CP&L
A Progress Energy Company

James Scarola
Vice President
Harris Nuclear Plant

FEB 1 5 2001

United States Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555

SERIAL: HNP-01-035
10CFR50.90

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
TECHNICAL SPECIFICATIONS 3/4.3.2, 3/4.3.3.1, 3/4.6.1.1, 3/4.6.1.7, 3/4.6.3, 3/4.9.4, 3/4.9.9

Dear Sir or Madam:

In accordance with the Code of Federal Regulations, Title 10, Part 50.90, Carolina Power & Light Company (CP&L) requests a revision to the Technical Specifications (TS) for the Harris Nuclear Plant (HNP). The proposed amendment revises Technical Specifications (TS) 3/4.3.2 "Engineered Safety Features Actuation System Instrumentation", 3/4.3.3.1 "Radiation Monitoring Instrumentation", 3/4.6.1.1 "Containment Integrity", 3/4.6.1.7 "Containment Ventilation System", 3/4.6.3 "Containment Isolation Valves", 3/4.9.4 "Containment Building Penetrations", and 3/4.9.9 "Containment Ventilation Isolation System", and associated Bases. Specifically, HNP proposes to revise the applicable TS to clarify and relocate requirements by implementing the guidance of NUREG-1431, Revision 1, TSTF-30, TSTF-45, TSTF-46, and TSTF-269.

Enclosure 1 provides a description of the proposed changes and the basis for the changes. Enclosure 2 details, in accordance with 10 CFR 50.91(a), the basis for CP&L's determination that the proposed changes do not involve a significant hazards consideration. Enclosure 3 provides an environmental evaluation which demonstrates that the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental assessment is required for approval of this amendment request. Enclosure 4 provides page change instructions for incorporating the proposed revisions. Enclosure 5 provides the proposed Technical Specification pages.

In accordance with 10 CFR 50.91(b), CP&L is providing the State of North Carolina with a copy of the proposed license amendment.

CP&L requests that the proposed amendment be issued such that implementation will occur within 120 days of issuance to allow time for procedure revision and orderly incorporation into copies of the Technical Specifications.

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A001

Please refer any questions regarding this submittal to Mr. E. A. McCartney at (919) 362-2661.

Sincerely,

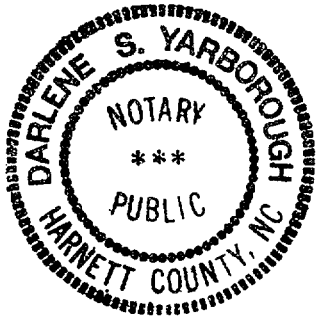
James Scarola

James Scarola

MSE/mse

Enclosures:
1. Basis for Change Request
2. 10 CFR 50.92 Evaluation
3. Environmental Considerations
4. Page Change Instructions
5. Technical Specification Pages

James Scarola, having been first duly sworn, did depose and say that the information contained herein is true and correct to the best of his information, knowledge and belief, and the sources of his information are employees, contractors, and agents of Carolina Power & Light Company.



Darlene S. Yarborough

Notary (Seal)
My commission expires: 2-21-2005

c: Mr. J. B. Brady, NRC Sr. Resident Inspector
Mr. Mel Fry, Director, N.C. DEHNR
Mr. R. J. Laufer, NRC Project Manager
Mr. L. A. Reyes, NRC Regional Administrator

ENCLOSURE 1 TO SERIAL: HNP-00-035

SHEARON HARRIS NUCLEAR POWER PLANT
NRC DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
TECHNICAL SPECIFICATIONS 3/4.3.2, 3/4.3.3.1, 3/4.6.1, 3/4.6.1.7, 3/4.6.3, 3/4.9.4, 3/4.9.9

BASIS FOR CHANGE REQUEST

Background

The Harris Nuclear Plant (HNP) Technical Specifications (TS) currently have requirements for containment isolation valves (CIVs) in five different specifications. Additionally, actuation requirements are divided into two separate specifications. This dispersion of requirements for CIVs has caused some confusion for staff personnel in performing required actions. Therefore, HNP is proposing to consolidate these requirements to be consistent with NUREG-1431, Revision 1 dated April 1998, and to implement improvements to standard TS as documented in TSTF-30, TSTF-45, TSTF-46, and TSTF-269.

Proposed Change

1. Relocate applicable requirements for actuation circuitry from Technical Specification (TS) 3/4.3.2 "Engineered Safety Features Actuation System Instrumentation" to TS 3/4.3.3.1 "Radiation Monitoring Instrumentation". Revise the relocated requirements to be consistent with NUREG-1431, Revision 1. Relocate requirements for TS 3/4.9.9 "Containment Ventilation Isolation System" to TS 3/4.3.3.1 "Radiation Monitoring Instrumentation". Revise the relocated requirements to be consistent with NUREG-1431, Revision 1.
2. Relocate applicable requirements for containment isolation valves from TS 3/4.6.1.1 "Containment Integrity" to TS 3/4.6.3 "Containment Isolation Valves".
3. Revise TS 3/4.6.3 "Containment Isolation Valves" to be consistent with NUREG-1431, Revision 1.
4. Relocate requirements from TS 3/4.6.1.7 "Containment Ventilation System" to TS 3/4.6.3 "Containment Isolation Valves".
5. Revise TS 3/4.6.3 "Containment Isolation Valves" and associated Bases to implement improvements to standard TS as documented in TSTF-30, TSTF-45, TSTF-46, and TSTF-269.
6. Revise applicable portions of TS 3/4.9.4 "Containment Building Penetrations" to be consistent with NUREG-1431, Revision 1.

Basis for the Proposed Change

1. Relocate applicable requirements for actuation circuitry from Technical Specification (TS) 3/4.3.2 "Engineered Safety Features Actuation System Instrumentation" (ESFAS) to TS 3/4.3.3.1 "Radiation Monitoring Instrumentation". Revise the relocated requirements to be consistent with NUREG-1431, Revision 1. Relocate requirements for TS 3/4.9.9 "Containment Ventilation Isolation System" to TS 3/4.3.3.1 "Radiation Monitoring Instrumentation". Revise the relocated requirements to be consistent with NUREG-1431, Revision 1.

Most of the items associated in Functional Unit 3.c. reference other requirements in Table 3.3-3, Table 3.3-6, or Table 4.3-3 and as such do not identify different actions other than otherwise specified. Therefore, HNP proposes to delete these applicable references. HNP is also proposing to relocate the Containment Ventilation Isolation Automatic Actuation Logic and Actuation Relays requirements to TS 3/4.3.3.1 "Radiation Monitoring Instrumentation". Similar requirements are currently located in TS 3/4.3.2 and TS 3/4.9.9. This relocation will consolidate containment ventilation instrumentation requirements into one TS instead of three TS, as currently provided in HNP TS. The relocated requirements will be revised to be consistent with NUREG-1431, Revision 1, to clarify required actions.

2. Relocate applicable requirements for containment isolation valves from TS 3/4.6.1.1 "Containment Integrity" to TS 3/4.6.3 "Containment Isolation Valves".

Current HNP TS 3/4.6.3 "Containment Isolation Valves" Action b. requires isolation of an affected penetration by use of at least one deactivated automatic valve secured in the isolation position if a containment isolation valve is inoperable. Surveillance Requirement (SR) 4.6.1.1.a. requires that a deactivated valve, manual valve, or blind flange be verified shut every 31 days in Modes 1-4. HNP proposes to relocate SR 4.6.1.1.a. to 3/4.6.3 "Containment Isolation Valves" to consolidate applicable requirements for CIVs to the appropriate TS that regulates CIV requirements. This change is consistent with NUREG-1431, Revision 1.

3. Revise 3/4.6.3 "Containment Isolation Valves" and applicable associated Bases to be consistent with NUREG-1431, Revision 1.

Current HNP TS references plant procedure PLP-106. NRC Generic Letter 91-08 states that it is inappropriate to reference plant procedures in TS. HNP proposes to revise TS 3/4.6.3 to be consistent with NUREG-1431, Revision 1.

Four notes modify the proposed Actions, for TS 3/4.6.3. The first Note allows penetration flow paths, except for 42 inch purge valve penetration flow paths, to be unisolated intermittently under administrative controls. These administrative controls would consist of stationing a dedicated operator at the valve controls, who is in continuous communication with the control room. In this way the penetration can be rapidly isolated when the need for containment isolation is indicated. The penetration flow paths, for the 42 inch purge valves, may not be opened under these administrative controls due to the size of the line and the fact that these penetrations connect containment atmosphere with the outside environment. A single purge valve in a penetration flow path may be open to effect repairs to an inoperable valve as allowed by the proposed SR 4.6.3.1.

The second proposed note provides clarification that, for this LCO, a separate Action entry is allowed for each penetration flow path. Per NUREG-1431, Revision 1, this is acceptable since the required actions for each condition provide appropriate compensatory actions for each containment isolation valve.

The proposed third note ensures appropriate remedial actions are taken, if necessary, if the affected systems are rendered inoperable by an inoperable containment isolation valve.

In the event the isolation valve leakage results in exceeding the overall containment leakage rate, Note 4 directs entry into LCO 3.6.1.

The proposed Actions are revised to reflect guidance from NUREG-1431, Revision 1. Action a.

is modified by a note that states it is applicable to penetration flow paths with two containment isolations valves (one inside and one outside). Action a. provides four hours to isolate the affected penetration. This Action is consistent with the current HNP TS.

Action b. is a new Action that provides a one-hour allowed out of service time when two containment isolation valves are inoperable in the same penetration flow path. Per NUREG-1431, Revision 1, this allowed out of service time is permissible based on being consistent with TS 3.6.1 "Containment Integrity".

