3/4.7 PLANT SYSTEMS

3/4.7.1 TURBINE CYCLE

SAFETY VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.1 Main steam safety valves (MSSVs) shall be OPERABLE with lift settings as specified in Table 3.7-2.

APPLICABILITY: MODES 1, 2 and 3.*

ACTION:

a. With one or more MSSVs inoperable, operation may proceed provided, that within 4 hours, either the inoperable valve is restored to OPERABLE status or the Power Range Neutron Flux High Setpoint trip is reduced per Table 3.7-1. ~~The provisions of Specification 3.0.4 are not applicable.~~

b. With the requirments of ACTION a., not met or with one or more steam generators with less than two MSSVs OPERABLE be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN in the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.1 No additional Surveillance Requirements other than those required by Specification 4.0.5. Following testing, lift settings shall be within ± 1%.

*With the reactor trip system breakers in the closed position.

PLANT SYSTEMS

AUXILIARY FEEDWATER (AFW) SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.2 Three auxiliary feedwater trains shall be OPERABLE.*

APPLICABILITY: MODES 1, 2, and 3, MODE 4 when steam generator is relied upon for heat removal.

ACTION:

a. With one AFW train inoperable in MODE 1, 2, or 3, restore the inoperable AFW train to OPERABLE status within 72 hours or be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 12 hours.

b. With two AFW trains inoperable in MODE 1, 2, or 3, be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

c. With three AFW trains inoperable in MODE 1, 2, or 3, immediately initiate corrective action to restore at least one AFW train to OPERABLE status.**

d. With the required AFW train inoperable in MODE 4, immediately initiate action to restore the required AFW train to OPERABLE status.

e. LCO 3.0.4.b is not applicable.

SURVEILLANCE REQUIREMENTS

4.7.1.2.1 At least once per 31 days, verify each AFW manual, power operated, and automatic valve in each water flow path, and in both steam supply flow paths to the steam turbine driven pump, that is not locked, sealed, or otherwise secured in position, is in the correct position.

* Only one AFW train, which includes a motor driven pump, is required to be OPERABLE in MODE 4.

** LCO 3.0.3 and all other LCO ACTIONS requiring MODE changes are suspended until one AFW train is restored to OPERABLE status.

PLANT SYSTEMS

MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.5 Four main steam line isolation valves shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3

ACTION:

MODE 1 - With one main steam line isolation valve inoperable, POWER OPERATION may continue provided the inoperable valve is restored to OPERABLE status within 4 hours;

Otherwise, be in MODE 2 within the next 6 hours.

MODES 2 and 3 - With one or more main steam line isolation valves inoperable, subsequent operation in MODES 2 or 3 may proceed provided:

a. The isolation valve is restored to OPERABLE status or closed within 4 hours;

b. The inoperable isolation valve is verified closed once per 7 days;

~~c. The provisions of Specification 3.0.4 are not applicable;~~

~~d.~~ *c.* Separate entry into this action is allowed for each isolation valve.

Otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.5.1 Each main steam line isolation valve shall be demonstrated OPERABLE by verifying full closure within 5 seconds when tested pursuant to Specification 4.0.5.

4.7.1.5.2 At least once per 18 months, verify each main steam isolation valve closes on an actual or simulated automatic actuation signal.

PLANT SYSTEMS

MAIN FEEDWATER ISOLATION, REGULATING, AND BYPASS VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.6 Four main feedwater isolation valves (MFIVs), four main feedwater regulating valves (MFRVs), and four MFRV bypass valves shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3

ACTION:

a. With one or more MFIVs inoperable, POWER OPERATION may continue provided the inoperable valve is returned to OPERABLE status or closed or isolated within 72 hours; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. With one or more MFRVs inoperable, POWER OPERATION may continue provided the inoperable valve is returned to OPERABLE status or closed or isolated within 72 hours; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

c. With one or more MFRV bypass valves inoperable, POWER OPERATION may continue provided the inoperable valve is returned to OPERABLE status or closed or isolated within 72 hours; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

d. For each MFIV, MFRV, or MFRV bypass valve that has been closed or isolated to satisfy Action a., b., or c. above, verify that it is closed or isolated once per 7 days.

e. With two valves in the same main feedwater flow path inoperable, isolate the affected flow path within 8 hours; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

f. Separate entry into the above ACTIONS is allowed for each valve or flow path. ~~The provisions of Specification 3.0.4 are not applicable.~~

SURVEILLANCE REQUIREMENTS

4.7.1.6 In addition to the requirements of Specification 4.0.5, verify each MFIV, MFRV, and MFRV bypass valve closes on an actual or simulated automatic actuation signal at least once per 18 months.

PLANT SYSTEMS

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7 Two independent control room emergency ventilation systems (CREVS) shall be OPERABLE.

APPLICABILITY: ALL MODES and during movement of irradiated fuel assemblies

ACTION:

MODES 1, 2, 3 and 4

a. With one CREVS inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With both CREVS inoperable due to actions taken as a result of a tornado warning, restore at least one train to operable status within 8 hours or be in a least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. With both CREVS inoperable for other than Action b., be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours

MODES 5, 6, and during movement of irradiated fuel assemblies

a. With one CREVS inoperable, restore the inoperable system to OPERABLE status within 7 days or initiate and maintain operation of the operable CREVS in the recirculation mode.
or
suspend movement of irradiated fuel assemblies.

b. With both CREVS inoperable, suspend all operations involving movement of irradiated fuel assemblies.

~~c. The provisions of Specification 3.0.4 are not applicable.~~

SURVEILLANCE REQUIREMENTS

4.7.7 Each CREVS shall be demonstrated OPERABLE:

a. DELETED

b. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 15 minutes.

c. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with the system by:

PLANT SYSTEMS

3/4.7.10 SEALED SOURCE CONTAMINATION

LIMITING CONDITION FOR OPERATION

3.7.10 Each sealed source containing radioactive material either in excess of 100 microcuries of beta and/or gamma emitting material or 5 microcuries of alpha emitting material shall be free of greater than or equal to 0.005 micro-curies of removable contamination.

APPLICABILITY: At all times.

ACTION:

a. With a sealed source having removable contamination in excess of the above limits, immediately withdraw the sealed source from use and:

1. Either decontaminate and repair the sealed source, or

2. Dispose of the sealed source in accordance with Commission Regulations.

b. The provisions of Specifications 3.0.3 ~~and 3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.10.1 Test Requirements - Each sealed source shall be tested for leakage and/or contamination by:

a. The licensee, or

b. Other persons specifically authorized by the Commission or an Agreement State.

The test method shall have a detection sensitivity of at least 0.005 microcuries per test sample.

4.7.10.2 Test Frequencies - Each category of sealed sources (excluding startup sources and fission detectors previously subjected to core flux) shall be tested at the frequency described below.

a. Sources in use - At least once per six months for all sealed sources containing radioactive materials:

1. With a half-life greater than 30 days (excluding Hydrogen 3), and

2. In any form other than gas.

ELECTRICAL POWER SYSTEMS

ACTION (Continued)

c. With one offsite circuit and one diesel generator set of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirements 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter, and Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours; restore at least one of the inoperable sources to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

d. With two of the above required offsite A.C. circuits inoperable, demonstrate the OPERABILITY of 4 diesel generator sets by performing Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours, unless the diesel generator sets are already operating; restore at least one of the inoperable offsite sources to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours.

e. With either diesel generator sets 1A-A and/or 2A-A inoperable simultaneous with 1B-B and/or 2B-B, demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; restore at least 1) 1A-A and 2A-A or 2) 1B-B and 2B-B to OPEPABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

f. LCO 3.0.4.b is not applicable to diesel generators.

SURVEILLANCE REOUIREMENTS

4.8.1.1.1 Each of the above required independent circuits between the offsite transmission network and the onsite Class 1E distribution system shall be:

a. Determined OPERABLE at least once per 7 days by verifying correct breaker alignments and indicated power availability.

REFUELING OPERATIONS

3/4.9.2 INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.9.2 As a minimum, two source range neutron flux monitors shall be OPERABLE and operating, each with continuous visual indication in the control room and one with audible indication in the containment and control room.

APPLICABILITY: MODE 6.

ACTION:

a. With one of the above required monitors inoperable or not operating, immediately suspend all operations involving CORE ALTERATIONS and suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet LCO 3.9.1.

b. With both of the above required monitors inoperable or not operating, determine the boron concentration of the reactor coolant system at least once per 12 hours.

c. The provisions of Specifications 3.0.3 ~~and 3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.2 Each source range neutron flux monitor shall be demonstrated OPERABLE by performance of:

a. A CHANNEL CHECK at least once per 12 hours, and

b. A CHANNEL FUNCTIONAL TEST at least once per 7 days.

REFUELING OPERATIONS

3/4.9.9 CONTAINMENT VENTILATION ISOLATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.9 The Containment Ventilation isolation system shall be OPERABLE.

APPLICABILITY: During movement of irradiated fuel within the containment.

ACTION:

With the Containment Ventilation isolation system inoperable, close each of the Ventilation penetrations providing direct access from the containment atmosphere to the outside atmosphere. The provisions of Specifications 3.0.3 ~~and 3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.9 The Containment Ventilation isolation system shall be demonstrated OPERABLE within 100 hours prior to the start of and at least once per 7 days during movement of irradiated fuel within containment byverifying that Containment Ventilation isolation occurs on manual initiation and on a high radiation test signal from each of the containment radiation monitoring instrumentation channels.

REFUELING OPERATIONS

3/4.9.12 AUXILIARY BUILDING GAS TREATMENT SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.12 One auxiliary building gas treatment filter train shall be OPERABLE.

APPLICABILITY: Whenever irradiated fuel is in the storage pool.

ACTION:

a. With no auxiliary building gas treatment filter train OPERABLE, suspend all operations involving movement of fuel within the spent fuel pit or crane operation with loads over the spent fuel pit until at least one auxiliary building gas treatment filter train is restored to OPERABLE status.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.12 The above required auxiliary buildings gas treatment filter train shall be demonstrated OPERABLE:

a. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 10 hours with the heaters on.

b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with the system by:

1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978 (except for the provisions of ANSI N510 Sections 8 and 9), and the system flow rate is 9000 cfm ± 10%.

2. Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows the methyl iodide penetration less than 2.5% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C (86° F) and a relative humidity of 70%.

3. Verifying a system flow rate of 9000 cfm ± 10% during system operations when tested in accordance with ANSI N510-1975.

RADIOACTIVE EFFLUENTS

LIQUID HOLDUP TANKS

LIMITING CONDITION FOR OPERATION

3.11.1.4 The quantity of radioactive material contained in each of the following tanks shall be limited by the following expression:

$$\sum_i \frac{\text{concentration of isotope i}}{\text{(effluent concentration limit of isotope i)}} \leq 6{,}700$$

excluding tritium and dissolved or entrained noble gases.

a. Condensate Storage Tank
b. Steam Generator Layup Tank
c. Outside temporary tanks for radioactive liquid

APPLICABILITY: At all times.

ACTION:

a. With the quantity of radioactive material in any of the above listed tanks exceeding the above limit, immediately suspend all additions of radioactive material to the tank and within 48 hours reduce the tank contents to within the limit.

b. The provisions of Specifications 3.0.3 ~~and 3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.1.4 The quantity of radioactive material contained in each of the above listed tanks shall be determined to be within the above limit by analyzing a representative sample of the tank's contents at least once per 7 days when radioactive materials are being added to the tank.

RADIOACTIVE EFFLUENTS

EXPLOSIVE GAS MIXTURE

LIMITING CONDITION FOR OPERATION

3.11.2.5 The concentration of oxygen in the waste gas holdup system shall be limited to less than or equal to 2% by volume whenever the hydrogen concentration exceeds 4% by volume.

APPLICABILITY: At all times.

ACTION:

a. With the concentration of oxygen in a waste gas holdup tank greater than 2% by volume but less than or equal to 4% by volume, reduce the oxygen concentration to the above limits within 48 hours.

b. With the concentration of oxygen in a waste gas holdup tank greater than 4% by volume and the hydrogen concentration greater than 2% by volume, without delay suspend all additions of waste gases to the affected waste gas holdup tank and reduce the concentration of oxygen to less than or equal to 2% by volume without delay.

c. The provisions of Specifications 3.0.3 ~~and 3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.5 The concentration of hydrogen and oxygen in the waste gas holdup system shall be determined to be within the above limits by monitoring the waste gas additions to the waste gas holdup system with the hydrogen and oxygen monitors required OPERABLE by Table 3.3-13 of Specification 3.3.3.10.