Action c. is a new Action that provides an allowed out of service time for an inoperable containment isolation valve in a closed system. The allowed out of service time is different from Action b. due to the relative stability of the closed system. HNP proposes to further modify this Action in accordance with TSTF-30 as described below.

4. Relocate requirements from TS 3/4.6.1.7 "Containment Ventilation System" to TS 3/4.6.3 "Containment Isolation Valves".

HNP proposes to relocate requirements for TS 3/4.6.1.7. Containment Purge valves are considered CIVs. The proposed relocated requirements are modified in accordance with NUREG-1431, Revision 1. The 184-day frequency for the proposed SR 4.6.3.6 is based on resolution of Generic Issue B-20, "Containment Leakage due to Seal Deterioration". An additional requirement to test within 92 days of opening a purge valve with resilient seals is provided recognizing that cycling the valve introduces additional seal degradation.

5. Revise TS 3/4.6.3 "Containment Isolation Valves" and associated Bases to implement improvements to standard TS as documented in TSTF-30, TSTF-45, TSTF-46, and TSTF-269.

HNP proposes to implement the guidance of TSTF-30 for TS 3/4.6.3. This TSTF extends the allowed out of service time for a closed system flow path with an inoperable isolation valve to 72 hours. General Design Criteria (GDC) 57 allows the use of a closed system in combination with a containment isolation valve to provide two containment barriers against the release of radioactive material following an accident. Current HNP TS do not allow the use of a closed system to isolate a failed containment isolation valve even though the closed system is subject to a Type A containment leakage test, is missile protected, and has seismic category I piping. A closed system also typically has flow through it during normal operation such that a loss of integrity could be continually observed through a leakage detection system within containment and system walkdowns for closed systems outside containment. As such, a closed system is no different than isolating a failed CIV by the use of a single valve as described in current HNP TS. Therefore, HNP proposes to extend the allowed out of service time for an inoperable CIV in a closed system to 72 hours in accordance with TSTF-30.

HNP proposes to implement TSTF-45. This TSTF revises, in part, SR 4.6.3.3 to specify that only CIVs that are not locked, sealed, or otherwise secured are required to be verified closed. This change is consistent with other valves in TS required to be in their correct position prior to an accident such as Emergency Core Cooling Systems (SR 4.5.2.b.2), Auxiliary Feedwater (SR 4.7.1.2.1.b.1.), and Emergency Service Water (SR 4.7.4.a.).

HNP proposes to implement TSTF-46. This TSTF revises SR 4.6.3.5 to delete reference to verifying the isolation time of "each power operated" containment isolation valve and only requires verification of each "automatic isolation valve". The purpose of this SR is to ensure that the applicable valve will isolate in a time period less than that assumed in the accident analysis.

The power operated CIVs that do not receive an automatic closure signal do not have an isolation time since they require operator action. Therefore, deleting reference to power operated isolation valve testing reduces potential for misinterpreting the requirements of this SR while maintaining assumptions in the accident analysis.

HNP proposes to implement TSTF-269. This TSTF revises required actions to verify penetrations isolated once per 31 days due to inoperable CIVs to allow this verification to be performed using administrative means. The justification provided by TSTF-269 is that it is sufficient to assume that the initial establishment of component status was performed correctly. Subsequent verification is intended to ensure the component has not been inadvertently repositioned. The periodic re-verification should only be a verification of the administrative control that ensures that the component remains in the required state. It would be inappropriate to remove the lock, seal, or other means of securing the component solely to perform an active verification of the required state.

6. Revise applicable portions of TS 3/4.9.4 "Containment Building Penetrations" to be consistent with NUREG-1431, Revision 1.

This change provides for consistency between SRs associated with TS 3/4.9.4 and TS 3/4.6.3. Specifically, proposed TS 4.9.4.1 and TS 4.9.4.2 are simplified and made consistent with proposed TS 4.6.3.7 using NUREG-1431, Revision 1. The 18-month frequency for proposed TS 4.6.3.7 is acceptable based on consistency with other similar ESFAS instrumentation and valve testing requirements.

Conclusion

HNP is requesting this change to clarify existing requirements, consolidate and relocate requirements, and provide for consistency between specifications. The proposed changes have been previously reviewed and approved by the NRC in NUREG-1431, Revision 1 and changes to ITS in TSTF-30, TSTF-45, TSTF-46, and TSTF-269.

ENCLOSURE 2 TO SERIAL: HNP-01-035

SHEARON HARRIS NUCLEAR POWER PLANT
NRC DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
TECHNICAL SPECIFICATIONS 3/4.3.2, 3/4.3.3.1, 3/4.6.1.1, 3/4.6.1.7, 3/4.6.3, 3/4.9.4, 3/4.9.9

10 CFR 50.92 EVALUATION

The Commission has provided standards in 10 CFR 50.92(c) for determining whether a significant hazards consideration exists. A proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety. Carolina Power & Light Company has reviewed this proposed license amendment request and determined that its adoption would not involve a significant hazards determination. The bases for this determination are as follows:

Proposed Change

1. Relocate applicable requirements for actuation circuitry from Technical Specification (TS) 3/4.3.2 "Engineered Safety Features Actuation System Instrumentation" to TS 3/4.3.3.1 "Radiation Monitoring Instrumentation". Revise the relocated requirements to be consistent with NUREG-1431, Revision 1.
2. Relocate applicable requirements for containment isolation valves from TS 3/4.6.1.1 "Containment Integrity" to TS 3/4.6.3 "Containment Isolation Valves".
3. Revise 3/4.6.3 "Containment Isolation Valves" to be consistent with NUREG-1431, Revision 1.
4. Relocate requirements from TS 3/4.6.1.7 "Containment Ventilation System" to TS 3/4.6.3 "Containment Isolation Valves".
5. Revise 3/4.6.3 "Containment Isolation Valves" and associated Bases to implement improvements to standard TS as documented in TSTF-30, TSTF-45, TSTF-46, and TSTF-269.
6. Revise 3/4.9.4 "Containment Building Penetrations" to be consistent with NUREG-1431, Revision 1.
7. Relocate requirements for TS 3/4.9.9 "Containment Ventilation Isolation System" to TS 3/4.3.3.1 "Radiation Monitoring Instrumentation". Revise the relocated requirements to be consistent with NUREG-1431, Revision

Basis

This change does not involve a significant hazards consideration for the following reasons:

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

   The proposed changes modify required Actions and Surveillance Requirements previously reviewed and approved by the NRC in improved Technical Specifications

(ITS) and changes to ITS as described in TSTF-30, TSTF-45, TSTF-46, and TSTF-269. These changes are administrative in nature in that they do not modify the design or operation of Structures, Systems, and Components (SSCs) that initiate or mitigate the consequences of an accident.

Therefore, the proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

   The proposed changes do not involve new plant components or procedures, but only revise existing Technical Specification Actions and Surveillance Requirements. These changes do not modify the design or operation of Structures, Systems, and Components (SSCs) that could initiate an accident.

   Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

   The proposed changes modify required Actions and Surveillance Requirements previously reviewed and approved by the NRC in improved Technical Specifications (ITS) and changes to ITS as described in TSTF-30, TSTF-45, TSTF-46, and TSTF-269.

   Therefore, the proposed change does not involve a significant reduction in the margin of safety.

ENCLOSURE 3 TO SERIAL: HNP-01-035

SHEARON HARRIS NUCLEAR POWER PLANT
NRC DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
TECHNICAL SPECIFICATIONS 3/4.3.2, 3/4.3.3.1, 3/4.6.1.1, 3/4.6.1.7, 3/4.6.3, 3/4.9.4, 3/4.9.9

ENVIRONMENTAL CONSIDERATIONS

10 CFR 51.22(c)(9) provides criterion for and identification of licensing and regulatory actions eligible for categorical exclusion from performing an environmental assessment. A proposed amendment to an operating license for a facility requires no environmental assessment if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant hazards consideration; (2) result in a significant change in the types or significant increase in the amounts of any effluents that may be released offsite; (3) result in a significant increase in individual or cumulative occupational radiation exposure. Carolina Power & Light Company has reviewed this request and determined that the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with the issuance of the amendment. The basis for this determination follows:

Proposed Change

1. Relocate applicable requirements for actuation circuitry from Technical Specification (TS) 3/4.3.2 "Engineered Safety Features Actuation System Instrumentation" to TS 3/4.3.3.1 "Radiation Monitoring Instrumentation". Revise the relocated requirements to be consistent with NUREG-1431, Revision 1.
2. Relocate applicable requirements for containment isolation valves from TS 3/4.6.1.1 "Containment Integrity" to TS 3/4.6.3 "Containment Isolation Valves".
3. Revise 3/4.6.3 "Containment Isolation Valves" to be consistent with NUREG-1431, Revision 1.
4. Relocate requirements from TS 3/4.6.1.7 "Containment Ventilation System" to TS 3/4.6.3 "Containment Isolation Valves".
5. Revise 3/4.6.3 "Containment Isolation Valves" and associated Bases to implement improvements to standard TS as documented in TSTF-30, TSTF-45, TSTF-46, and TSTF-269.
6. Revise 3/4.9.4 "Containment Building Penetrations" to be consistent with NUREG-1431, Revision 1.
7. Relocate requirements for TS 3/4.9.9 "Containment Ventilation Isolation System" to TS 3/4.3.3.1 "Radiation Monitoring Instrumentation". Revise the relocated requirements to be consistent with NUREG-1431, Revision

Basis

The change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) for the following reasons:

1. As demonstrated in Enclosure 2, the proposed amendment does not involve a significant hazards consideration.
2. The proposed amendment does not result in a significant change in the types or increase in the amounts of any effluents that may be released offsite.

The change does not introduce any new effluents or significantly increase the quantities of existing effluents. As such, the change cannot significantly affect the types or amounts of any effluents that may be released offsite.