RADIOACTIVE EFFLUENTS

GAS DECAY TANKS

LIMITING CONDITION FOR OPERATION

3.11.2.6 The quantity of radioactivity contained in each gas decay tank shall be limited to less than or equal to 50,000 curies of noble gases (considered as Xe-133).

APPLICABILITY: At all times.

ACTION:

a. With the quantity of radioactive material in any gas decay tank exceeding the above limit, without delay suspend all additions of radioactive material to the tank and within 48 hours reduce the tank contents to ~~within~~ the limit.

b. The provisions of Specifications 3.0.3 ~~and 3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.6 The quantity of radioactive material contained in each gas decay tank shall be determined to be within the above limit at least once per 24 hours when radioactive materials are being added to the tank.

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

3/4.0 APPLICABILITY

LIMITING CONDITION FOR OPERATION

3.0.1 Compliance with the Limiting Conditions for Operation contained in the succeeding Specifications is required during the OPERATIONAL MODES or other conditions specified therein; except that upon failure to meet the Limiting Conditions for Operation, the associated ACTION requirements shall be met.

3.0.2 Noncompliance with a Specification shall exist when the requirements of the Limiting Condition for Operation and associated ACTION requirements are not met within the specified time intervals. If the Limiting Conditions for Operation is restored prior to expiration of the specified time intervals, completion of the ACTION requirements is not required.

3.0.3 When a Limiting Condition for Operation is not met, except as provided in the associated ACTION requirements, within one hour action shall be initiated to place the unit in a MODE in which the Specification does not apply by placing it, as applicable, in:

1. At least HOT STANDBY within the next 6 hours,
2. At least HOT SHUTDOWN within the following 6 hours, and
3. At least COLD SHUTDOWN within the subsequent 24 hours.

Where corrective measures are completed that permit operation under the ACTION requirements, the ACTION may be taken in accordance with the specified time limits as measured from the time of failure to meet the Limiting Condition for Operation. Exceptions to these requirements are stated in the individual Specifications.

Insert 1

~~3.0.4 Entry into an OPERATIONAL MODE or other specified condition shall not be made unless the conditions for the Limiting Condition for Operation are met without reliance on provisions contained in the ACTION requirements. This provision shall not prevent passage through OPERATIONAL MODES as required to comply with ACTION requirements. Exceptions to these requirements are stated in the individual Specifications.~~

3.0.5 When a system, subsystem, train, component or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered OPERABLE for the purpose of satisfying the requirements of its applicable Limiting Condition for Operation, provided: (1) its corresponding normal or emergency power source is OPERABLE; and (2) all of its redundant system(s), subsystem(s), train(s), component(s) and device(s) are OPERABLE, or likewise satisfy the requirements of this Specification. Unless both conditions (1) and (2) are satisfied, within 2 hours action shall be initiated to place the unit in a MODE in which the applicable Limiting Condition for Operation does not apply by placing it as applicable in:

1. At least HOT STANDBY within the next 6 hours
2. At least HOT SHUTDOWN within the following 6 hours, and
3. At least COLD SHUTDOWN within the subsequent 24 hours.

This Specification is not applicable in MODES 5 or 6.

3.0.6 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 3.0.1 and 3.0.2 for the system returned to service under administrative control to perform the testing required to demonstrate OPERABILITY.

APPLICABILITY

SURVEILLANCE REQUIREMENTS

4.0.1 Surveillance Requirements shall be met during the MODES or other specified conditions in the Applicability for individual Limiting Condition for Operation, unless otherwise stated in the individual Surveillance Requirement. Failure to meet a Surveillance Requirement, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the Limiting Condition for Operation. Failure to perform a Surveillance within the specified surveillance interval shall be failure to meet the Limiting Conditions for Operation except as provided in Specification 4.0.3. Surveillances do not have to be performed on inoperable equipment or variables outside specified limits.

4.0.2 Each Surveillance Requirement shall be performed within the specified surveillance interval with a maximum allowable extension not to exceed 25 percent of the specified surveillance interval.

4.0.3 If it is discovered that a Surveillance was not performed within its specified surveillance interval (including the allowed extension per Specification 4.0.2), then compliance with the requirement to declare the Limiting Condition for Operation not met may be delayed, from the time of discovery, up to 24 hours or up to the limit of the specified surveillance interval, 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 Limiting Condition for Operation must immediately be declared not met, and the applicable ACTION(s) must be entered. When the Surveillance is performed within the delay period and the Surveillance is not met, the Limiting Condition for Operation must immediately be declared not met, and the applicable ACTION(s) must be entered.

4.0.4 ~~Entry into an OPERATIONAL MODE or other specified condition shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been performed within the specified surveillance interval or as otherwise specified. This provision shall not prevent passage through or to OPERATIONAL MODES as required to comply with ACTION requirements.~~

Insert 2

4.0.5 Surveillance Requirements for inservice inspection and testing of ASME Code Class 1, 2 and 3 components shall be as follows:

Inservice Inspection Program

This program provides controls for inservice inspection of ASME Code Class 1, 2, and 3 components, including applicable supports. The program shall include the following:

a. Provisions that inservice testing of ASME Code Class 1, 2 and 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50.55a;

b. The provisions of SR 4.0.2 are applicable to the frequencies for performing inservice inspection activities;

c. Inspection of each reactor coolant pump flywheel per the recommendation of Regulation Position c.4.b of Regulatory Guide 1.14, Revision 1, August 1975 or in lieu of Position c.4.b(1) and c.4.b(2), a qualified in-place ultrasonic examination over the volume from the inner bore of the flywheel to the circle one-half of the outer radius or a surface examination (magnetic particle and/or liquid penetrant) of exposed surfaces of the removed flywheels may be conducted at 20-year intervals (the provisions of SR 4.0.2 are not applicable); and

d. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirement of any TS.

ACTION: (Continued)

2. Reduce THERMAL POWER to less than 50% of RATED THERMAL POWER within 2 hours and reduce the Power Range Neutron Flux-High Trip Setpoints to less than or equal to 55% of RATED THERMAL POWER within the next 4 hours.

3. Identify and correct the cause of the out of limit condition prior to increasing THERMAL POWER; subsequent POWER OPERATION above 50% of RATED THERMAL POWER may proceed provided that the QUADRANT POWER TILT RATIO is verified within its limit at least once per hour for 12 hours or until verified at 95% or greater RATED THERMAL POWER.

d. With the indicated QUADRANT POWER TILT RATIO not confirmed as required by Surveillance Requirement 4.2.4.2, reduce THERMAL POWER to less than 75 percent RATED THERMAL POWER within 6 hours.

e. With the QUADRANT POWER TILT RATIO not monitored as required by Surveillance Requirement 4.2.4.1, reduce THERMAL POWER to less than 50 percent of RATED THERMAL POWER within the next 6 hours.

~~f. The provisions of Specification 3.0.4 are not applicable.~~

SURVEILLANCE REQUIREMENTS

4.2.4.1 The QUADRANT POWER TILT RATIO shall be determined to be within the limit above 50% of RATED THERMAL POWER by:

a. Calculating the ratio at least once per 7 days when the alarm is OPERABLE.

b. Calculating the ratio at least once per 12 hours during steady state operation when the alarm is inoperable.

4.2.4.2 The QUADRANT POWER TILT RATIO shall be determined to be within the limit when above 75 percent of RATED THERMAL POWER with one Power Range channel inoperable by using the movable incore detectors to confirm that the normalized symmetric power distribution, obtained from 4 pairs of symmetric thimble locations or from performance of a full core map, is consistent with the indicated QUADRANT POWER TILT RATIO at least once per 12 hours.

TABLE 3.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION

	FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1.	Manual Reactor Trip	2	1	2	1, 2, and *	1
2.	Power Range, Neutron Flux	4	2	3	1, 2	2#
3.	Power Range, Neutron Flux High Positive Rate	4	2	3	1, 2	2#
4.	Power Range, Neutron Flux, High Negative Rate	4	2	3	1, 2	2#
5.	Intermediate Range, Neutron Flux	2	1	2	1, 2, and *	3
6.	Source Range, Neutron Flux					
	A. Startup	2	1	2	2##, and *	4
	B. Shutdown	2	0	1	3, 4 and 5	5
7.	Overtemperature ΔT Four Loop Operation	4	2	3	1, 2	6#
8.	Overpower ΔT Four Loop Operation	4	2	3	1, 2	6#
9.	Pressurizer Pressure-Low	4	2	3	1, 2	6#
10.	Pressurizer Pressure—High	4	2	3	1, 2	6#
11.	Pressurizer Water Level—High	3	2	2	1, 2	6#

TABLE 3. 3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

	FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
12.	Loss of Flow - Single Loop (Above P-8)	3/loop	2/loop in any operating loop	2/loop in each operating loop	1	6#
13.	Loss of Flow - Two Loops (Above P-7 and below P-8)	3/loop	2/loop in two operating loops	2/loop in each operating loop	1	6#
14.	Main Steam Generator Water Level--Low-Low					
	A. Steam Generator Water Level--Low-Low (Adverse)	3/Stm. Gen.	2/Stm. Gen. in any operating Stm. Gen	2/Stm. Gen. in each Operating Stm. Gen.	1,2	9#
	B. Steam Generator Water Level--Low-Low (EAM)	3/Stm. Gen.	2/Stm. Gen. in any operating Stm. Gen.	2/Stm. Gen. in each operating Stm. Gen.	1,2	9#
	C. RCS Loop ΔT	4 (1/loop)	2	3	1,2	10#
	D. Containment Pressure (EAM)	4	2	3	1,2	11#
15.	Deleted					

TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

	FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
16.	Undervoltage-Reactor Coolant Pumps	4-1/bus	2	3	1	6
17.	Underfrequency-Reactor Coolant Pumps	4-1/bus	2	3	1	6
18.	Turbine Trip					
	A. Low Fluid Oil Pressure	3	2	2	1	6
	B. Turbine Stop Valve Closure	4	4	4	1	6
19.	Safety Injection Input from ESF	2	1	2	1, 2	12
20.	Reactor Trip Breakers					
	A. Startup and Power Operation	2	1	2	1, 2	12, 15
	B. Shutdown	2	1	2	3*,4* and 5*	16
21.	Automatic Trip Logic					
	A. Startup and Power Operation	2	1	2	1, 2	12
	B. Shutdown	2	1	2	3*,4* and 5*	16
22.	Reactor Trip System Interlocks					
	A. Intermediate Range Neutron Flux, P-6	2	1	2	2, and*	8a
	B. Power Range Neutron Flux, P-7	4	2	3	1	8b

TABLE 3.3-1 (Continued)

TABLE NOTATION

* With the reactor trip system breakers in the closed position, the control rod drive system capable of rod withdrawal, and fuel in the reactor vessel.

~~# The provisions of Specification 3.0.4 are not applicable.~~

Source Range outputs may be disabled above the P-6 (Block of Source Range Reactor Trip) setpoint.

ACTION STATEMENTS

ACTION 1 - With the number of OPERABLE channels one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in HOT STANDBY within the next 6 hours and/or open the reactor trip breakers.

ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 6 hours.

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.1.1.1.

c. The QUADRANT POWER TILT RATIO is monitored in accordance with Technical Specification 3.2.4.

TABLE 3.3-3

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1. SAFETY INJECTION, TURBINE TRIP AND FEEDWATER ISOLATION					
a. Manual Initiation	2	1	2	1, 2, 3, 4	20
b. Automatic Actuation Logic	2	1	2	1, 2, 3, 4	15
c. Containment Pressure-High	3	2	2	1, 2, 3	17*
d. Pressurizer Pressure-Low	3	2	2	1, 2, 3#	17*
e. Deleted					

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
f. Steam Line Pressure-Low	3/steam line	2/steam line in any steam line	2/steam line	1, 2, 3#	17*
2. CONTAINMENT SPRAY					
a. Manual	2	1**	2	1, 2, 3, 4	20
b. Automatic Actuation Logic	2	1	2	1, 2, 3, 4	15
c. Containment Pressure--High-High	4	2	3	1, 2, 3	18
3. CONTAINMENT ISOLATION					
a. Phase "A" Isolation					
1) Manual	2	1	2	1, 2, 3, 4	20
2) From Safety Injection Automatic Actuation Logic	2	1	2	1, 2, 3, 4	15

** Two switches must be operated simultaneously for actuation.

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
3. CONTAINMENT ISOLATION					
b. Phase "B" Isolation					
1) Manual	2	1**	2	1, 2, 3, 4	20
2) Automatic Actuation Logic	2	1	2	1, 2, 3, 4	15
3) Containment Pressure-High-High	4	2	3	1, 2, 3	18
c. Containment Ventilation Isolation					
1) Manual	2	1	2	1, 2, 3, 4	19
2) Automatic Isolation Logic	2	1	2	1, 2, 3, 4	15
3) Containment Purge Air Exhaust Monitor Radioactivity-High	2	1	1	1, 2, 3, 4	19

** Two switches must be operated simultaneously for actuation.

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
4. STEAM LINE ISOLATION					
a. Manual	1/steam line	1/steam line	1/operating steam line	1, 2, 3	25
b. Automatic Actuation Logic	2	1	2	1, 2, 3	23
c. Containment Pressure--High-High	4	2	3	1, 2, 3	18
d. Steam Line Pressure-Low	3/steam line	2/steam line in any steam line	2/steam line	1, 2, 3[#]	17
e. Negative Steam Line Pressure Rate-High	3/steam line	2/steam line in any steam lines	2/steam line	3[##]	17

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
5. TURBINE TRIP & FEEDWATER ISOLATION					
a. Steam Generator Water Level— High-High	3/loop	2/loop in any operating loop	2/loop in each operating loop	1, 2, 3	17*
b. Automatic Actuation Logic	2	1	2	1, 2, 3	23
6. AUXILIARY FEEDWATER					
a. Manual Initiation	2	1	2	1, 2, 3	24
b. Automatic Actuation Logic	2	1	2	1, 2, 3	23
c. Main Steam Generator Water Level--Low-Low					
i. Start Motor-Driven Pumps					
a. Steam Gen. Water Level-- Low-Low (Adverse)	3/Stm. Gen.	2/Stm. Gen. in any operating Stm. Gen.	2/Stm. Gen. in each operating Stm. Gen.	1, 2, 3	36*
b. Steam Gen. Water Level-- Low-Low (EAM)	3/Stm. Gen.	2/Stm. Gen. in any operating Stm. Gen.	2/Stm. Gen. in each operating Stm. Gen.	1, 2, 3	36*
c. RCS Loop ΔT	4(1/loop)	2	3	1, 2, 3	37*

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
d. Containment Pressure (EAM)	4	2	3	1, 2, 3	38
ii. Start Turbine Driven Pump					
a. Steam Gen. Water Level--Low-Low (Adverse)	3/Stm. Gen.	2/Stm. Gen. in any 2 operating Stm. Gen.	2/Stm. Gen. in each operating Stm. Gen.	1, 2, 3	36
b. Steam Gen. Water Level--Low-Low (EAM)	3/Stm. Gen.	2/Stm. Gen. in any 2 operating Stm. Gen.	2/Stm. Gen. in each operating Stm. Gen.	1, 2, 3	36
c. RCS Loop ΔT	4(1/loop)	2	3	1, 2, 3	37
d. Containment Pressure (EAM)	4	2	3	1, 2, 3	38
d. S. I. Start Motor-Driven Pumps and Turbine Driven Pump	See 1 above (all S.I. initiating functions and requirements)				

Minimum channels operable is proposed to be 1/shutdown board by TS Change 02-01

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
e. Loss of Power Start					
1. Voltage Sensors	3/shutdown board**	2/shutdown board**	3/shutdown board**	1, 2, 3	35
2. Load Shed Timer	2/shutdown board**	1/shutdown board**	2/shutdown board**	1, 2, 3	35
f. Trip of Main Feedwater Pumps Start Motor-Driven Pumps and Turbine Driven Pump	1/pump	1/pump	1/pump	1, 2	20
g. Auxiliary Feedwater Suction Pressure-Low	3/pump	2/pump	3/pump	1, 2, 3	21
h. Auxiliary Feedwater Suction Transfer Time Delays					
1. Motor-Driven Pump	1/pump	1/pump	1/pump	1, 2, 3	21
2. Turbine-Driven Pump	2/pump	1/pump	2/pump	1, 2, 3	21

** Unit 2 Shutdown Boards Only

TABLE 3.3-3 (Continued)

TABLE NOTATION

Trip function may be bypassed in this MODE below P-11 (Pressurizer Pressure Block of Safety Injection) setpoint.

Trip function automatically blocked above P-11 and may be blocked below P-11 when Safety Injection on Steam Line Pressure-Low is not blocked.

When Associated Diesel Generator is required to be OPERABLE by LCO 3.8.1.2, "AC Sources-Shutdown." ~~The Provisions of Specification 3.0.4 are not applicable.~~

~~* The provisions of Specification 3.0.4 are not applicable.~~

Footnote deleted by TS Change 04-01

ACTION STATEMENTS

ACTION 15 - With the number of OPERABLE Channels one less than the Total Number of Channels, be in HOT STANDBY within 12 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.1 provided the other channel is OPERABLE.

ACTION 16 - Deleted.

ACTION 17 - With the number of OPERABLE Channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 6 hours.

b. The Minimum Channels OPERABLE requirements is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.2.1.1.

ACTION 18 - With the number of OPERABLE Channels one less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the bypassed condition within 6 hours and the Minimum Channels OPERABLE requirement is met; one additional channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.1.

ACTION 19 - With less than the Minimum Channels OPERABLE, operation may continue provided the containment purge supply and exhaust valves are maintained closed.

ACTION 20 - With the number of OPERABLE Channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

INSTRUMENTATION

3/4.3.3 MONITORING INSTRUMENTATION

RADIATION MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.1 The radiation monitoring instrumentation channels shown in Table 3.3-6 shall be OPERABLE with their alarm/trip setpoints within the specified limits.

APPLICABILITY: As shown in Table 3.3-6.

ACTION:

a. With a radiation monitoring channel alarm/trip setpoint exceeding the value shown in Table 3.3-6, adjust the setpoint to within the limit within 4 hours or declare the channel inoperable.

b. With one or more radiation monitoring channels inoperable, take the ACTION shown in Table 3.3-6.

c. The provisions of Specifications 3.0.3 ~~and 3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.1 Each radiation monitoring instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations for the MODES and at the frequencies shown in Table 4.3-3.

INSTRUMENTATION

MOVABLE INCORE DETECTORS

LIMITING CONDITION FOR OPERATION

3.3.3.2 The movable incore detection system shall be OPERABLE with:

a. At least 75% of the detector thimbles,

b. A minimum of 2 detector thimbles per core quadrant, and

c. Sufficient movable detectors, drive, and readout equipment to map these thimbles.

APPLICABILITY: When the movable incore detection system is used for:

a. Recalibration of the excore neutron flux detection system,

b. Monitoring the QUADRANT POWER TILT RATIO, or

c. Measurement of $F_{\Delta H}^{N}$ and $F_Q(Z)$.

ACTION:

With the movable incore detection system inoperable, do not use the system for the above applicable monitoring or calibration functions. The provisions of Specifications 3.0.3 ~~and 3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.2 The movable incore detection system shall be demonstrated OPERABLE by normalizing each detector output when required for:

a. Recalibration of the excore neutron flux detection system, or

b. Monitoring the QUADRANT POWER TILT RATIO, or

c. Measurement of $F_{\Delta H}^{N}$ and $F_Q(Z)$

INSTRUMENTATION

METEOROLOGICAL INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.4 The meterological monitoring instrumentation channels shown in Table 3.3-8 shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

a. With one or more required meteorological monitoring channels inoperable for more than 7 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 withint the next 10 days outlining the cause of the malfunction and the plans for restoring the channel(s) to OPERABLE status.

b. The provisions of Specifications 3.0.3 ~~and 3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.4 Each of the above meteorological monitoring instrumentation channels shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-5.

INSTRUMENTATION

REMOTE SHUTDOWN INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.5 The remote shutdown monitoring instrumentation channels shown in Table 3.3-9 shall be OPERABLE with readouts displayed external to the control room.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

a. With the number of OPERABLE remote shutdown monitoring channels less than required by Table 3.3-9, restore the inoperable channel(s) to OPERABLE status within 7 days, or be in HOT SHUTDOWN within the next 12 hours.

~~b. The provisions of Specification 3.0.4 are not applicable.~~

SURVEILLANCE REQUIREMENTS

4.3.3.5 Each remote shutdown monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-6.

TABLE 3.3-10 (Continued)

ACTION STATEMENTS

ACTION 1 - NOTE: Also refer to the applicable action requirements from Tables 3.3-1 and 3.3-3, and LCO 3.3.3.5 since they may contain more restrictive actions.

a. With the number of channels one less than the minimum channels required, restore the inoperable channel to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the next 6 hours.

b. With the number of channels two less than the minimum channels required, restore at least one inoperable channel to OPERABLE status within 7 days or be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the next 6 hours.

~~c. The provisions of Specification 3.0.4 are not applicable.~~

ACTION 2 - NOTE: Also refer to the applicable action requirements from Tables 3.3-1 since it may contain more restrictive actions.

a. With the number of channels one less than the minimum channels required, restore the inoperable channel to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the next 6 hours.

b. With the number of channels two less than the minimum channels required, restore at least one inoperable channel to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the next 6 hours.

c. With the number of channels three less than the minimum channels required, restore one channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the next 6 hours.

~~d. The provisions of Specification 3.0.4 are not applicable.~~

ACTION 3 - NOTE: Also refer to the applicable action requirements from LCO 3.6.3 since it may contain more restrictive actions.

a. With the accident monitoring indication for one of the penetration inboard or outboard valve(s) inoperable, restore the inoperable valve(s) accident indication to OPERABLE status within 30 days, or isolate each affected penetration within 30 days by use of at least one deactivated automatic valve secured in the isolated position, or isolate each

TABLE 3.3-10 (Continued)

ACTION STATEMENTS

(Continued)

affected penetration within 30 days by use of at least one closed manual valve or blind flange, or be in at least HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the next 6 hours.

b. With the accident monitoring indication for both an inboard and outboard valve(s) on the same penetration inoperable, restore at least the inboard or outboard inoperable valve(s) indication to OPERABLE status within 7 days, or isolate each affected penetration within 7 days by use of at least one deactivated automatic valve secured in the isolated position, or isolate each affected penetration within 7 days by use of at least one closed manual valve or blind flange, or be in at least HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the next 6 hours.

~~c. The provisions of Specification 3.0.4 are not applicable.~~

On a penetration where accident indication is declared INOPERABLE on a valve but on the opposite side of the penetration an accident indication valve does not exist (such as with a closed system or a check valve), only ACTION 3(a) must be entered. However, valves FCV-63-158 & -172 are both inboard penetration valves, but if both valves have inoperable accident indication, ACTION 3(b) must be entered until at least one of the valve's accident indication is restored to OPERABLE status. Valves FCV-30-46 & VLV-30-571, FCV-30-47 & VLV-30-572, and FCV-30-48 & VLV-30-573 are all outboard penetration valves, but if both valves have inoperable accident indication, ACTION 3(b) must be entered until at least one of the valve's accident indication is restored to OPERABLE status.

TABLE 3.3-10 (Continued)

ACTION STATEMENTS
(Continued)

ACTION 4 - a. With the number of channels less than the minimum channels required, initiate an alternate method of monitoring containment area radiation within 72 hours and either restore the inoperable channel(s) to OPERABLE status within 30 days, or prepare and submit a special report to the Commission pursuant to Specification 6.9.2.1 within 14 days that provides actions taken, cause of the inoperability, and plans and schedule for restoring the channels to OPERABLE status.

b. ~~The provisions of Specification 3.0.4 are not applicable.~~

ACTION 5 - NOTE: Also refer to the applicable action requirements from LCO 3.3.3.5 since it may contain more restrictive actions.

a. With the number of channels on one or more steam generators less than the minimum channels required for either flow rate or valve position, restore the inoperable channel to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the next 6 hours.

b. With the number of channels on one or more steam generators less than the minimum channels required for flow rate and valve position, restore the inoperable channel(s) to OPERABLE status within 7 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the next 6 hours.

c. ~~The provisions of Specification 3.0.4 are not applicable.~~

INSTRUMENTATION

EXPLOSIVE GAS MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.10 The explosive gas monitoring instrumentation channels shown in Table 3.3-13 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of Specification 3.11.2.5 are not exceeded.

APPLICABILITY: As shown in Table 3.3-13

ACTION:

a. With an explosive gas monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above Specification, declare the channel inoperable and take the ACTION shown in Table 3.3-13.

b. With less than the minimum number of explosive gas monitoring instrumentation channels OPERABLE, take the ACTION shown in Table 3.3-13. Restore the inoperable instrumentation to OPERABLE status within 30 days and, if unsuccessful, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2.1 to explain why this inoperability was not corrected in a timely manner.

c. The provisions of Specifications 3.0.3 ~~and 3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.10 Each explosive gas monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, CHANNEL CALIBRATION, and CHANNEL FUNCTIONAL TEST at the frequencies shown in Table 4.3-9.