3. The proposed amendment does not result in a significant increase in individual or cumulative occupational radiation exposure.

   The proposed change does not result in any physical plant changes or new surveillances which would require additional personnel entry into radiation controlled areas. Therefore, the amendment has no significant affect on either individual or cumulative occupational radiation exposure.

ENCLOSURE 4 TO SERIAL: HNP-01-035

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PAGE CHANGE INSTRUCTIONS

Removed Page	Inserted Page
3/4 3-20	3/4 3-20
3/4 3-21	Deleted
3/4 3-26	3/4 3-26
3/4 3-27	3/4 3-27
3/4 3-29	3/4 3-29
3/4 3-30	Deleted
3/4 3-43	3/4 3-43
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3/4 3-45	Deleted
3/4 3-49	3/4 3-49
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3/4 3-52	3/4 3-52
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3/4 3-54	3/4 3-54
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3/4 6-9	Deleted
3/4 6-10	Deleted
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3/4 6-15	3/4 6-15
NA	3/4 6-15a
3/4 9-5	3/4 9-5
3/4 9-11	3/4 9-11
B3/4 6-2	B3/4 6-2
B3/4 6-3	B3/4 6-3
B3/4 6-4	B3/4 6-4
B3/4 9-2	B3/4 9-2

ENCLOSURE 5 TO SERIAL: HNP-01-035

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TECHNICAL SPECIFICATIONS 3/4.3.2, 3/4.3.3.1, 3/4.6.1.1, 3/4.6.1.7, 3/4.6.3, 3/4.9.4, 3/4.9.9

TECHNICAL SPECIFICATION PAGES

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
3. Containment Isolation (Continued)					
2) Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3, 4	14
3) Containment Pressure--High-3	See Item 2.c. above for Containment Pressure High-3 initiating functions and requirements.				
c. Containment Ventilation Isolation					
1) Manual Containment Spray Initiation	See Item 2.a. above for Manual Containment Spray initiating functions and requirements.				
2) Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3, 4, 6**	17, 25
3) Safety Injection	See Item 1. above for all Safety Injection initiating functions and requirements.				
4) Containment Radioactivity					
a. Area Monitors (both preentry and normal purges)	4	See Table 3.3-6, Item 1a, for initiating functions and requirements.			
b. Airborne Gaseous Radioactivity					

Delete

Add

Amendment No.

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
3. Containment Isolation (Continued)					
(1) RCS Leak Detection (normal purge)	1	See Table 3.3-6, Item 1b1, for initiating functions and requirements.			
(2) Preentry Purge Detector	1	See Table 3.3-6, Item 1b2, for initiating functions and requirements.			
c. Airborne Particulate Radioactivity					
(1) RCS Leak Detection (normal purge)	1	See Table 3.3-6, Item 1C1, for initiating functions and requirements.			
(2) Preentry Purge Detector	1	See Table 3.3-6, Item 1C2, for initiating functions and requirements.			
5) Manual Phase "A" Isolation	See Item 3.a.1) above for Manual Phase "A" Isolation initiating functions and requirements.				
4. Main Steam Line Isolation					
a. Manual Initiation					
1) Individual MSIV Closure	1/steam line	1/steam line	1/operating steam line	1, 2, 3, 4	23
2) System	2	1	2	1, 2, 3	22

TABLE 3.3-3 (Continued)

TABLE NOTATIONS

*The provisions of Specification 3.0.4 are not applicable.

#Trip function may be blocked in this MODE below the P-11 (Pressurizer Pressure Interlock) Setpoint.

**During CORE ALTERATIONS or movement of irradiated fuel in containment, refer to Specification 3.9.9.

***Trip function automatically blocked above P-11 and may be blocked below P-11 when Safety Injection on low steam line pressure is not blocked.

ACTION STATEMENTS

ACTION 14 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or be in at least HOT STANDBY within the next 6 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, provided the other channel is OPERABLE.

ACTION 15 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed until performance of the next required CHANNEL OPERATIONAL TEST provided the inoperable channel is placed in the tripped condition within 1 hour.

ACTION 15a - 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 tripped condition within 1 hour. With less than the minimum channels OPERABLE, operation may proceed provided the minimum number of channels is restored within one hour, otherwise declare the affected diesel generator inoperable. When performing surveillance testing of either primary or secondary undervoltage relays, the redundant emergency bus and associated primary and secondary relays shall be OPERABLE.

ACTION 16 - 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.

ACTION 17 - {Deleted} Add With less than the Minimum Channels OPERABLE requirement, operation may continue provided the Containment Purge Makeup and Exhaust Isolation valves are maintained closed while in MODES 1, 2, 3 and 4 (refer to Specification 3.6.1.7). For MODE 6, refer to Specification 3.9.4.

ACTION 18 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, 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.

TABLE 3.3-3 (Continued)

ACTION STATEMENTS (Continued)

Delete

ACTION 19 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed provided the following conditions are satisfied:

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

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 4.3.2.1.

ACTION 20 - With less than the Minimum Number of Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock is in its required state for the existing plant condition, or apply Specification 3.0.3.

Delete

ACTION 21 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.

ACTION 22 - 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 6 hours and in at least HOT SHUTDOWN within the following 6 hours.

ACTION 23 - With the number of OPERABLE channels less than the Total Number of Channels, declare the associated equipment inoperable and take the appropriate ACTION required in accordance with the specific equipment specification.

Delete

ACTION 24 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or be in at least HOT STANDBY within the next 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.

Deleted - Add

ACTION 25 - During CORE ALTERATIONS or movement of irradiated fuel within containment, comply with the ACTION statement of Specification 3.9.9.

Delete

Delete

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA)	Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
3. Containment Isolation					
a. Phase "A" Isolation					
1) Manual Initiation	N.A.	N.A.	N.A.	N.A.	N.A.
2) Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	N.A.
3) Safety Injection	See Item 1. above for all Safety Injection Trip Setpoints and Allowable Values.				
b. Phase "B" Isolation					
1) Manual Containment Spray Initiation	N.A.	N.A.	N.A.	N.A.	N.A.
2) Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	N.A.
3) Containment Pressure--High-3	See Item 2.c. above for Containment Pressure High-3 Trip Setpoints and Allowable Values.				
c. Containment Ventilation Isolation					
1) Manual Containment Spray Initiation	N.A.	N.A.	N.A.	N.A.	N.A.
2) Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	N.A.

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Amendment No.

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA)	Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
3. Containment Isolation (Continued)					
3) Safety Injection	See Item 1. above for all Safety Injection Trip Setpoints and Allowable Values.				
4) Containment Radioactivity					
a) Area Monitors (both preentry and normal purges)	See Table 3.3-6, Item 1a, for trip setpoint.				
b) Airborne Gaseous Radioactivity					
(1) RCS Leak Detection (normal purge)	See Table 3.3-6, Item 1b1, for trip setpoint.				
(2) Preentry Purge Detector	See Table 3.3-6, Item 1b2, for trip setpoint.				
c) Airborne Particulate Radioactivity					
(1) RCS Leak Detection (normal purge)	See Table 3.3-6, Item 1C1, for trip setpoint.				
(2) Preentry Purge Detector	See Table 3.3-6, Item 1C2, for trip setpoint.				
5) Manual Phase "A" Isolation	N.A.	N.A.	N.A.	N.A.	N.A.

Delete

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

CHANNEL FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
3. Containment Isolation (Continued)								
3) Containment Pressure--High-3	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
c. Containment Ventilation Isolation								
1) Manual Containment Spray Initiation	See Item 2.a. above for Manual Containment Spray Surveillance Requirements.							
2) Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1, 2)	M(1, 2)	Q(2)	1, 2, 3, 4, 6#
3) Safety Injection	See Item 1. above for all Safety Injection Surveillance Requirements.							
4) Containment Radioactivity								
a) Area Monitors (both preentry and normal purges)	See Table 4.3-3, Item 1a, for surveillance requirements.							
b) Airborne Gaseous Radioactivity								
(1) RCS Leak Detection (normal purge)	See Table 4.3-3, Item 1b1, for surveillance requirements.							

Delete

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

CHANNEL FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
3. Containment Isolation (Continued)								
(2) Preentry Purge Detector	See Table 4.3-3, Item 1b2, for surveillance requirements.							
c) Airborne Particulate Radioactivity								
(1) RCS Leak Detection (normal purge)	See Table 4.3-3, Item 1C1, for surveillance requirements.							
(2) Preentry Purge Detector	See Table 4.3-3, Item 1C2, for surveillance requirements.							
5) Manual Phase A Isolation	See Item 3.a.1) above for Manual Phase A Isolation Surveillance Requirements.							
4. Main Steam Line Isolation								
a. Manual Initiation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3, 4
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A	N.A	N.A.	M(1)(4)	M(1)	Q	1, 2, 3, 4
c. Containment Pressure--High-2	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3

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TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

CHANNEL FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
4. Main Steam Line Isolation (Continued)								
d. Steam Line Pressure--Low	See Item 1.e. above for Steam Line Pressure--Low Surveillance Requirements.							
e. Negative Steam Line Pressure Rate--High	S	R	Q	N.A.	N.A.	N.A.	N.A.	3**, 4**
5. Turbine Trip and Feedwater Isolation								
a. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2
b. Steam Generator Water Level--High-High (P-14)	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2
c. Safety Injection	See Item 1. above for Safety Injection Surveillance Requirements.							
6. Auxiliary Feedwater								
a. Manual Initiation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3
b. Automatic Actuation and Actuation Relays	N.A.	N.A	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3
c. Steam Generator Water Level--Low-Low	S	R	Q	N.A.	N.A.	N.A	N.A	1, 2, 3
d. Safety Injection Start Motor-Driven Pumps	See Item 1. above for all Safety Injection Surveillance Requirements.							
e. Loss-of-Offsite Power Start Motor-Driven Pumps and Turbine-Driven Pump	See Item 9. below for all Loss-of-Offsite Power Surveillance Requirements.							