REACTOR COOLANT SYSTEM

RELIEF VALVES - OPERATING

LIMITING CONDITION FOR OPERATION

3.4.3.2 All power operated relief valves (PORVs) and their associated block valves shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

a. With one or more PORV(s) inoperable, but capable of RCS pressure control, within 1 hour either restore the PORV(s) to OPERABLE status or close the associated block valve(s); otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. With one PORV inoperable and incapable of RCS pressure control, within 1 hour either restore the PORV to OPERABLE status or close the associated block valve and remove power from the block valve; restore the PORV to OPERABLE status within the following 72 hours or be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

c. With both PORVs inoperable and incapable of RCS pressure control, within 1 hour either restore each of the PORVs to OPERABLE status or close their associated block valves and remove power from the block valves and be in HOT STANDBY within the next 6 hours and HOT SHUTDOWN within the following 6 hours.

d. With one or more block valve(s) inoperable, within 1 hour: (1) restore the block valve(s) to OPERABLE status, or close the block valve(s) and remove power from the block valve(s), or close the PORV(s) and remove power from its associated solenoid valve(s); and (2) apply the ACTION b. or c. above, as appropriate, for the isolated PORV(s).

~~e. The provisions of Specification 3.0.4 are not applicable.~~

SURVEILLANCE REQUIREMENTS

4.4.3.2.1 In addition to the requirements of Specification 4.0.5, each PORV shall be demonstrated OPERABLE at least once per 18 months by:

a. Performance of a CHANNEL CALIBRATION, and

This surveillance is proposed for deletion by TS Change 04-03

b. Operating the valve through one complete cycle of full travel during Modes 3, 4, or 5 with a steam bubble in the pressurizer.

4.4.3.2.2 Each block valve shall be demonstrated OPERABLE at least once per 92 days by operating the valve through one complete cycle of full travel.

REACTOR COOLANT SYSTEM

3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE

LEAKAGE DETECTION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.4.6.1 The following Reactor Coolant System leakage detection instrumentation shall be OPERABLE:

a. Two lower containment atmosphere radioactivity monitors (gaseous and particulate), and

b. One containment pocket sump level monitor.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a. With both containment pocket sump monitors inoperable, operation may continue for up to 30 days provided SR 4.4.6.2.1 is performed once per 24 hours*; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. ~~The provisions of Specification 3.0.4 are not applicable.~~

b. With either or both the gaseous or particulate lower containment atmosphere radioactivity monitors inoperable, operation may continue for up to 30 days provided grab samples of the lower containment atmosphere are analyzed once per 24 hours or SR 4.4.6.2.1 is performed once per 24 hours*; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. ~~The provisions of Specification 3.0.4 are not applicable.~~

c. With both containment pocket sump monitors and both lower containment atmosphere radioactivity monitors inoperable, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours..

SURVEILLANCE REQUIREMENTS

4.4.6.1 The leakage detection instrumentation shall be demonstrated OPERABLE by:

a. Performance of the lower containment atmosphere gaseous and particulate monitor CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST at the frequencies specified in Table 4.3-3, and

b. Performance of containment pocket sump level monitor CHANNEL CALIBRATION at least once per 18 months.

* Surveillance performance not required until 12 hours after establishment of steady state operation.

3/4.4.8 SPECIFIC ACTIVITY

LIMITING CONDITION FOR OPERATION

3.4.8 The specific activity of the primary coolant shall be limited to:

a. Less than or equal to 0.35 microcurie per gram DOSE EQUIVALENT I-131, and

b. Less than or equal to 100/$\bar{E}$ microcuries per gram.

APPLICABILITY: MODES 1, 2, 3, 4 and 5

ACTION:

LCO 3.0.4.c is applicable.

MODES 1, 2 and 3*:

a. With the specific activity of the primary coolant greater than 0.35 microcurie per gram DOSE EQUIVALENT I-131 for more than 48 hours during one continuous time interval or exceeding the limit line shown on Figure 3.4-1, be in at least HOT STANDBY with T_{avg} less than 500°F within 6 hours.

b. With the specific activity of the primary coolant greater than 100/$\bar{E}$ microcurie per gram, be in at least HOT STANDBY with T_{avg} less than 500°F within 6 hours.

MODES 1, 2, 3, 4 and 5:

a. With the specific activity of the primary coolant greater than 0.35 microcurie per gram DOSE EQUIVALENT I-131 or greater than 100/$\bar{E}$ microcuries per gram, perform the sampling and analysis requirements of item 4a of Table 4.4-4 until the specific activity of the primary coolant is restored to within its limits.

* With T_{avg} greater than or equal to 500°F.

3/4.4.11 REACTOR COOLANT SYSTEM HEAD VENTS

LIMITING CONDITION FOR OPERATION

3.4.11 At least one Reactor Coolant System Head Vent (RCSHV) path shall be OPERABLE.*

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

a. With no RCSHV path OPERABLE*, restore at least one path to OPERABLE status within 30 days or be in HOT STANDBY within 6 hours and HOT SHUTDOWN within the following 6 hours.

~~b. The provisions of Specification 3.0.4 are not applicable.~~

SURVEILLANCE REQUIREMENTS

4.4.11 Each RCSHV path shall be demonstrated OPERABLE at least once per 18 months by:

a. Verifying that the upstream manual isolation valves are locked in the open position,

b. Operating each remotely controlled valve through at least one cycle from the control room, and

c. Verifying flow through each RCSHV path.

* Inoperable paths must be maintained closed with power removed from the valve actuators. If any RCSHV path is declared inoperable while in an applicable MODE, power shall be removed from the valve actuators within one hour.

ACTION (Continued)

e. With two required PORVs inoperable, or the Actions (a), (b), (c) , or (d) not met, or the LTOP System inoperable for any reason other than (a), (b), (c), or (d), depressurize the RCS and establish RCS vent of ≥ 3.0 square inches within 12 hours.

f. ~~The provisions of Specification 3.0.4 are not applicable~~

LCO 3.0.4.b is not applicable when entering MODE 4.

SURVEILLANCE REQUIREMENTS

4.4.12.1 Each PORV shall be demonstrated OPERABLE by:

a. Performance of a CHANNEL FUNCTIONAL TEST*, but excluding valve operation, at least once per 31 days;

b. Performance of a CHANNEL CALIBRATION on each required PORV actuation channel at least once per 18 months; and

c. Verifying the PORV block valve is open for each required PORV at least once per 72 hours.

4.4.12.2 Verify no safety injection pumps are capable of injecting into the RCS within 4 hours after entering MODE 4 from MODE 3 and prior to the temperature of one or more RCS cold legs decreasing below 325°F, and every 12 hours thereafter.

4.4.12.3 Verify a maximum of one charging pump is capable of injecting into the RCS within 4 hours after entering MODE 4 from MODE 3 and prior to the temperature of one or more RCS cold legs decreasing below 325°F, and every 12 hours thereafter.

4.4.12.4 Verify each accumulator is isolated at least once per 12 hours

4.4.12.5 Verify# required RCS vent ≥ 3.0 square inches open at least:

a. Once every 12 hours for unlocked open vent valve(s) and,

b. Once every 31 days for other vent path(s)

* Not required to be performed until 12 hours after decreasing RCS cold leg temperatures to ≤ the LTOP arming temperature in the PTLR.

\# Only required to be met when complying with LCO 3.4.12.b.

EMERGENCY CORE COOLING SYSTEMS

3/4.5.3 ECCS SUBSYSTEMS - T_{avg} LESS THAN 350°F

LIMITING CONDITION FOR OPERATION

3.5.3 As a minimum, one ECCS subsystem comprised of the following shall be OPERABLE:

a. One OPERABLE centrifugal charging pump,

b. One OPERABLE residual heat removal heat exchanger,

c. One OPERABLE residual heat removal pump, and

d. An OPERABLE flow path capable of taking suction from the refueling water storage tank upon being manually realigned and automatically transferring suction to the containment sump during the recirculation phase of operation.

APPLICABILITY: MODE 4.

LCO 3.0.4.b is not applicable

ACTION:

a. With no ECCS subsystem OPERABLE because of the inoperability of either the centrifugal charging pump or the flow path from the refueling water storage tank, restore at least one ECCS subsystem to OPERABLE status within 1 hour or be in COLD SHUTDOWN within the next 20 hours.

b. With no ECCS subsystem OPERABLE because of the inoperability of either the residual heat removal heat exchanger or residual heat removal pump, restore at least one ECCS subsystem to OPERABLE status or maintain the Reactor Coolant System T_{avg} less than 350°F by use of alternate heat removal methods.

LIMITING CONDITION FOR OPERATION

3.6.1.3 Each containment air lock shall be OPERABLE* with both doors closed except when the air lock is being used for normal transit entry and exit through the containment, then at least one air lock door shall be closed.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a. With one containment air lock door inoperable:

1. Maintain at least the OPERABLE air lock door closed and either restore the inoperable air lock door to OPERABLE status within 24 hours or lock the OPERABLE air lock door closed.

2. Operation may then continue until performance of the next required overall air lock leakage test provided that the OPERABLE air lock door is verified to be locked closed at least once per 31 days.

3. Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

4. ~~The provisions of Specification 3.0.4 are not applicable~~

b. With the containment air lock inoperable, except as the result of a inoperable air lock door, maintain at least one air lock door closed; restore the inoperable air lock to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

*1. An inoperable air lock door does not invalidate the previous successful performance of the overall air lock leakage test.

2. Enter the ACTION of LCO 3.6.1.1, "Primary Containment" when air lock leakage results in exceeding the overall containment leakage rate acceptance criteria.

CONTAINMENT SYSTEMS

CONTAINMENT VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.1.9 One pair (one purge supply line and one purge exhaust line) of containment purge system lines may be open; the containment purge supply and exhaust isolation valves in all other containment purge lines shall be closed. Operation with purge supply or exhaust isolation valves open for either purging or venting shall be limited to less than or equal to 1000 hours per 365 days. The 365 day cumulative time period will begin every January 1.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

a. With a purge supply or exhaust isolation valve open in excess of the above cumulative limit, or with more than one pair of containment purge system lines open, close the isolation valve(s) in the purge line(s) within one hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With a containment purge supply and/or exhaust isolation valve having a measured leakage rate in excess of 0.05 La, restore the inoperable valve to OPERABLE status or isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange within 24 hours. Verify** the affected penetration flow path is isolated once per 31 days for isolation devices outside containment and prior to entering Mode 4 from Mode 5 if not performed within the previous 92 days for isolation devices inside containment. Otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. ~~The provisions of Specification 3.0.4 do not apply.~~

SURVEILLANCE REQUIREMENTS

4.6.1.9.1 The position of the containment purge supply and exhaust isolation valves shall be determined at least once per 31 days.

4.6.1.9.2 The cumulative time that the purge supply and exhaust isolation valves are open over a 365 day period shall be determined at least once per 7 days.

4.6.1.9.3 At least once per 3 months, each containment purge supply and exhaust isolation valve shall be demonstrated OPERABLE by verifying that the measured leakage rate is less than or equal to 0.05 L_a.*

* Enter the ACTION of LCO 3.6.1.1, "Primary Containment" when purge valve leakage results in exceeding the overall containment leakage rate acceptance criteria.

** Isolation devices in high radiation areas may be verified by use of administrative means. Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means.

3/4.6.3 CONTAINMENT ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.6.3 Each containment isolation valve shall be OPERABLE.*

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a. With one or more penetration flow paths with one containment isolation valve inoperable; except for containment vacuum relief isolation valves(s), isolate each affected penetration within 4 hours by use of at least one closed deactivated automatic valve, closed manual valve, blind flange, or check valve## with flow through the valve secured; and, verify# the affected penetration flow path is isolated once per 31 days for isolation devices outside containment, and prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days for isolation devices inside containment.

b. With one or more penetration flow paths with two containment isolation valves inoperable; except for containment vacuum relief isolation valves(s), isolate each affected penetration within 1 hour by use of at least one closed deactivated automatic valve, closed manual valve, or blind flange and verify# the affected penetration flow path is isolated once per 31 days.

c. With one or more containment vacuum relief isolation valve(s) inoperable, the valve(s) must be returned to OPERABLE status within 72 hours.

d. With any of the above ACTIONS not met, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

e. ~~The provisions of Specification 3.0.4 do not apply.~~

SURVEILLANCE REQUIREMENTS

4.6.3.1 Deleted

*1. Penetration flow path(s) may be unisolated intermittently under administrative controls.