TABLE 4.3-2 (Continued)

TABLE NOTATION

(1) Each train shall be tested at least every 62 days on a STAGGERED TEST BASIS

(2) DELETED

Add

Delete

The Surveillance Requirements of Specification 4.9.9 apply during CORE ALTERATIONS or movement of irradiated fuel in containment.

(3) Except for relays K601, K602, K603, K608, K610, K615, K616, K617, K622, K636, K739, K740 and K741 which shall be tested at least once per 18 months and during each COLD SHUTDOWN exceeding 72 hours unless they have been tested within the previous 92 days.

Delete

(4) The Steam Line Isolation-Safety Injection (Block-Reset) switches enable the Negative Steam Line Pressure Rate--High signal (item 4.e) when used below the P-11 setpoint. Verify proper operation of these switches each time they are used.

* Setpoint verification not required.

Delete

\# During CORE ALTERATIONS or movement of irradiated fuel in containment.

** Trip Function automatically blocked above P-11 and may be blocked below P-11 when safety injection or low steamline pressure is not blocked.

Delete

INSTRUMENTATION

3/4.3.3 MONITORING INSTRUMENTATION

RADIATION MONITORING FOR PLANT OPERATIONS

LIMITING CONDITION FOR OPERATION

3.3.3.1 The radiation monitoring instrumentation channels for plant operations 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 for plant operations exceeding the value shown in Table 3.3-6, adjust the Setpoint to within the limit within 4 hours or declare the channel inoperable or Actuation Logic or Actuation Relays inoperable for Containment Ventilation Isolation Signal Area monitors. Add

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

c. The provisions of Specification 3.0.3 are not applicable. Delete (1)

SURVEILLANCE REQUIREMENTS

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

Surveillance Requirements specified Add

Delete

TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS

INSTRUMENT	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	ACTION
1. Containment Radioactivity--					
a. Containment Ventilation Isolation Signal Area Monitors	2	3	1, 2, 3, 4, 6 (Delete 6); ## (Add ##)	#	25, 27, 30 (Add 25)
b. Airborne Gaseous Radioactivity					
1) RCS Leakage Detection	1	1	1, 2, 3, 4	$\leq 1.0 \times 10^{-3}$ μCi/ml	25, 26, 27
2) Pre-entry Purge	1	1	##	$\leq 2.0 \times 10^{-3}$ μCi/ml	30
c. Airborne Particulate Radioactivity					(Add 25)
1) RCS Leakage Detection	1	1	1, 2, 3, 4	$\leq 4.0 \times 10^{-8}$ μCi/ml	25, 26, 27
2) Pre-entry Purge	1	1	##	$\leq 1.5 \times 10^{-8}$ μCi/ml	30
2. Spent Fuel Pool Area-- Fuel Handling Building Emergency Exhaust Actuation					
a. Fuel Handling Building Operating Floor--South Network	1/train***	1/train 2 trains	**	$\leq$ 100 mR/hr	28
b. Fuel Handling Building Operating Floor--North Network	1/train***	1/train 2 trains	*	$\leq$ 100 mR/hr	28
3. Control Room Outside Air Intakes--					
a. Normal Outside Air Intake Isolation	1	2	1,2,3,4,5,6 and during movement of irradiated fuel asemblies and movement of loads over spent fuel pools.	$\leq 4.9 \times 10^{-6}$ μCi/ml	29

Delete

TABLE 3.3-6 (Continued)

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS

INSTRUMENT	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	ACTION
3. Control Room Outside Air Intakes-- (Continued)					
b. Emergency Outside Air Intake Isolation--South Intake	1	2	1,2,3,4,5,6 and during movement of irradiated fuel assemblies and movmement of loads over spent fuel pools.	$\leq 4.9 \times 10^{-6}$ μCi/ml	29
c. Emergency Outside Air Intake Isolation--North Intake	1	2	1,2,3,4,5,6 and during movement of irradiated fuel assemblies and movement of loads over spent fuel pools.	$\leq 4.9 \times 10^{-6}$ μCi/ml	29
4. Actuation Logic and Actuation Relays for Containment Ventilation Isolation Signal Area Monitors	1	2	1, 2, 3, 4 ##	NA	25 30

Delete

Add

Delete

TABLE 3.3-6 (Continued)

TABLE NOTATIONS

* With irradiated fuel in the Northend Spent Fuel Pool or transfer of irradiated fuel from or to a spent fuel shipping cask.

** With irradiated fuel in the Southend Spent Fuel Pool or New Fuel Pool.

*** Each channel consists of 3 detectors with 1 of 3 logic. A channel is OPERABLE when 1 or more of the detectors are OPERABLE.

\# For MODES 1, 2, 3 and 4, the setpoint shall be less than or equal to three times detector background at RATED THERMAL POWER. During fuel movement the setpoint shall be less than or equal to 150 mR/hr.

Required OPERABLE whenever pre-entry purge system is to be used. Delete

Add: During CORE ALTERATIONS and during movement of irradiated fuel assemblies within containment.

Insert A

Action 25 →

ACTION STATEMENTS

ACTION 26 - Must satisfy the ACTION requirement for Specification 3.4.6.1.

ACTION 27 - With less than the Minimum Channels OPERABLE requirement, operation may continue provided the containment purge makeup and exhaust isolation valves are maintained closed. Delete

Insert B

ACTION 28 - With less than the Minimum Channels OPERABLE requirement, declare the associated train of Fuel Handling Building Emergency Exhaust inoperable and perform the requirements of Specification 3.9.12. Delete

ACTION 29 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, within 1 hour initiate isolation of the respective air intake. With no outside air intakes available, maintain operation of the Control Room Emergency Filtration System in the Recirculation Mode of Operation.

ACTION 30 - With less than the Minimum Channels OPERABLE requirement, pre-entry purge operations shall be suspended and the containment pre-entry purge makeup and exhaust valves shall be maintained closed; Delete

or enter the applicable conditions and required actions of LCO 3.9.4 "Containment Building Penetrations" for Containment Purge and Exhaust Isolation valves made inoperable by isolation instrumentation. Add

Delete

Insert A

With less than the minimum channels OPERABLE for more than one function under item 1. Containment Radioactivity (1.a. and 1.b. or 1.a. and 1.c. or 1.b. and 1.c.) or less than the minimum channels OPERABLE for Actuation Logic and Actuation Relays for Containment Ventilation Isolation Signal Area Monitors, then enter the applicable conditions and required actions of Technical Specification 3.6.3 for Containment Purge and Exhaust Isolation Valves made inoperable by inoperable isolation instrumentation.

Insert B

With less than the minimum channels OPERABLE, restore the minimum number of channels to OPERABLE status within four hours. Otherwise, enter the applicable conditions and required actions of Technical Specification LCO 3.6.3, "Containment Isolation Valves", for Containment Purge and Exhaust Isolation Valves made inoperable by inoperable instrumentation.

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	Actuation Logic Test	CHANNEL CALIBRATION	Master Relay Test	DIGITAL CHANNEL OPERATIONAL TEST	Slave Relay Test	MODES FOR WHICH SURVEILLANCE IS REQUIRED
1. Containment Radioactivity--							
a. Containment Ventilation Isolation Signal Area Monitors	S	NA	R	NA	Q	NA	1, 2, 3, 4, 6 (Delete) # (Add)
b. Airborne Gaseous Radioactivity							
1) RCS Leakage Detection	S	NA	R	NA	Q	NA	1, 2, 3, 4
2) Pre-entry Purge	S	NA	R	NA	Q## (Delete)	NA	#
c. Airborne Particulate Radioactivity							
1) RCS Leakage Detection	S	NA	R	NA	Q	NA	1, 2, 3, 4
2) Pre-entry Purge	S	NA	R	NA	Q##	NA	#
2. Spent Fuel Pool Area-- Fuel Handling Building Emergency Exhaust Actuation							
a. Fuel Handling Building Operating Floor--South Network	S	NA	R	NA	Q	NA	**
b. Fuel Handling Building Operating Floor--North Network	S	NA	R	NA	Q	NA	*

(Add — Actuation Logic Test; Add — Master Relay Test; Add — Slave Relay Test)

(Delete)

TABLE 4.3-3 (Continued)

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	Actuation Logic Test	CHANNEL CALIBRATION	Master Relay Test	DIGITAL CHANNEL OPERATIONAL TEST	Slave Relay Test	MODES FOR WHICH SURVEILLANCE IS REQUIRED
3. Control Room Outside Air Intakes							
a. Normal Outside Air Intake Isolation	S	NA	R	NA	Q	NA	1,2,3,4,5,6 and during movement of irradiated fuel assemblies and movement of loads over spent fuel pools.
b. Emergency Outside Air Intake Isolation--South Intake	S	NA	R	NA	Q	NA	1,2,3,4,5,6 and during movement of irradiated fuel assemblies and movement of loads over spent fuel pools.
c. Emergency Outside Air Intake Isolation--North Intake	S	NA	R	NA	Q	NA	1,2,3,4,5,6 and during movement of irrradiated fuel assemblies and movement of loads overs spent fuel pools.
4. Actuation Logic and Actuation Relays for Containment Ventilation Isolation Signal Area Monitors	NA	M***	NA	M***	NA	Q	1,2,3,4,#

TABLE NOTATIONS

* With irradiated fuel in the Northend Spent Fuel Pool or transfer of irradiated fuel from or to a spent fuel shipping cask.

** With irradiated fuel in the Southend Spent Fuel Pool or New Fuel Pool.

\# Whenever pre-entry purge system is to be used. During CORE ALTERATIONS or movement of irradiated fuel assemblies within Containment.

Prior to operation of pre-entry purge unless performed within the last 92 days.

*** Performed on a STAGGERED TEST BASIS.

3/4.6 CONTAINMENT SYSTEMS

3/4.6.1 PRIMARY CONTAINMENT

CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.1 Primary CONTAINMENT INTEGRITY shall be maintained.

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

ACTION:

Without primary CONTAINMENT INTEGRITY, restore CONTAINMENT INTEGRITY within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.1 Primary CONTAINMENT INTEGRITY shall be demonstrated:

Delete

a. At least once per 31 days by verifying that all penetrations*# not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in their closed positions, except as provided in Table 3.6-1 of Specification 3.6.3;

Delete

b. (a.) By verifying that each containment air lock is in compliance with the requirements of Specification 3.6.1.3; and

Add

Delete

c. (b.) After each closing of each penetration subject to Type B testing, except the containment air locks, if opened following a Type A or B test, by leak rate testing the seal with gas at a pressure not less than P_a, and verifying that when the measured leakage rate for these seals is added to the leakage rates determined pursuant to Specification 4.6.1.2a. for all other Type B and C penetrations, the combined leakage rate is less than 0.60 L_a.

Delete

Delete

* Except valves, blind flanges, and deactivated automatic valves which are located inside the containment and are locked, sealed or otherwise secured in the closed position. These penetrations shall be verified closed during each COLD SHUTDOWN except that such verification need not be performed more often than once per 92 days.

\# Valves CP-B3, CP-B7, and CM-B5 may be verified at least once per 31 days by manual remote keylock switch position.

Delete

CONTAINMENT VESSEL STRUCTURAL INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.6 The structural integrity of the containment vessel shall be maintained at a level consistent with the acceptance criteria in Specification 4.6.1.6.1.

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

ACTION:

With the structural integrity of the containment vessel not conforming to the above requirements, restore the structural integrity to within the limits within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.6.1 Containment Vessel Surfaces. The structural integrity of the exposed accessible interior and exterior surfaces of the containment vessel, including the liner plate, shall be determined, during the shutdown for each Type A containment leakage rate test (reference Specification 4.6.1.2), by a visual inspection of these surfaces. This inspection shall be performed prior to the Type A containment leakage rate test to verify no apparent changes in appearance or other abnormal degradation. Additional inspections shall be conducted during two other refueling outages before the next Type A test if the interval for the Type A test has been extended to 10 years.

Delete

4.6.1.6.2 Reports. Any abnormal degradation of the containment vessel structure detected during the above required inspections shall be reported to the Commission in a Special Report pursuant to Specification 6.9.2 within 15 days. This report shall include a description of the condition of the concrete, the inspection procedure, the tolerances on cracking, and the corrective actions taken.

Add

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LIMITING CONDITION FOR OPERATION

3.6.1.7 Each containment purge makeup and exhaust isolation valve shall be OPERABLE and:

a. Each 42-inch containment preentry purge makeup and exhaust isolation valve shall be closed and sealed closed, and

b. The 8-inch containment purge makeup and exhaust isolation valve(s) may be open for safety-related reasons only.

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

ACTION:

a. With a 42-inch containment preentry purge makeup and/or exhaust isolation valve open or not sealed closed, close and/or seal close that valve or isolate the penetration(s) within 4 hours, otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With the 8-inch containment purge makeup and/or exhaust isolation valve(s) inoperable for any reason other than leakage integrity, close the open 8-inch valve(s) or isolate the penetration(s) within 4 hours, otherwise be in at least HOT STANDBY within the next 6 hours, and in COLD SHUTDOWN within the following 30 hours.

c. With a containment purge makeup and/or exhaust isolation valve(s) having a measured leakage rate in excess of the limits of Specification 4.6.1.7.2, restore the inoperable valve(s) to OPERABLE status within 24 hours, otherwise be in at least HOT STANDBY within the next 6 hours, and in COLD SHUTDOWN within the following 30 hours.

Delete

SURVEILLANCE REQUIREMENTS

4.6.1.7.1 Each 42-inch containment preentry purge makeup and exhaust isolation valve shall be verified to be sealed closed and closed at least once per 31 days.

4.6.1.7.2 At least once per 3 months on a STAGGERED TEST BASIS, the inboard and outboard valves in each makeup and exhaust penetration (2-42 inch valves and 2-8 inch valves) shall be demonstrated OPERABLE by verifying that the measured penetration leakage rate is less than 0.06 L_a when pressurized to P_a.

3/4.6.3 CONTAINMENT ISOLATION VALVES

Insert C

Delete

LIMITING CONDITION FOR OPERATION

3.6.3 Each containment isolation valve specified in the Technical Specification Equipment List Program, plant procedure PLP-106, shall be OPERABLE with isolation times less than or equal to required isolation times.

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

ACTION:

With one or more of the containment isolation valve(s) inoperable, maintain at least one isolation valve OPERABLE in each affected penetration that is open and:

a. Restore the inoperable valve(s) to OPERABLE status within 4 hours, or

b. Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the isolation position, or

c. Isolate each affected penetration within 4 hours by use of at least one closed manual valve or blind flange, or

d. Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.3.1 Each isolation valve shall be demonstrated OPERABLE prior to returning the valve to service after maintenance, repair or replacement work is performed on the valve or its associated actuator, control or power circuit by performance of a cycling test, and verification of isolation time.

Delete

Insert C

Page 1 of 2

LIMITING CONDITION FOR OPERATION

3.6.3 Each containment isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1,2,3, and 4

ACTION:

----------Notes----------

1. Penetration flow path(s) (except for 42 inch purge valve flow paths) may be unisolated intermittently under administrative controls.
2. Separate ACTION is allowed for each penetration flow path.
3. Perform applicable ACTIONS for systems made inoperable by containment isolation valves.
4. Enter LCO 3.6.1 for "CONTAINMENT INTEGRITY" when isolation valve leakage results in exceeding the overall containment leakage rate acceptance criteria, Specification 3.6.1.2.a.

---

a. With one or more penetration flow paths with one containment isolation valve inoperable (except for purge valve leakage not within limits)*:
   1. Isolate the affected penetration flow path within four hours by use of at least one closed and de-activated automatic valve, closed manual valve, blind flange, or check valve with flow secured through the valve.
   2. Verify the affected flow path is isolated.
      a. At least once per 31 days for isolation devices outside containment. Isolation devices that are in high radiation areas or locked, sealed, or otherwise secured may be verified by administrative means.
      b. Prior to entering MODE 4 from MODE 5 (if not performed within the previous 92 days) for isolation devices inside containment. Isolation devices that are in high radiation areas or locked, sealed, or otherwise secured may be verified by administrative means.

b. With one or more penetration flow paths with two containment isolation valves inoperable (except for purge valve leakage not within limits)*, then within 1 hour isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange.

---

*Only applicable to penetration flow paths with two containment isolation valves (one inside and one outside).

c. With one or more penetration flow paths with one containment isolation valve inoperable**:
   1. Within 72 hours, isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange.
   2. Verify the affected penetration flow path is isolated once per 31 days.

d. With one or more penetration flow paths with one or more containment purge valves not within purge valve leakage limits:
   1. Within 24 hours, isolate the affected penetration flow path by use of at least one close and de-activated automatic valve, closed manual valve, or blind flange.
   2. Verify the affected penetration flow path is isolated:
      a. At least once per 31 days for isolation devices outside containment. Isolation devices that are in high radiation areas or locked, sealed, or otherwise secured may be verified by administrative means.
      b. Prior to entering MODE 4 from MODE 5 (if not performed within the previous 92 days) for isolation devices inside containment. Isolation devices that are in high radiation areas or locked, sealed, or otherwise secured may be verified by administrative means.

e. With ACTIONS a, b, c, and d required actions not met, be in MODE 3 in six hours and MODE 5 in the following 30 hours.

** Only applicable to penetration flow paths with only one containment isolation valve and a closed system.

Insert D

Delete

SURVEILLANCE REQUIREMENTS (Continued)

4.6.3.2 Each isolation valve shall be demonstrated OPERABLE at least once per 18 months by:

a. Verifying that on a Phase "A" Isolation test signal, each Phase "A" isolation valve actuates to its isolation position;

b. Verifying that on a Phase "B" Isolation test signal, each Phase "B" isolation valve actuates to its isolation position; and

c. Verifying that on a Containment Ventilation Isolation test signal, each normal, preentry purge makeup and exhaust, and containment vacuum relief valve actuates to its isolation position, and

d. Verifying that, on a Safety Injection "S" test signal, each containment isolation valve receiving an "S" signal actuates to its isolation position, and

e. Verifying that, on a Main Steam Isolation test signal, each main steam isolation valve actuates to its isolation position, and

f. Verifying that, on a Main Feedwater Isolation test signal, each feedwater isolation valve actuates to its isolation position.

4.6.3.3 The isolation time of each power-operated or automatic valve shall be determined to be within its limit specified in the Technical Specification Equipment List Program, plant procedure PLP-106, when tested pursuant to Specification 4.0.5.

Delete

Insert D

SURVEILLANCE REQUIREMENTS

4.6.3.1 At least once per 31 days, verify each 42 inch purge valve is sealed closed, except for one purge valve in a penetration flow path while in ACTION d. of this LCO. Valves CP-B3, CP-B7, and CM-B5 may be verified at least once per 31 days by manual remote keylock switch position.

4.6.3.2 At least once per 31 days, verify each 8 inch purge valve is closed except when the 8 inch purge valves are open for pressure control, ALARA, or air quality considerations for personnel entry, or for Surveillances that require the valves to be open.