2. Enter the ACTION of LCO 3.6.1.1, "Primary Containment" when containment isolation valve leakage results in exceeding the overall containment leakage rate acceptance criteria.

#3. Isolation devices in high radiation areas may be verified by use of administrative means.

#4. Isolation devices that are locked, sealed, or otherwise secured may be verified by use of administrative means.

##5. A check valve with flow through the valve secured is only applicable to penetration flow paths with two containment isolation valves.

3/4.7 PLANT SYSTEMS

3/4.7.1 TURBINE CYCLE

SAFETY VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.1 Main steam safety valves (MSSVs) shall be OPERABLE with lift settings as specified in Table 3.7-2.

APPLICABILITY: Modes 1, 2 and 3*.

ACTION:

a. With one or more MSSVs inoperable, operation may proceed provided, that within 4 hours, either the inoperable valve is restored to OPERABLE status or the Power Range Neutron Flux High Setpoint trip is reduced per Table 3.7-1. ~~The provisions of Specification 3.0.4 are not applicable.~~

b. With the requirements of Action a., not met or with one or more steam generators with less than two MSSVs OPERABLE be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN in the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.1 No additional Surveillance Requirements other than those required by Specification 4.0.5. Following testing, lift settings shall be within ± 1%.

*With the reactor trip system breakers in the closed position.

PLANT SYSTEMS

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.2 Three auxiliary feedwater trains shall be OPERABLE.*

APPLICABILITY: MODES 1, 2, and 3, MODE 4 when steam generator is relied upon for heat removal.

ACTION:

a. With one AFW train inoperable in MODE 1, 2, or 3, restore the inoperable AFW train to OPERABLE status within 72 hours or be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 12 hours.

b. With two AFW trains inoperable in MODE 1, 2, or 3, be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

c. With three AFW trains inoperable MODE 1, 2, or 3, immediately initiate corrective action to restore at least one AFW train to OPERABLE status.**

d. ~~With the required AFW train inoperable in MODE~~ 4, immediately initiate action to restore the ~~required AFW train to OPERABLE~~ status.

e. *LCO 3.0.4.b is not applicable.*

SURVEILLANCE REQUIREMENTS

4.7.1.2.1 At least once per 31 days, verify each AFW manual, power operated, and automatic valve in each water flow path, and in both steam supply flow paths to the steam turbine driven pump, that is not locked, sealed, or otherwise secured in position, is in the correct position.

* Only one AFW train, which includes a motor driven pump, is required to be OPERABLE in MODE 4.

** LCO 3.0.3 and all other LCO ACTIONS requiring MODE changes are suspended until one AFW train is restored to OPERABLE status.

PLANT SYSTEMS

MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.5 Four main steam line isolation valves shall be OPERABLE.

APPLICABILITY: MODE 1, 2, and 3

ACTION:

MODE 1 - With one main steam line isolation valve inoperable, POWER OPERATION may continue provided the inoperable valve is restored to OPERABLE status within 4 hours;

Otherwise, be in MODE 2 within the next 6 hours.

MODES 2 and 3 - With one or more main steam line isolation valves inoperable, subsequent operation in MODES 2 or 3 may proceed provided:

a. The isolation valve is restored to OPERABLE status or closed within 4 hours;

b. The inoperable isolation valve is verified closed once per 7 days;

~~c. The provisions of Specification 3.0.4 are not applicable;~~

c. ~~d.~~ Separate entry into this action is allowed for each isolation valve.

Otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.5.1 Each main steam line isolation valve shall be demonstrated OPERABLE by verifying full closure within 5 seconds when tested pursuant to Specification 4.0.5.

4.7.1.5.2 At least once per 18 months, verify each main steam isolation valve closes on an actual or simulated automatic actuation signal.

PLANT SYSTEMS

MAIN FEEDWATER ISOLATION, REGULATING, AND BYPASS VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.6 Four main feedwater isolation valves (MFIVs), four main feedwater regulating valves (MFRVs), and four MFRV bypass valves shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3

ACTION:

a. With one or more MFIVs inoperable, POWER OPERATION may continue provided the inoperable valve is returned to OPERABLE status or closed or isolated within 72 hours; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. With one or more MFRVs inoperable, POWER OPERATION may continue provided the inoperable valve is returned to OPERABLE status or closed or isolated within 72 hours; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

c. With one or more MFRV bypass valves inoperable, POWER OPERATION may continue provided the inoperable valve is returned to OPERABLE status or closed or isolated within 72 hours; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

d. For each MFIV, MFRV, or MFRV bypass valve that has been closed or isolated to satisfy Action a., b., or c. above, verify that it is closed or isolated once per 7 days.

e. With two valves in the same main feedwater flow path inoperable, isolate the affected flow path within 8 hours; otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

f. Separate entry into the above ACTIONS is allowed for each valve or flow path. ~~The provisions of Specification 3.0.4 are not applicable.~~

SURVEILLANCE REQUIREMENTS

4.7.1.6 In addition to the requirements of Specification 4.0.5, verify each MFIV, MFRV, and MFRV bypass valve closes on an actual or simulated automatic actuation signal at least once per 18 months.

PLANT SYSTEMS

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7 Two independent control room emergency ventilation systems (CREVS) shall be OPERABLE.

APPLICABILITY: ALL MODES and during movement of irradiated fuel assemblies

ACTION:

MODES 1, 2, 3 and 4

a. With one CREVS inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With both CREVS system inoperable due to actions taken as a result of a tornado warning, restore at least one train to operable status within 8 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. With both CREVS inoperable for other than Action b., be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

MODES 5, 6, and during movement of irradiated fuel assemblies

a. With one CREVS inoperable, restore the inoperable system to OPERABLE status within 7 days or initiate and maintain operation of the operable CREVS in the recirculation mode
or
suspend movement of irradiated fuel assemblies.

b. With both CREVS inoperable, suspend all operations involving movement of irradiated fuel assemblies.

~~c. The provisions of Specification 3.0.4 are not applicable.~~

SURVEILLANCE REQUIREMENTS

4.7.7 Each CREVS shall be demonstrated OPERABLE:

a. DELETED

b. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 15 minutes.

c. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with the system by:

PLANT SYSTEMS

3/4.7.10 SEALED SOURCE CONTAMINATION

LIMITING CONDITION FOR OPERATION

3.7.10 Each sealed source containing radioactive material either in excess of 100 microcuries of beta and/or gamma emitting material or 5 microcuries of alpha emitting material, shall be free of greater than or equal to 0.005 microcuries of removable contamination.

APPLICABILITY: At all times.

ACTION:

a. With a sealed source having removable contamination in excess of the above limits, immediately withdraw the sealed source from use and either:

   1. Decontaminate and repair the sealed source, or

   2. Dispose of the sealed source in accordance with Commission Regulations.

b. The provisions of Specifications 3.0.3 ~~and 3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.10.1 Test Requirements - Each sealed source shall be tested for leakage and/or contamination by:

a. The licensee, or

b. Other persons specifically authorized by the Commission or an Agreement State.

The test method shall have a detection sensitivity of at least 0.005 microcuries per test sample.

4.7.10.2 Test Frequencies - Each category of sealed sources (excluding startup sources and fission detectors previously subjected to core flux) shall be tested at the frequency described below.

a. Sources in use - At least once per six months for all sealed sources containing radioactive materials:

   1. With a half-life greater than 30 days (excluding Hydrogen 3), and

   2. In any form other than gas.

ACTION (Continued)

c. With one offsite circuit and one diesel generator set of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirements 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter, and Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours; restore at least one of the inoperable sources to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

d. With two of the above required offsite A.C. circuits inoperable, demonstrate the OPERABILITY of 4 diesel generator sets by performing Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours, unless the diesel generator sets are already operating; restore at least one of the inoperable offsite sources to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours.

e. With either diesel generator sets 1A-A and/or 2 A-A inoperable simultaneous with 1B-B and/or 2B-B, demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; restore at least 1) 1A-A and 2A-A or 2) 1B-B and 2B-B to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

f. LCO 3.0.4.b is not applicable to diesel generators.

SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Each of the above required independent circuits between the offsite transmission network and the onsite Class E distribution system shall be:

a. Determined OPERABLE at least once per 7 days by verifying correct breaker alignments and indicated power availability.

REFUELING OPERATIONS

3/4.9.2 INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.9.2 As a minimum, two source range neutron flux monitors shall be OPERABLE and operating, each with continuous visual indication in the control room and one with audible indication in the containment and control room.

APPLICABILITY: MODE 6.

ACTION:

a. With one of the above required monitors inoperable or not operating, immediately suspend all operations involving CORE ALTERATIONS and suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet LCO 3.9.1.

b. With both of the above required monitors inoperable or not operating, determine the boron concentration of the reactor coolant system at least once per 12 hours.

c. The provisions of Specifications 3.0.3 ~~and 3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.2 Each source range neutron flux monitor shall be demonstrated OPERABLE by performance of:

a. A CHANNEL CHECK at least once per 12 hours, and

b. A CHANNEL FUNCTIONAL TEST at least once per 7 days.

REFUELING OPERATIONS

3/4.9.9 CONTAINMENT VENTILATION ISOLATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.9 The Containment Ventilation Isolation System shall be OPERABLE.

APPLICABILITY: During movement of irradiated fuel within the containment.

ACTION:

With the Containment Ventilation Isolation System inoperable, close each of the Ventilation penetrations providing direct access from the containment atmosphere to the outside atmosphere. The provisions of Specifications 3.0.3 ~~and 3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.9 The Containment Ventilation Isolation System shall be demonstrated OPERABLE within 100 hours prior to the start of and at least once per 7 days during movement of irradiated fuel within containment by verifying that Containment Ventilation isolation occurs on manual initiation and on a high radiation test signal from each of the containment radiation monitoring instrumentation channels.

REFUELING OPERATIONS

3/4.9.12 AUXILIARY BUILDING GAS TREATMENT SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.12 One auxiliary building gas treatment filter train shall be OPERABLE.

APPLICABILITY: Whenever irradiated fuel is in the storage pool.

ACTION:

a. With no auxiliary building gas treatment filter train OPERABLE, suspend all operations involving movement of fuel within the spent fuel pit or crane operation with loads over the spent fuel pit until at least one auxiliary building gas treatment filter train is restored to OPERABLE status.

b. The provisions of Specifications 3.0.3 ~~and 3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.12 The above required auxiliary building gas treatment filter train shall be demonstrated OPERABLE:

a. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 10 hours with the heaters on.

b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with the system by:

1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978 (except for the provisions of ANSI N510 Sections 8 and 9), and the system flow rate is 9000 cfm ± 10%.

2. Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows the methyl iodide penetration less than 2.5% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C (86° F) and a relative humidity of 70%.

3. Verifying a system flow rate of 9000 cfm ± 10% during system operation when tested in accordance with ANSI N510-1975.

RADIOACTIVE EFFLUENTS

LIQUID HOLDUP TANKS

LIMITING CONDITION FOR OPERATION

3.11.1.4 The quantity of radioactive material contained in each of the following tanks shall be limited by the following expression:

$$\sum_i \frac{\text{concentration of isotope i}}{\text{(effluent concentration limit of isotope i)}} \leq 6{,}700$$

excluding tritium and dissolved or entrained noble gases.

a. Condensate Storage Tank
b. Steam Generator Layup Tank
c. Outside temporary tanks for radioactive liquid

APPLICABILITY: At all times.

ACTION:

a. With the quantity of radioactive material in any of the above listed tanks exceeding the above limit, immediately suspend all additions of radioactive material to the tank and within 48 hours reduce the tank contents to within the limit.

b. The provisions of Specifications 3.0.3 ~~and 3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.1.4 The quantity of radioactive material contained in each of the above listed tanks shall be determined to be within the above limit by analyzing a representative sample of the tank's contents at least once per 7 days when radioactive materials are being added to the tank.

RADIOACTIVE EFFLUENTS

EXPLOSIVE GAS MIXTURE

LIMITING CONDITION FOR OPERATION

3.11.2.5 The concentration of oxygen in the waste gas holdup system shall be limited to less than or equal to 2% by volume whenever the hydrogen concentration exceeds 4% by volume.

APPLICABILITY: At all times.