4.6.3.3 At least once per 31 days, verify each containment isolation manual valve and blind flange that is located outside containment and not locked, sealed, or otherwise secure and required to be closed during accident conditions is closed, except for containment isolation valves that are open for administrative controls. Isolation devices that are in high radiation areas may be verified by administrative means.

4.6.3.4 Prior to entering MODE 4 from MODE 5, if not performed within the previous 92 days, verify each containment isolation valve and blind flange that is located inside containment and not locked, sealed, or otherwise secure and required to be closed during accident conditions is closed, except for containment isolation valves that are open for administrative controls. Isolation devices that are in high radiation areas may be verified by administrative means.

4.6.3.5 Verify the isolation time of each automatic power operated containment isolation valve is within limits in accordance with the Inservice Testing Program.

4.6.3.6 At least once per 184 days and within 92 days after opening the valve, perform leakage rate testing of containment purge valves (42 inch and 8 inch).

4.6.3.7 At least once per 18 months, verify each automatic containment isolation valve that is not locked, sealed, or otherwise secured in position, actuates to the isolation position on an actual or simulated actuation signal.

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

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

a. The equipment door closed and held in place by a minimum of four bolts,

b. A minimum of one door in each airlock is capable of being closed*, and

c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:

1. Be capable of being* closed by a manual or automatic isolation valve, blind flange or equivalent, or

2. Be capable of being closed by OPERABLE automatic normal containment purge and containment pre-entry purge makeup and exhaust isolation valves.

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within the containment.

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving CORE ALTERATIONS or movement of irradiated fuel in the containment building.

SURVEILLANCE REQUIREMENTS

4.9.4.1 At least once per seven days verify each required containment penetration is in the required status.

4.9.4 Each of the above required containment building penetrations shall be determined to be either in its closed/isolated condition, capable of being closed/isolated*, or capable of being closed by OPERABLE automatic normal containment purge and containment pre-entry purge makeup and exhaust isolation valves at least once per 7 days during CORE ALTERATIONS or movement of irradiated fuel in the containment building by:

a. Verifying the penetrations are either closed/isolated or capable of being closed/isolated*, or

4.9.4.2 At least once per 18 months test

b. Testing the normal containment purge and containment pre-entry purge makeup and exhaust isolation valves per the applicable portions of Specification 4.6.3 (2) (7)

* Penetrations may be opened under administrative controls except for containment purge and exhaust penetrations. This allowance is permitted for refueling outage 9 and cycle 10 only. Operation under these administrative controls has not been approved for refueling outage 10.

3/4.9.9 CONTAINMENT VENTILATION ISOLATION SYSTEM

Delete

LIMITING CONDITION FOR OPERATION

3.9.9 The Containment Ventilation Isolation System shall be OPERABLE.

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within the containment.

ACTION:

a. With the Containment Ventilation Isolation System inoperable, close each of the containment purge makeup and exhaust penetrations providing direct access from the containment atmosphere to the outside atmosphere.

b. The provisions of Specification 3.0.3 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 CORE ALTERATIONS by verifying that containment ventilation isolation occurs on a two-out-of-four High Radiation test signal from the containment area radiation monitors (Table 3.3-6, item 1.a) and by verifying that isolation occurs for each valve using its control switch in the main control room.

Page 3/4 9-11 has been deleted.

Add

Add

3/4.6.1.5 AIR TEMPERATURE

The limitations on containment average air temperature ensure that the overall containment average air temperature does not exceed the initial temperature condition assumed in the safety analysis for a LOCA or steam line break accident. Measurements shall be made at all listed locations, whether by fixed or portable instruments, prior to determining the average air temperature.

3/4.6.1.6 CONTAINMENT STRUCTURAL INTEGRITY

This limitation ensures that the structural integrity of the containment will be maintained comparable to the original design standards for the life of the facility. Structural integrity is required to ensure that the containment will withstand the maximum pressure of a postulated main steam line break accident (41.2 psig). A visual inspection in conjunction with the Containment Leakage Rate Testing Program is sufficient to demonstrate this capability.

Delete

3/4.6.1.7 CONTAINMENT VENTILATION SYSTEM

Delete

Delete

The 42-inch containment preentry purge makeup and exhaust isolation valves are required to be sealed closed during plant operations in MODES 1, 2, 3 and 4 since these valves have not been demonstrated capable of closing during a LOCA or steam line break accident. Maintaining these valves sealed closed during these MODES ensures that excessive quantities of radioactive materials will not be released via the Pre-entry Containment Purge System. To provide assurance that these containment valves cannot be inadvertently opened, the valves are sealed closed in accordance with Standard Review Plan 6.2.4 which includes mechanical devices to seal or lock the valve closed, or prevents power from being supplied to the valve operator.

The use of the Normal Containment Purge System is restricted to the 8-inch purge makeup and exhaust isolation valves since, unlike the 42-inch valves, the 8-inch valves are capable of closing during a LOCA or steam line break accident. Therefore, the SITE BOUNDARY dose guideline of 10 CFR Part 100 would not be exceeded in the event of an accident during normal containment PURGING operation. The total time the Normal Containment Purge System isolation valves may be open during MODES 1, 2, 3, and 4 in a calendar year is a function of anticipated need and operating experience. Only safety-related reasons; e.g., containment pressure control or the reduction of airborne radioactivity to facilitate personnel access for surveillance and maintenance activities, may be used to justify the opening of these isolation valves during MODES 1, 2, 3, and 4.

Leakage integrity tests with a maximum allowable leakage rate for containment purge makeup and exhaust supply valves will provide early indication of resilient material seal degradation and will allow opportunity for repair before

Delete

CONTAINMENT VENTILATION SYSTEM (Continued) Delete

gross leakage failures could develop. The 0.60 L_a leakage limit of Specification 3.6.1.2b. shall not be exceeded when the leakage rates determined by the leakage integrity tests of these valves are added to the previously determined total for all valves and penetrations subject to Type B and C tests. Delete

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

3/4.6.2.1 CONTAINMENT SPRAY SYSTEM

The OPERABILITY of the Containment Spray System ensures that containment depressurization and cooling capability will be available in the event of a LOCA or steam line break. The pressure reduction and resultant lower containment leakage rate are consistent with the assumptions used in the safety analyses.

The Containment Spray System and the Containment Fan Coolers are redundant to each other in providing post-accident cooling of the containment atmosphere. However, the Containment Spray System also provides a mechanism for removing iodine from the containment atmosphere and therefore the time requirements for restoring an inoperable spray system to OPERABLE status have been maintained consistent with that assigned other inoperable ESF equipment.

3/4.6.2.2 SPRAY ADDITIVE SYSTEM

The OPERABILITY of the Spray Additive System ensures that sufficient NaOH is added to the containment spray in the event of a LOCA. The limits on NaOH volume and concentration ensure a pH value of between 8.5 and 11.0 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. The contained solution volume limit includes an allowance for solution not usable because of tank discharge line location or other physical characteristics. These assumptions are consistent with the iodine removal efficiency assumed in the safety analyses.

The maximum and minimum volumes for the Spray Additive Tank are based on the analytical limits. The specified indicated levels used for surveillance include instrument uncertainties and unusable tank volume.

3/4.6.2.3 CONTAINMENT COOLING SYSTEM

The OPERABILITY of the Containment Fan Coolers ensures that adequate heat removal capacity is available when operated in conjunction with the Containment Spray Systems during post-LOCA conditions.

ESW flowrate to the Containment Fan Coolers will vary based on reservoir level. Acceptable ESW flowrate is dependent on the number of heat exchanger tubes in service. Surveillance test acceptance criteria should be adjusted for these factors.

Delete

BASES

Add

CONTAINMENT COOLING SYSTEM (Continued)

The Containment Fan Coolers and the Containment Spray System are redundant to each other in providing post-accident cooling of the containment atmosphere.

As a result of this redundancy in cooling capability, the allowable out-of-service time requirements for the Containment Fan Coolers have been appropriately adjusted. However, the allowable out-of-service time requirements for the Containment Spray System have been maintained consistent with that assigned other inoperable ESF equipment since the Containment Spray System also provides a mechanism for removing iodine from the containment atmosphere.

3/4.6.3 CONTAINMENT ISOLATION VALVES

The OPERABILITY of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment and is consistent with the requirements of General Design Criteria 54 through 57 of Appendix A to 10 CFR Part 50. Containment isolation within the time limits specified for those isolation valves designed to close automatically ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a LOCA.

Insert E

3/4.6.4 COMBUSTIBLE GAS CONTROL

The OPERABILITY of the equipment and systems required for the detection and control of hydrogen gas ensures that this equipment will be available to maintain the hydrogen concentration within containment below its flammable limit during post-LOCA conditions. Either recombiner unit is capable of controlling the expected hydrogen generation associated with: (1) zirconium-water reactions, (2) radiolytic decomposition of water, and (3) corrosion of metals within containment. This hydrogen control system is consistent with the recommendations of Regulatory Guide 1.7, "Control of Combustible Gas Concentrations in Containment Following a LOCA," Rev. 2, November 1978.

3/4.6.5 VACUUM RELIEF SYSTEM

The OPERABILITY of the primary containment to atmosphere vacuum relief valves ensures that the containment internal pressure does not become more negative than -1.93 psig. This condition is necessary to prevent exceeding the containment design limit for internal vacuum of -2 psig.

Delete

Insert E

The ACTIONS are modified by a Note allowing penetration flow paths, except for 42-inch purge valves, to be unisolated intermittently under administrative controls. These administrative controls consist of stationing a dedicated operator at the valve controls, who is in continuous communications with the control room. In this way, the penetration can be rapidly isolated when a need for containment isolation is indicated.

ACTION c. is modified by a note indicating that this ACTION is only applicable to those penetration flow paths with only one containment isolation valve and a closed system. This closed system must meet the requirements of Standard Review Plan Section 6.2.4.

Delete

3/4.9.6 REFUELING MACHINE - DELETED

3/4.9.7 CRANE TRAVEL - FUEL HANDLING BUILDING - DELETED

3/4.9.8 RESIDUAL HEAT REMOVAL AND COOLANT CIRCULATION

The requirement that at least one residual heat removal (RHR) loop be in operation ensures that: (1) sufficient cooling capacity is available to remove decay heat and maintain the water in the reactor vessel below 140°F as required during the REFUELING MODE, and (2) sufficient coolant circulation is maintained through the core to minimize the effect of a boron dilution incident and prevent boron stratification.

The requirement to have two RHR loops OPERABLE when there is less than 23 feet of water above the reactor vessel flange ensures that a single failure of the operating RHR loop will not result in a complete loss of residual heat removal capability. With the reactor vessel head removed and at least 23 feet of water above the reactor pressure vessel flange, a large heat sink is available for core cooling. Thus, in the event of a failure of the operating RHR loop, adequate time is provided to initiate emergency procedures to cool the core.

The minimum RHR flow requirement is reduced to 900 gpm when the reactor water level is below the reactor vessel flange. The 900 gpm limit reduces the possibility of cavitation during operation of the RHR pumps and ensures sufficient mixing in the event of a MODE 6 boron dilution incident.

3/4.9.9 CONTAINMENT VENTILATION ISOLATION SYSTEM — DELETED — Add

Delete

The OPERABILITY of this system ensures that the containment purge makeup and exhaust penetrations will be automatically isolated upon detection of high radiation levels within the containment. The OPERABILITY of this system is required to restrict the release of radioactive material from the containment atmosphere to the environment.

Delete

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
3. Containment Isolation (Continued)					
2) Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3, 4	14
3) Containment Pressure--High-3	See Item 2.c. above for Containment Pressure High-3 initiating functions and requirements.				
4. Main Steam Line Isolation					
a. Manual Initiation					
1) Individual MSIV Closure	1/steam line	1/steam line	1/operating steam line	1, 2, 3, 4	23
2) System	2	1	2	1, 2, 3	22

PAGE 3/4 3-21 HAS BEEN DELETED

TABLE 3.3-3 (Continued)

TABLE NOTATIONS

*The provisions of Specification 3.0.4 are not applicable.

#Trip function may be blocked in this MODE below the P-11 (Pressurizer Pressure Interlock) Setpoint.

***Trip function automatically blocked above P-11 and may be blocked below P-11 when Safety Injection on low steam line pressure is not blocked.

ACTION STATEMENTS

ACTION 14 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or be in at least HOT STANDBY within the next 6 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, provided the other channel is OPERABLE.

ACTION 15 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed until performance of the next required CHANNEL OPERATIONAL TEST provided the inoperable channel is placed in the tripped condition within 1 hour.

ACTION 15a - 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 tripped condition within 1 hour. With less than the minimum channels OPERABLE, operation may proceed provided the minimum number of channels is restored within one hour, otherwise declare the affected diesel generator inoperable. When performing surveillance testing of either primary or secondary undervoltage relays, the redundant emergency bus and associated primary and secondary relays shall be OPERABLE.

ACTION 16 - 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.

ACTION 17 - DELETED

ACTION 18 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, 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.

TABLE 3.3-3 (Continued)

ACTION STATEMENTS (Continued)

ACTION 19 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed provided the following conditions are satisfied:

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

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 4.3.2.1.

ACTION 20 - With less than the Minimum Number of Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock is in its required state for the existing plant condition, or apply Specification 3.0.3.

ACTION 21 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.

ACTION 22 - 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 6 hours and in at least HOT SHUTDOWN within the following 6 hours.

ACTION 23 - With the number of OPERABLE channels less than the Total Number of Channels, declare the associated equipment inoperable and take the appropriate ACTION required in accordance with the specific equipment specification.

ACTION 24 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or be in at least HOT STANDBY within the next 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.

ACTION 25 - DELETED

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA)	Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
3. Containment Isolation					
a. Phase "A" Isolation					
1) Manual Initiation	N.A.	N.A.	N.A.	N.A.	N.A.
2) Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	N.A.
3) Safety Injection	See Item 1. above for all Safety Injection Trip Setpoints and Allowable Values.				
b. Phase "B" Isolation					
1) Manual Containment Spray Initiation	N.A.	N.A.	N.A.	N.A.	N.A.
2) Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	N.A.
3) Containment Pressure--High-3	See Item 2.c. above for Containment Pressure High-3 Trip Setpoints and Allowable Values.				

PAGE 3/4 3-30 HAS BEEN DELETED

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

CHANNEL FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
3. Containment Isolation (Continued)								
3) Containment Pressure-- High-3	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
4. Main Steam Line Isolation								
a. Manual Initiation	N.A.	N.A.	N.A	R	N.A	N.A	N.A	1, 2, 3, 4
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)(4)	M(1)	Q	1, 2, 3, 4
c. Containment Pressure-- High-2	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
d. Steam Line Pressure--Low	See Item 1.e. above for Steam Line Pressure--Low Surveillance Requirements.							
e. Negative Steam Line Pressure Rate--High	S	R	Q	N.A.	N.A.	N.A.	N.A.	3**, 4**

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

CHANNEL FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
5. Turbine Trip and Feedwater Isolation								
a. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2
b. Steam Generator Water Level--High-High (P-14)	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2
c. Safety Injection	See Item 1. above for Safety Injection Surveillance Requirements.							
6. Auxiliary Feedwater								
a. Manual Initiation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3
b. Automatic Actuation and Actuation Relays	N.A.	N.A	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3
c. Steam Generator Water Level--Low-Low	S	R	Q	N.A.	N.A.	N.A	N.A	1, 2, 3
d. Safety Injection Start Motor-Driven Pumps	See Item 1. above for all Safety Injection Surveillance Requirements.							
e. Loss-of-Offsite Power Start Motor-Driven Pumps and Turbine-Driven Pump	See Item 9. below for all Loss-of-Offsite Power Surveillance Requirements.							

PAGE 3/4 3-45 HAS BEEN DELETED.

TABLE 4.3-2 (Continued)

TABLE NOTATION

(1) Each train shall be tested at least every 62 days on a STAGGERED TEST BASIS.

(2) DELETED

(3) Except for relays K601, K602, K603, K608, K610, K615, K616, K617, K622, K636, K739, K740 and K741 which shall be tested at least once per 18 months and during each COLD SHUTDOWN exceeding 72 hours unless they have been tested within the previous 92 days.

(4) The Steam Line Isolation-Safety Injection (Block-Reset) switches enable the Negative Steam Line Pressure Rate--High signal (item 4.e) when used below the P-11 setpoint. Verify proper operation of these switches each time they are used.

* Setpoint verification not required.

** Trip Function automatically blocked above P-11 and may be blocked below P-11 when safety injection or low steamline pressure is not blocked.

3/4.3.3 MONITORING INSTRUMENTATION

RADIATION MONITORING FOR PLANT OPERATIONS

LIMITING CONDITION FOR OPERATION

3.3.3.1 The radiation monitoring instrumentation channels for plant operations 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 for plant operations 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 for plant operations inoperable or Actuation Logic or Actuation Relays inoperable for Containment Ventilation Isolation Signal Area Monitors, take the ACTION shown in Table 3.3-6.

c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.1 Each radiation monitoring instrumentation channel for plant operations shall be demonstrated OPERABLE by the performance of the Surveillance Requirements specified in Table 4.3-3.

TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS

INSTRUMENT	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	ACTION
1. Containment Radioactivity--					
a. Containment Ventilation Isolation Signal Area Monitors	2	3	1, 2, 3, 4 ##	#	25, 27 30
b. Airborne Gaseous Radioactivity					
1) RCS Leakage Detection	1	1	1, 2, 3, 4	$\leq 1.0 \times 10^{-3}$ μCi/ml	25,26,27
2) Pre-entry Purge	1	1	##	$\leq 2.0 \times 10^{-3}$ μCi/ml	30
c. Airborne Particulate Radioactivity					
1) RCS Leakage Detection	1	1	1, 2, 3, 4	$\leq 4.0 \times 10^{-8}$ μCi/ml	25,26,27
2) Pre-entry Purge	1	1	##	$\leq 1.5 \times 10^{-8}$ μCi/ml	30
2. Spent Fuel Pool Area-- Fuel Handling Building Emergency Exhaust Actuation					
a. Fuel Handling Building Operating Floor--South Network	1/train***	1/train 2 trains	**	$\leq$ 100 mR/hr	28
b. Fuel Handling Building Operating Floor--North Network	1/train***	1/train 2 trains	*	$\leq$ 100 mR/hr	28
3. Control Room Outside Air Intakes--					
a. Normal Outside Air Intake Isolation	1	2	1,2,3,4,5,6 and during movement of irradiated fuel assemblies and movement of loads over spent fuel pools.	$\leq 4.9 \times 10^{-6}$ μCi/ml	29

TABLE 3.3-6 (Continued)

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS

INSTRUMENT	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	ACTION
3. Control Room Outside Air Intakes-- (Continued)					
b. Emergency Outside Air Intake Isolation--South Intake	1	2	1,2,3,4,5,6 and during movement of irradiated fuel assemblies and movement of loads over spent fuel pools.	$\leq 4.9 \times 10^{-6}$ μCi/ml	29
c. Emergency Outside Air Intake Isolation--North Intake	1	2	1,2,3,4,5,6 and during movement of irradiated fuel assemblies and movement of loads over spent fuel pools.	4.9×10^{-6} μCi/ml	29
4. Actuation Logic and Actuation Relays for Containment Ventilation Isolation Signal Area Monitors	1	2	1,2,3,4 ##	N.A.	25 30

TABLE 3.3-6 (Continued)

TABLE NOTATIONS

* With irradiated fuel in the Northend Spent Fuel Pool or transfer of irradiated fuel from or to a spent fuel shipping cask.