ACTION:

a. With the concentration of oxygen in a waste gas holdup tank greater than 2% by volume but less than or equal to 4% by volume, reduce the oxygen concentration to the above limits within 48 hours.

b. With the concentration of oxygen in a waste gas holdup tank greater than 4% by volume and the hydrogen concentration greater than 2% by volume, without delay suspend all additions of waste gases to the affected waste gas holdup tank and reduce the concentration of oxygen to less than or equal to 2% by volume without delay.

c. The provisions of Specifications 3.0.3 ~~and 3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.5 The concentration of hydrogen and oxygen in the waste gas holdup system shall be determined to be within the above limits by monitoring the waste gas additions to the waste gas holdup system with the hydrogen and oxygen monitors required OPERABLE by Table 3.3-13 of Specification 3.3.3.10.

RADIOACTIVE EFFLUENTS

GAS DECAY TANKS

LIMITING CONDITION FOR OPERATION

3.11.2.6 The quantity of radioactivity contained in each gas decay tank shall be limited to less than or equal to 50,000 curies of noble gases (considered as Xe-133).

APPLICABILITY: At all times.

ACTION:

a. With the quantity of radioactive material in any gas decay tank exceeding the above limit, without delay suspend all additions of radioactive material to the tank and within 48 hours reduce the tank contents to within the limit.

b. The provisions of Specifications 3.0.3 ~~and 3.0.4~~ are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.6 The quantity of radioactive material contained in each gas decay tank shall be determined to be within the above limit at least once per 24 hours when radioactive materials are being added to the tank.

ENCLOSURE 3

TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT (SQN)
UNITS 1 AND 2

Changes to Technical Specifications Bases Pages

I. AFFECTED PAGE LIST

Unit 1	Unit 2
B 3/4 0-1	B 3/4 0-1
B 3/4 0-5	B 3/4 0-5
B 3/4 4-4d	B 3/4 4-4b
B 3/4 4-4e	B 3/4 4-4c
B 3/4 4-5	B 3/4 4-5
B 3/4 4-21	B 3/4 4-22
B 3/4 5-2	B 3/4 5-2
B 3/4 7-2b	B 3/4 7-2b
B 3/4 8-1a	B 3/4 8-1a

II. MARKED PAGES

See attached.

BASES

The specifications of this section provide the general requirements applicable to each of the Limiting Conditions for Operation and Surveillance Requirements within Section 3/4.

3.0.1 This specification defines the applicability of each specification in terms of defined OPERATIONAL MODES or other specified conditions and is provided to delineate specifically when each specification is applicable.

3.0.2 This specification defines those conditions necessary to constitute compliance with the terms of an individual Limiting Condition for Operation and associated ACTION requirement.

3.0.3 This specification delineates the ACTION to be taken for circumstances not directly provided for in the ACTION statements and whose occurrence would violate the intent of the specification. For example, Specification 3.5.2 requires two independent ECCS subsystems to be OPERABLE and provides explicit ACTION requirements if one ECCS subsystem is inoperable. Under the requirements of Specification 3.0.3, if both of the required ECCS subsystems are inoperable, within one hour measures must be initiated to place the unit in at least HOT STANDBY within the next 6 hours, and in at least HOT SHUDOWN within the following 6 hours. As a further example, Specification 3.6.2.1 requires two containment spray subsystems to be OPERABLE and provides explicit ACTION requirements if one spray system is inoperable. Under the requirements of Specification 3.0.3, if both of the required containment spray subsystems are inoperable, within one hour measures must be initiated to place the unit in at least HOT STANDBY within the next 6 hours, in at least HOT SHUTDOWN within the ~~following 6 hours, and in~~ COLD SHUTDOWN ~~within~~ the subsequent ~~24 hours~~.

3.0.4 ~~This specification provides that entry into an OPERATIONAL MODE or other specified applicability condition must be made with (a) the full complement of required systems, equipment or components OPERABLE and (b) all other parameters as specified in the Limiting Conditions for Operation being met without regard for allowable deviations and out of service provisions contained in the ACTION statements.~~

~~The intent of this provision is to insure that facility operation is not initiated with either required equipment or systems inoperable or other specified limits being exceeded.~~

~~Exceptions to this provision have been provided for a limited number of specifications when startup with inoperable equipment would not affect plant safety. These exceptions are stated in the ACTION statements of the appropriate specifications.~~

Insert 3

APPLICABILITY

BASES

Insert 4

4.0.4 ~~This specification establishes the requirement that all applicable surveillances must be met before entry into an OPERATIONAL MODE or other condition of operation specified in the Applicability statement. The purpose of this specification is to ensure that system and component OPERABILITY requirements or parameter limits are met before entry into a MODE or condition for which these systems and components ensure safe operation of the facility. This provision applies to changes in OPERATIONAL MODES or other specified conditions associated with plant shutdown as well as startup.~~

~~Under the provisions of this specification, the applicable Surveillance Requirements must be performed within the specified surveillance interval to ensure that the Limiting Conditions for Operations are met during initial plant startup or following a plant outage.~~

~~When a shutdown is required to comply with ACTION requirements, the provisions of Specification 4.0.4 do not apply because this would delay placing the facility in a lower MODE of operation.~~

4.0.5 This specification ensures that inservice inspection of ASME Code Class 1, 2 and 3 components and inservice testing of ASME Code Class I, 2 and 3 pumps and valves will be performed in accordance with a periodically updated version of Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by 10 CFR 50.55a.

This specification includes a clarification of the frequencies for performing the inservice inspection and testing activities required by Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda. This clarification is provided to ensure consistency in surveillance intervals throughout these technical specifications and to remove any ambiguties relative to the frequencies for performing the required inservice inspection and testing activities.

Under the terms of this specification, the more restrictive requirements of the Technical Specifications take precedence over the ASME Boiler and Pressure Vessel Code and applicable Addenda. For example, the requirements of Specification 4.0.4 to perform surveillance activities prior to entry into an OPERATIONAL MODE or other specified applicability condition takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows pumps to be tested up to one week after return to normal operation. And for example, the Technical Specification definition of OPERABLE does not grant a grace period before a device that is not capable of performing its specified function is declared inoperable and takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows a valve to be incapable of performing its specified function for up to 24 hours before being declared inoperable.

APPLICABILITY

Because of elevated RCS temperature and pressure in MODES 1, 2, 3, and 4, RCS leakage detection instrumentation is required to be OPERABLE.

In MODE 5 or 6, the temperature is to be ≤ 200°F and pressure is maintained low or at atmospheric pressure. Since the temperatures and pressures are far lower than those for MODES 1, 2, 3, and 4, the likelihood of leakage and crack propagation are much smaller. Therefore, the requirements of this LCO are not applicable in MODES 5 and 6.

ACTIONS

Action a:

With both containment pocket sump monitors inoperable, no other form of sampling can provide the equivalent information; however, the containment atmosphere radioactivity monitor will provide indications of changes in leakage. Together with the atmosphere monitor, the periodic surveillance for RCS water inventory balance, Surveillance 4.4.6.2.1, must be performed at an increased frequency of 24 hours to provide information that is adequate to detect leakage. A footnote is added allowing that SR 4.4.6.2.1 is not required to be performed until 12 hours after establishing steady state operation (stable pressure, temperature, power level, pressurizer and makeup tank levels, makeup, letdown, and RCP seal injection and return flows). The 12-hour allowance provides sufficient time to collect and process all necessary data after stable plant conditions are established.

Restoration of the required pocket sump monitor to OPERABLE status within a Completion Time of 30 days is required to regain the function after the monitor's failure. This time is acceptable, considering the frequency and adequacy of the RCS water inventory balance required by Action a.

~~Action a is modified by a note that indicates that the provisions of LCO 3.0.4 are not applicable. As a result, a MODE change is allowed when the containment sump monitor is inoperable. This allowance is provided because other instrumentation is available to monitor RCS leakage.~~

If the requirements of Action a cannot be met, the plant must be brought to a MODE in which the requirement does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE 5 within the following 30 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.

Action b:

With either the gaseous or particulate containment atmosphere radioactivity monitoring instrumentation channels inoperable, alternative action is required. Either grab samples of the containment atmosphere must be taken and analyzed or water inventory balances, in accordance with Surveillance 4.4.6.2.1, must be performed to provide alternate periodic information.

With a sample obtained and analyzed or water inventory balance performed every 24 hours, the reactor may be operated for up to 30 days to allow restoration of the containment atmosphere radioactivity monitors.

The 24 hour interval provides periodic information that is adequate to detect leakage. A footnote is added allowing that SR 4.4.6.2.1 is not required to be performed until 12 hours after establishing steady state operation (stable pressure, temperature, power level, pressurizer and makeup tank levels, makeup, letdown, and RCP seal injection and return flows). The 12-hour allowance provides sufficient time to collect and process all necessary data after stable plant conditions are established. The 30 day Completion Time recognizes at least one other form of leakage detection is available.

~~Action b is modified by a note that indicates that the provisions of LCO 3.0.4 are not applicable. As a result, a MODE change is allowed when the gaseous and particulate containment atmosphere radioactivity monitor channels are inoperable. This allowance is provided because other instrumentation is available to monitor for RCS leakage.~~

If the requirements of Action b cannot be met, the plant must be brought to a MODE in which the requirement does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE 5 within the following 30 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.

Action c:

With all required monitors inoperable, no automatic means of monitoring leakage are available, and immediate plant shutdown to a MODE in which the requirement does not apply is required. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE 5 within the following 30 hours.

The surveillance requirements provide adequate assurance that concentrations in excess of the limits will be detected in sufficient time to take corrective action.

3/4.4.8 SPECIFIC ACTIVITY

The limitations on the specific activity of the primary coolant ensure that the resulting 2 hour doses at the site boundary will not exceed an appropriately small fraction of Part 100 limits following a steam generator tube rupture accident in conjunction with an assumed steady state primary-to-secondary steam generator leakage rate of 1.0 GPM. The values for the limits on specific activity represent interim limits based upon a parametric evaluation by the NRC of typical site locations. These values are conservative in that specific site parameters of the Sequoyah Nuclear Plant site, such as site boundary location and meteorological conditions, were not considered in this evaluation.

The ACTION statement permitting POWER OPERATION to continue for limited time periods with the primary coolant's specific activity greater than 0.35 microcuries/gram DOSE EQUIVALENT I-131, but within the allowable limit shown on Figure 3.4-1, accommodates possible iodine spiking phenomenon which may occur following changes in THERMAL POWER. Operation with specific activity levels exceeding 0.35 microcuries/gram DOSE EQUIVALENT I-131 but within the limits shown on Figure 3.4-1 should be limited to no more than 800 hours per year since the activity levels allowed by Figure 3.4-1 increase the 2-hour thyroid dose at the site boundary by a factor of up to 20 following a postulated steam generator tube rupture.

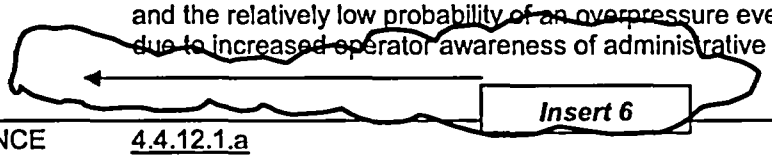
Insert 5

Reducing T_{avg} to less than 500°F prevents the release of activity should a steam generator tube rupture since the saturation pressure of the primary coolant is below the lift pressure of the atmospheric steam relief valves. The surveillance requirements provide adequate assurance that excessive specific activity levels in the primary coolant will be detected in sufficient time to take corrective action. Information obtained on iodine spiking will be used to assess the parameters associated with spiking phenomena. A reduction in frequency of isotopic analyses following power changes may be permissible if justified by the data obtained.

ACTIONS (continued)

The vent must be sized ≥ 3.0 square inches to ensure that the flow capacity is greater than that required for the worst case mass input transient reasonable during the applicable MODES. This action is needed to protect the RCPB from a low temperature overpressure event and a possible brittle failure of the reactor vessel.

The action time considers the time required to place the plant in this condition and the relatively low probability of an overpressure event during this time period due to increased operator awareness of administrative control requirements.



SURVEILLANCE REQUIREMENTS

4.4.12.1.a

Performance of a CHANNEL FUNCTIONAL TEST is required within 12 hours after decreasing RCS cold leg temperature to ≤ LTOP arming temperature specified in the PTLR and every 31 days on each required PORV to verify and, as necessary, adjust its lift setpoint. The CHANNEL FUNCTIONAL TEST will verify the setpoint is within the PTLR allowed maximum limits in the PTLR. PORV actuation could depressurize the RCS and is not required.

The 12 hour frequency considers the unlikelihood of a low temperature overpressure event during this time.

A footnote* has been added indicating that this SR is required to be performed 12 hours after decreasing RCS cold leg temperature to ≤ LTOP arming temperature specified in the PTLR. The CHANNEL FUNCTIONAL TEST cannot be performed until in the LTOP MODES when the PORV lift setpoint can be reduced to the LTOP setting. The test must be performed within 12 hours after entering the LTOP MODES.

4.4.12.1.b

Performance of a CHANNEL CALIBRATION on each required PORV actuation channel is required every 18 months to adjust the whole channel so that it responds and the valve opens within the required range and accuracy to known input.

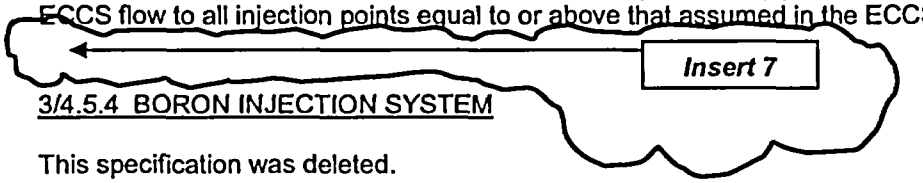
4.4.12.1.c

The PORV block valve must be verified open every 72 hours to provide the flow path for each required PORV to perform its function when actuated. The valve must be remotely verified open in the main control room.

The block valve is a remotely controlled, motor operated valve. The power to the valve operator is not required removed, and the manual operator is not required locked in the inactive position. Thus, the block valve can be closed in the event the PORV develops excessive leakage or does not close (sticks open) after relieving an overpressure situation.

With the RCS temperature below 350°F, one OPERABLE ECCS subsystem is acceptable without single failure consideration on the basis of the stable reactivity condition of the reactor and the limited core cooling requirements.

The Surveillance Requirements provided to ensure OPERABILITY of each component ensures that at a minimum, the assumptions used in the safety analyses are met and that subsystem OPERABILITY is maintained. Surveillance requirements for throttle valve position stops and flow balance testing provide assurance that proper ECCS flows will be maintained in the event of a LOCA. Maintenance of proper flow resistance and pressure drop in the piping system to each injection point is necessary to: (1) prevent total pump flow from exceeding runout conditions when the system is in its minimum resistance configuration, (2) provide the proper flow split between injection points in accordance with the assumptions used in the ECCS-LOCA analyses, and (3) provide an acceptable level of total ECCS flow to all injection points equal to or above that assumed in the ECCS-LOCA analyses.



3/4.5.4 BORON INJECTION SYSTEM

This specification was deleted.

which are designated as Train A, receive A-train air, and provide flow to the same steam generators that are supplied by the B-train motor-driven auxiliary feedwater pump. The remaining two LCVs are designated as Train B, receive B-train air, and provide flow to the same steam generators that are supplied by the A-train motor-driven pump. This design provides the required redundancy to ensure that at least two steam generators receive the necessary flow assuming any single failure. It can be seen from the description provided above that the loss of a single train of air (A or B) will not prevent the auxiliary feedwater system from performing its intended safety function and is no more severe than the loss of a single auxiliary feedwater pump. Therefore, the loss of a single train of auxiliary air only affects the capability of a single motor-driven auxiliary feedwater pump because the turbine-driven pump is still capable of providing flow to two steam generators that are separate from the other motor-driven pump.

Two redundant steam sources are required to be operable to ensure that at least one source is available for the steam-driven auxiliary feedwater (AFW) pump operation following a feedwater or main steam line break. This requirement ensures that the plant remains within its design basis (i.e., AFW to two intact steam generators) given the event of a loss of the No. 1 steam generator because of a main steam line or feedwater line break and a single failure of the B-train motor driven AFW pump. The two redundant sources must be aligned such that No. 1 steam generator source is open and operable and the No. 4 steam generator source is closed and operable.

For instances where one train of emergency raw cooling water (ERCW) is declared inoperable in accordance with technical specifications, the AFW turbine-driven pump is considered operable since it is supplied by both trains of ERCW. Similarly, the AFW turbine-driven pump is considered operable when one train of the AFW loss of power start function is declared inoperable in accordance with Technical Specifications because both 6.9 kilovolt shutdown board logic trains supply this function. This position is consistent with American National Standards Institute/ANS 58.9 requirements (i.e., postulation of the failure of the opposite train is not required while relying on the TS limiting condition for operation).

Insert 8

3/4.7.1.3 CONDENSATE STORAGE TANK

The CST level required is equivalent to a usable volume of at least 240,000 gallons, which is based on holding the unit in MODE 3 for 2 hours, followed by a cooldown to RHR entry conditions within 6 hours.

3/4.8.1 and 3/4.8.2 A.C. SOURCES AND ONSITE POWER DISTRIBUTION SYSTEMS

According to Generic Letter 84-15, 24 hours is reasonable to confirm that the OPERABLE diesel generators are not affected by the same problem as the inoperable diesel generator. Insert 9

The OPERABILITY of the minimum specified A.C. and D.C. power sources and associated distribution systems during shutdown and refueling ensures that 1) the facility can be maintained in the shutdown or refueling condition for extended time periods and 2) sufficient instrumentation and control capability is available for monitoring and maintaining the unit status.

With the minimum required AC power sources not available, it is required to suspend CORE ALTERATIONS and operations involving positive reactivity additions that could result in loss of required SDM (Mode 5) or boron concentration (Mode 6). Suspending positive reactivity additions that could result in failure to meet minimum SDM or boron concentration limit is required to assure continued safe operation. Introduction of coolant inventory must be from sources that have a boron concentration greater than or equal to that required in the RCS for minimum SDM or refueling boron concentration. This may result in an overall reduction in RCS boron concentration but provides acceptable margin to maintaining subcritical operation. Introduction of temperature changes including temperature increases when operating with a positive MTC must also be evaluated to ensure they do not result in a loss of required SDM.

The requirements of Specification 3.8.2.1 provide those actions to be taken for the inoperability of A.C. Distribution Systems. Action a of this specification provides an 8-hour action for the inoperability of one or more A.C. boards. Action b of this specification provides a relaxation of the 8-hour action to 24-hours provided the Vital Instrument Power Board is inoperable solely as a result of one inoperable inverter and the board has been energized within 8 hours. In this condition the requirements of Action a do not have to be applied. Action b is not intended to provide actions for inoperable inverters, which is addressed by the operability requirements for the boards, and is included only for relief from the 8-hour action of Action a when only one inverter is affected. More than one inverter inoperable will result in the inoperability of the associated 120 Volt A.C. Vital Instrument Power Board(s) in accordance with Action a. With more than one inverter inoperable entry into the actions of TS 3.0.3 is not applicable because Action a includes provisions for multiple inoperable inverters as attendant equipment to the boards.

The Surveillance Requirements for demonstrating the OPERABILITY of the diesel generators are in accordance with the recommendations of Regulatory Guides 1.9 "Selection of Diesel Generator Set Capacity for Standby Power Supplies," March 10, 1971, and 1.108 "Periodic Testing of Diesel Generator Units Used as Onsite Electric Power Systems at Nuclear Power Plants," Revision 1, August 1977, and 1.137 "Fuel-Oil Systems for Standby Diesel Generators," Revision 1, October 1979. The Surveillance Requirements for the diesel generator load-run test and the 24-hour endurance and margin test are in accordance with Regulatory Guide 1.9, Revision 3, July 1993, "Selection, Design, Qualification, and Testing of Emergency Diesel Generator Units Used as Class 1E Onsite Electric Power Systems at Nuclear Power Plants." During the diesel generator endurance and margin surveillance test, momentary transients outside the kw and kvar load ranges do not invalidate the test results. Similarly, during the diesel generator load-run test, momentary transients outside the kw load range do not invalidate the test results.

The specifications of this section provide the general requirements applicable to each of the Limiting Conditions for Operation and Surveillance Requirements within Section 3/4.

3.0.1 This specification defines the applicability of each specification in terms of defined OPERATIONAL MODES or other specified conditions and is provided to delineate specifically when each specification is applicable.

3.0.2 This specification defines those conditions necessary to constitute compliance with the terms of an individual Limiting Condition for Operation and associated ACTION requirement.

3.0.3 This specification delineates the measures to be taken for those circumstances not directly provided for in the ACTION statements and whose occurrence would violate the intent of a specification. For example, Specification 3.5.2 requires two independent ECCS subsystems to be OPERABLE and provides explicit ACTION requirements if one ECCS subsystem is inoperable. Under the requirements of Specification 3.0.3, if both of the required ECCS subsystems are inoperable, within one hour measures must be initiated to place the unit in at least HOT STANDBY within the next 6 hours, and in at least HOT SHUTDOWN within the following 6 hours. As a further example, Specification 3.6.2.1 requires two Containment spray subsystems to be OPERABLE and provides explicit ACTION requirements if one spray subsystem is inoperable. Under the requirements of Specification 3.0.3 if both of the required Containment spray subsystems are inoperable, within one hour measures must be initiated to place the unit in at least HOT STANDBY within the next 6 hours, in at least HOT SHUTDOWN within the following 6 hours, and in COLD SHUTDOWN within the subsequent 24 hours.

3.0.4 ~~This specification provides that entry into an OPERATIONAL MODE or other specified applicability condition must be made with (a) the full complement of required systems, equipment or components OPERABLE and (b) all other parameters as specified in the Limiting Conditions for Operation being met without regard for allowable deviations and out of service provisions contained in the ACTION statements.~~

~~The intent of this provision is to insure that facility operation is not initiated with either required equipment or systems inoperable or other specified limits being exceeded.~~

~~Exceptions to this provision have been provided for a limited number of specifications when startup with inoperable equipment would not affect plant safety. These exceptions are stated in the ACTION statements of the appropriate specifications.~~

Insert 3

4.0.3 (Continued)

If a Surveillance is not completed within the allowed delay period, then the equipment is considered inoperable or the variable is considered outside the specification limits and the entry into the ACTION requirements for the applicable Limiting Conditions for Operation begins 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 entry into the ACTION requirements or the applicable Limiting Conditions for Operation begins immediately upon the failure of the Surveillance.

Completion of the Surveillance within the delay period allowed by this Specification, or within the Allowed Outage Time of the ACTIONS, restores compliance with Specification 4.0.1.

Insert 4

4.0.4 ~~This specification establishes the requirement that all applicable surveillances must be met before entry into an OPERATIONAL MODE or other condition of operation specified in the Applicability statement. The purpose of this specification is to ensure that system and component OPERABILITY requirements or parameter limits are met before entry into a MODE or condition for which these systems and components ensure safe operation of the facility. This provision applies to changes in OPERATIONAL MODES or other specified conditions associated with plant shutdown as well as startup.~~

~~Under the provisions of this specification, the applicable Surveillance Requirements must be performed within the specified surveillance interval to ensure that the Limiting Conditions for Operation are met during initial plant startup or following a plant outage.~~

~~When a shutdown is required to comply with ACTION requirements, the provisions of Specification 4.0.4 do not apply because this would delay placing the facility in a lower MODE of operation.~~

4.0.5 This specification ensures that inservice inspection of ASME Code Class 1, 2 and 3 components and inservice testing of ASME Code Class 1, 2 and 3 pumps and valves will be performed in accordance with a periodically updated version of Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by 10 CFR 50.55a.

This specification includes a clarification of the frequencies for performing the inservice inspection and testing activities required by Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda. This clarification is provided to ensure consistency in surveillance intervals throughout these Technical Specifications and to remove any ambiguities relative to the frequencies for performing the required inservice inspection and testing activities.

Under the terms of this specification, the more restrictive requirements of the Technical Specifications take precedence over the ASME Boiler and Pressure Vessel Code and applicable Addenda. For example, the requirements of Specification 4.0.4 to perform surveillance activities prior to entry into an OPERATIONAL MODE or other specified applicability condition takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows pumps to be tested up to one week after return to normal operation. And for example, the Technical Specification definition of OPERABLE does not grant a grace period before a device that is not capable of performing its specified function is declared inoperable and takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows a valve to be incapable of performing its specified function for up to 24 hours before being declared inoperable.

APPLICABILITY

Because of elevated RCS temperature and pressure in MODES 1, 2, 3, and 4, RCS leakage detection instrumentation is required to be OPERABLE.

In MODE 5 or 6, the temperature is to be ≤ 200°F and pressure is maintained low or at atmospheric pressure. Since the temperatures and pressures are far lower than those for MODES 1, 2, 3, and 4, the likelihood of leakage and crack propagation are much smaller. Therefore, the requirements of this LCO are not applicable in MODES 5 and 6.

ACTIONS

Action a:

With both containment pocket sump monitors inoperable, no other form of sampling can provide the equivalent information; however, the containment atmosphere radioactivity monitor will provide indications of changes in leakage. Together with the atmosphere monitor, the periodic surveillance for RCS water inventory balance, Surveillance 4.4.6.2.1, must be performed at an increased frequency of 24 hours to provide information that is adequate to detect leakage. A footnote is added allowing that SR 4.4.6.2.1 is not required to be performed until 12 hours after establishing steady state operation (stable pressure, temperature, power level, pressurizer and makeup tank levels, makeup, letdown, and RCP seal injection and return flows). The 12-hour allowance provides sufficient time to collect and process all necessary data after stable plant conditions are established.

Restoration of the required pocket sump monitor to OPERABLE status within a Completion Time of 30 days is required to regain the function after the monitor's failure. This time is acceptable, considering the frequency and adequacy of the RCS water inventory balance required by Action a.

~~Action a is modified by a note that indicates that the provisions of LCO 3.0.4 are not applicable. As a result, a MODE change is allowed when the containment sump monitor is inoperable. This allowance is provided because other instrumentation is available to monitor RCS leakage.~~

If the requirements of Action a cannot be met, the plant must be brought to a MODE in which the requirement does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE 5 within the following 30 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.

Action b:

With either the gaseous or particulate containment atmosphere radioactivity monitoring instrumentation channels inoperable, alternative action is required. Either grab samples of the containment atmosphere must be taken and analyzed or water inventory balances, in accordance with Surveillance 4.4.6.2.1, must be performed to provide alternate periodic information.

With a sample obtained and analyzed or water inventory balance performed every 24 hours, the reactor may be operated for up to 30 days to allow restoration of the containment atmosphere radioactivity monitors.

The 24 hour interval provides periodic information that is adequate to detect leakage. A footnote is added allowing that SR 4.4.6.2.1 is not required to be performed until 12 hours after establishing steady state operation (stable pressure, temperature, power level, pressurizer and makeup tank levels, makeup, letdown, and RCP seal injection and return flows). The 12-hour allowance provides sufficient time to collect and process all necessary data after stable plant conditions are established. The 30 day Completion Time recognizes at least one other form of leakage detection is available.

~~Action b is modified by a note that indicates that the provisions of LCO 3.0.4 are not applicable. As a result, a MODE change is allowed when the gaseous and particulate containment atmosphere radioactivity monitor channels are inoperable. This allowance is provided because other instrumentation is available to monitor for RCS leakage.~~

If the requirements of Action b cannot be met, the plant must be brought to a MODE in which the requirement does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE 5 within the following 30 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.

Action c:

With all required monitors inoperable, no automatic means of monitoring leakage are available, and immediate plant shutdown to a MODE in which the requirement does not apply is required. To achieve this status, the plant must be brought to at least MODE 3 within 6 hours and to MODE 5 within the following 30 hours.

3/4.4.7 CHEMISTRY

The limitations on Reactor Coolant System chemistry ensure that corrosion of the Reactor Coolant System is minimized and reduces the potential for Reactor Coolant System leakage or failure due to stress corrosion. Maintaining the chemistry within the Steady State Limits provides adequate corrosion protection to ensure the structural integrity of the Reactor Coolant System over the life of the plant. The associated effects of exceeding the oxygen, chloride and fluoride limits are time and temperature dependent. Corrosion studies show that operation may be continued with contaminant concentration levels in excess of the Steady State Limits, up to the Transient Limits, for the specified limited time intervals without having a significant effect on the structural integrity of the Reactor Coolant System. The time interval permitting continued operation within the restrictions of the Transient Limits provides time for taking corrective actions to restore the contaminant concentrations to within the Steady State Limits.

The surveillance requirements provide adequate assurance that concentrations in excess of the limits will be detected in sufficient time to take corrective action.

3/4.4.8 SPECIFIC ACTIVITY

The limitations on the specific activity of the primary coolant ensure that the resulting 2-hour doses at the site boundary will not exceed an appropriately small fraction of Part 100 limits following a steam generator tube rupture accident in conjunction with an assumed steady state primary-to-secondary steam generator leakage rate of 1.0 GPM. The values for the limits on specific activity represent limits based upon a parametric evaluation by the NRC of typical site locations. These values are conservative in that specific site parameters of the Sequoyah site, such as site boundary location and meteorological conditions, were not considered in this evaluation.

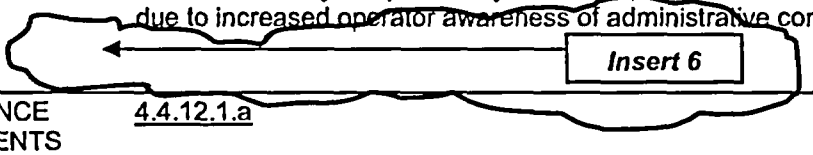
The ACTION statement permitting POWER OPERATION to continue for limited time periods with the primary coolant's specific activity greater than 0.35 microcuries/gram DOSE EQUIVALENT I-131, but within the allowable limit shown on Figure 3.4-1, accommodates possible iodine spiking phenomenon which may occur following changes in THERMAL POWER. Operation with specific activity levels exceeding 0.35 microcuries/gram DOSE EQUIVALENT I-131 but within the limits shown on Figure 3.4-1 should be limited to no more than 800 hours per year since the activity levels allowed by Figure 3.4-1 increase the 2-hour thyroid dose at the site boundary by a factor of up to 20 following a postulated steam generator tube rupture.

Insert 5

ACTIONS (continued)

The vent must be sized ≥ 3.0 square inches to ensure that the flow capacity is greater than that required for the worst case mass input transient reasonable during the applicable MODES. This action is needed to protect the RCPB from a low temperature overpressure event and a possible brittle failure of the reactor vessel.

The action time considers the time required to place the plant in this condition and the relatively low probability of an overpressure event during this time period due to increased operator awareness of administrative control requirements.



SURVEILLANCE REQUIREMENTS

4.4.12.1.a

Performance of a CHANNEL FUNCTIONAL TEST is required within 12 hours after decreasing RCS cold leg temperature to ≤ LTOP arming temperature specified in the PTLR and every 31 days on each required PORV to verify and, as necessary, adjust its lift setpoint. The CHANNEL FUNCTIONAL TEST will verify the setpoint is within the PTLR allowed maximum limits in the PTLR. PORV actuation could depressurize the RCS and is not required.

The 12 hour frequency considers the unlikelihood of a low temperature overpressure event during this time.

A footnote* has been added indicating that this SR is required to be performed 12 hours after decreasing RCS cold leg temperature to ≤ LTOP arming temperature specified in the PTLR. The CHANNEL FUNCTIONAL TEST cannot be performed until in the LTOP MODES when the PORV lift setpoint can be reduced to the LTOP setting. The test must be performed within 12 hours after entering the LTOP MODES.

4.4.12.1.b

Performance of a CHANNEL CALIBRATION on each required PORV actuation channel is required every 18 months to adjust the whole channel so that it responds and the valve opens within the required range and accuracy to known input.

4.4.12.1.c

The PORV block valve must be verified open every 72 hours to provide the flow path for each required PORV to perform its function when actuated. The valve must be remotely verified open in the main control room.

The block valve is a remotely controlled, motor operated valve. The power to the valve operator is not required removed, and the manual operator is not required locked in the inactive position. Thus, the block valve can be closed in the event the PORV develops excessive leakage or does not close (sticks open) after relieving an overpressure situation.

ECCS SUBSYSTEMS (Continued)

The Surveillance Requirements provided to ensure OPERABILITY of each component ensures that at a minimum, the assumptions used in the safety analyses are met and that subsystem OPERABILITY is maintained. Surveillance requirements for throttle valve position stops and flow balance testing provide assurance that proper ECCS flows will be maintained in the event of a LOCA. Maintenance of proper flow resistance and pressure drop in the piping system to each injection point is necessary to: (1) prevent total pump flow from exceeding runout conditions when the system is in its minimum resistance configuration, (2) provide the proper flow split between injection points in accordance with the assumptions used in the ECCS-LOCA analyses, and (3) provide an acceptable level of total ECCS flow to all injection points equal to or above that assumed in the ECCS-LOCA analyses.

Insert 7

3/4.5.4 BORON INJECTION SYSTEM

This Specification was deleted.

3/4.5.5 REFUELING WATER STORAGE TANK

The OPERABILITY of the refueling water storage tank (RWST) as part of the ECCS ensures that a sufficient supply of borated water is available for injection by the ECCS in the event of a LOCA. The limits on RWST minimum volume and boron concentration ensure that 1) sufficient water is available within containment to permit recirculation cooling flow to the core, and 2) the reactor will remain subcritical in the cold condition following mixing of the RWST and the RCS water volumes with all control rods inserted except for the most reactive control assembly. These assumptions are consistent with the LOCA analyses. Additionally, the OPERABILITY of the RWST, as part of the ECCS, ensures that sufficent negative reactivity is injected into the core to counteract any positive increase in reactivity caused by RCS cooldown.

The contained water volume limit includes an allowance for water not usable because of tank discharge line location or other physical characteristics.

The limits on contained water volume and boron concentration of the RWST also ensure a pH value of between 7.5 and 9.5 for the solution recirculated within containment after a LOCA. This pH band minimizes the evolution of iodine and minimizes the effect of chloride and caustic stress corrosion on mechanical systems and components.

train air, and provide flow to the same steam generators that are supplied by the A-train motor-driven pump. This design provides the required redundancy to ensure that at least two steam generators receive the necessary flow assuming any single failure. It can be seen from the description provided above that the loss of a single train of air (A or B) will not prevent the auxiliary feedwater system from performing its intended safety function and is no more severe than the loss of a single auxiliary feedwater pump. Therefore, the loss of a single train of auxiliary air only affects the capability of a single motor-driven auxiliary feedwater pump because the turbine-driven pump is still capable of providing flow to two steam generators that are separate from the other motor-driven pump.

Two redundant steam sources are required to be operable to ensure that at least one source is available for the steam-driven auxiliary feedwater (AFW) pump operation following a feedwater or main steam line break. This requirement ensures that the plant remains within its design basis (i.e., AFW to two intact steam generators) given the event of a loss of the No. 1 steam generator because of a main steam line or feedwater line break and a single failure of the B-train motor driven AFW pump. The two redundant sources must be aligned such that No. 1 steam generator source is open and operable and the No. 4 steam generator source is closed and operable.

For instances where one train of emergency raw cooling water (ERCW) is declared inoperable in accordance with technical specifications, the AFW turbine-driven pump is considered operable since it is supplied by both trains of ERCW. Similarly, the AFW turbine-driven pump is considered operable when one train of the AFW loss of power start function is declared inoperable in accordance with technical specifications because both 6.9 kilovolt shutdown board logic trains supply this function. Similarly, the AFW turbine-driven pump is considered operable when one train of the AFW loss of power start function is declared inoperable in accordance with Technical Specifications because both 6.9 kilovolt shutdown board logic trains supply this function. This position is consistent with American National Standards Institute/ANS 58.9 requirements (i.e., postulation of the failure of the opposite train is not required while relying on the TS limiting condition for operation).

Insert 8

~~3/4.7.1.3 CONDENSATE STORAGE TANK~~

The CST level required is equivalent to a usable volume of at least 240,000 gallons, which is based on holding the unit in MODE 3 for 2 hours, followed by a cooldown to RHR entry conditions within 6 hours.

3/4.8.1 AND 3/4.8.2 A.C. SOURCES AND ONSITE POWER DISTRIBUTION SYSTEMS

According to Generic Letter 84-15, 24 hours is reasonable to confirm that the OPERABLE diesel generators are not affected by the same problem as the inoperable diesel generator.

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The OPERABILITY of the minimum specified A.C. and D.C. power sources and associated distribution systems during shutdown and refueling ensures that 1) the facility can be maintained in the shutdown or refueling condition for extended time periods and 2) sufficient instrumentation and control capability is available for monitoring and maintaining the unit status.

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ENCLOSURE 4

TENNESSEE VALLEY AUTHORITY (TVA)
SEQUOYAH NUCLEAR PLANT (SQN)
UNITS 1 AND 2

List of Regulatory Commitments

The following table identifies those actions committed to by TVA in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments. Please direct questions regarding these commitments to Paul Pace.

REGULATORY COMMITMENTS	DUE DATE/EVENT
TVA will establish the Technical Specification Bases for Limiting Condition for Operation 3.0.4 and Surveillance Requirement 4.0.4 as adopted with the license amendment.	To be implemented with the Technical Specification amendment