** With irradiated fuel in the Southend Spent Fuel Pool or New Fuel Pool.

*** Each channel consists of 3 detectors with 1 of 3 logic. A channel is OPERABLE when 1 or more of the detectors are OPERABLE.

For MODES 1, 2, 3 and 4, the setpoint shall be less than or equal to three times detector background at RATED THERMAL POWER. During fuel movement the setpoint shall be less than or equal to 150 mR/hr.

During CORE ALTERATIONS and during movement of irradiated fuel assemblies within containment.

ACTION STATEMENTS

ACTION 25 - With less than the minimum channels OPERABLE for more than one function under item 1. Containment Radioactivity (1.a. and 1.b. or 1.a. and 1.c. or 1.b. and 1.c.) or less than the minimum channels OPERABLE for Actuation Logic and Actuation Relays for Containment Ventilation Isolation Signal Area Monitors, then enter the applicable conditions and required actions of Technical Specification 3.6.3 for Containment Purge and Exhaust Isolation Valves made inoperable by inoperable isolation instrumentation.

ACTION 26 - Must satisfy the ACTION requirement for Specification 3.4.6.1.

ACTION 27 - With less than the minimum channels OPERABLE, restore the minimum number of channels to OPERABLE status within four hours. Otherwise, enter the applicable conditions and required actions of Technical Specification LCO 3.6.3, "Containment Isolation Valves", for Containment Purge and Exhaust Isolation Valves made inoperable by inoperable instrumentation.

ACTION 28 - With less than the Minimum Channels OPERABLE requirement, declare the associated train of Fuel Handling Building Emergency Exhaust inoperable and perform the requirements of Specification 3.9.12.

ACTION 29 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, within 1 hour initiate isolation of the respective air intake. With no outside air intakes available, maintain operation of the Control Room Emergency Filtration System in the Recirculation Mode of Operation.

ACTION 30 - With less than the Minimum Channels OPERABLE requirement, pre-entry purge operations shall be suspended and the containment pre-entry purge makeup and exhaust valves shall be maintained closed or enter the applicable conditions and required actions of LCO 3.9.4 "Containment Building Penetrations" for Containment Purge and Exhaust Isolation Valves made inoperable by isolation instrumentation.

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	ACTUATION LOGIC TEST	CHANNEL CALIBRATION	MASTER RELAY TEST	DIGITAL CHANNEL OPERATIONAL TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
1. Containment Radioactivity--							
a. Containment Ventilation Isolation Signal Area Monitors	S	N.A.	R	N.A.	Q	N.A.	1, 2, 3, 4, #
b. Airborne Gaseous Radioactivity							
1) RCS Leakage Detection	S	N.A.	R	N.A.	Q	N.A.	1, 2, 3, 4
2) Pre-entry Purge	S	N.A.	R	N.A.	Q	N.A.	#
c. Airborne Particulate Radioactivity							
1) RCS Leakage Detection	S	N.A.	R	N.A.	Q	N.A.	1, 2, 3, 4
2) Pre-entry Purge	S	N.A.	R	N.A.	Q	N.A.	#
2. Spent Fuel Pool Area-- Fuel Handling Building Emergency Exhaust Actuation							
a. Fuel Handling Building Operating Floor--South Network	S	N.A.	R	N.A.	Q	N.A.	**
b. Fuel Handling Building Operating Floor--North Network	S	N.A.	R	N.A.	Q	N.A.	*

TABLE 4.3-3 (Continued)

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	ACTUATION LOGIC TEST	CHANNEL CALIBRATION	MASTER RELAY TEST	DIGITAL CHANNEL OPERATIONAL TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
3. Control Room Outside Air Intakes							
a. Normal Outside Air Intake Isolation	S	N.A.	R	N.A.	Q	N.A.	1,2,3,4,5,6 and during movement of irradiated fuel assemblies and movement of loads over spent fuel pools.
b. Emergency Outside Air Intake Isolation--South Intake	S	N.A.	R	N.A.	Q	N.A.	1,2,3,4,5,6 and during movement of irradiated fuel assemblies and movement of loads over spent fuel pools.
c. Emergency Outside Air Intake Isolation--North Intake	S	N.A.	R	N.A.	Q	N.A.	1,2,3,4,5,6 and during movement of irradiated fuel assemblies and movement of loads overs spent fuel pools.
4. Actuation Logic and Actuation Relays for Containment Ventilation Isolation Signal Area Monitors	N.A.	M***	N.A.	M***	N.A.	Q	1,2,3,4,#

TABLE NOTATIONS

* With irradiated fuel in the Northend Spent Fuel Pool or transfer of irradiated fuel from or to a spent fuel shipping cask.

** With irradiated fuel in the Southend Spent Fuel Pool or New Fuel Pool.

\# During CORE ALTERATIONS or movement of irradiated fuel assemblies within containment.

*** Performed on a STAGGERED TEST BASIS.

3/4.6 CONTAINMENT SYSTEMS

3/4.6.1 PRIMARY CONTAINMENT

CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.1 Primary CONTAINMENT INTEGRITY shall be maintained.

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

ACTION:

Without primary CONTAINMENT INTEGRITY, restore CONTAINMENT INTEGRITY within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.1 Primary CONTAINMENT INTEGRITY shall be demonstrated:

a. By verifying that each containment air lock is in compliance with the requirements of Specification 3.6.1.3; and

b. After each closing of each penetration subject to Type B testing, except the containment air locks, if opened following a Type A or B test, by leak rate testing the seal with gas at a pressure not less than P_a, and verifying that when the measured leakage rate for these seals is added to the leakage rates determined pursuant to Specification 4.6.1.2a. for all other Type B and C penetrations, the combined leakage rate is less than 0.60 L_a.

CONTAINMENT VESSEL STRUCTURAL INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.6 The structural integrity of the containment vessel shall be maintained at a level consistent with the acceptance criteria in Specification 4.6.1.6.1.

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

ACTION:

With the structural integrity of the containment vessel not conforming to the above requirements, restore the structural integrity to within the limits within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.6.1 Containment Vessel Surfaces. The structural integrity of the exposed accessible interior and exterior surfaces of the containment vessel, including the liner plate, shall be determined, during the shutdown for each Type A containment leakage rate test (reference Specification 4.6.1.2), by a visual inspection of these surfaces. This inspection shall be performed prior to the Type A containment leakage rate test to verify no apparent changes in appearance or other abnormal degradation. Additional inspections shall be conducted during two other refueling outages before the next Type A test if the interval for the Type A test has been extended to 10 years.

4.6.1.6.2 Reports. Any abnormal degradation of the containment vessel structure detected during the above required inspections shall be reported to the Commission in a Special Report pursuant to Specification 6.9.2 within 15 days. This report shall include a description of the condition of the concrete, the inspection procedure, the tolerances on cracking, and the corrective actions taken.

PAGES 3/4 6-9 AND 3/4 6-10 HAVE BEEN DELETED.

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:

. . . . . Notes . . . . .

1. Penetration flow path(s) (except for 42 inch purge valve flow paths) may be unisolated intermittently under administrative controls.
2. Separate ACTION is allowed for each penetration flow path.
3. Perform applicable ACTIONS for systems made inoperable by containment isolation valves.
4. Enter LCO 3.6.1 for "CONTAINMENT INTEGRITY" when isolation valve leakage results in exceeding the overall containment leakage rate acceptance criteria, Specification 3.6.1.2.a.

. . . . . .

a. With one or more penetration flow paths with one containment isolation valve inoperable (except for purge valve leakage not within limits)*:

   1. Isolate the affected penetration flow path within four hours by use of at least one closed and de-activated automatic valve, closed manual valve, blind flange, or check valve with flow secured through the valve.

   2. Verify the affected flow path is isolated.

      a. At least once per 31 days for isolation devices outside containment. Isolation devices that are in high radiation areas or locked, sealed, or otherwise secured may be verified by administrative means.

      b. Prior to entering MODE 4 from MODE 5 (if not performed within the previous 92 days) for isolation devices inside containment. Isolation devices that are in high radiation areas or locked, sealed, or otherwise secured may be verified by administrative means.

b. With one or more penetration flow paths with two containment isolation valves inoperable (except for purge valve leakage not within limits)*, then within 1 hour isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve or blind flange.

* Only applicable to penetration flow paths with two containment isolation valves (one inside and one outside).

LIMITING CONDITION FOR OPERATION (Continued)

c. With one or more penetration flow paths with one containment isolation valve inoperable**:

1. Within 72 hours, isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange.

2. Verify the affected penetration flow path is isolated once per 31 days.

d. With one or more penetration flow paths with one or more containment purge valves not within purge valve leakage limits:

1. Within 24 hours, isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange.

2. Verify the affected penetration flow path is isolated:

a. At least once per 31 days for isolation devices outside containment. Isolation devices that are in high radiation areas or locked, sealed or otherwise secured may be verified by administrative means.

b. Prior to entering MODE 4 from MODE 5 (if not performed within the previous 92 days) for isolation devices inside containment. Isolation devices that are in high radiation areas or locked, sealed, or otherwise secured may be verified by administrative means.

e. With ACTIONS a, b, c and d required actions not met, be in MODE 3 in six hours and MODE 5 in the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.3.1 At least once per 31 days, verify each 42 inch purge valve is sealed closed, except for one purge valve in a penetration flow path while in ACTION d. of this LCO. Valves CP-B3, CP-B7, and CM-B5 may be verified at least once per 31 days by manual remove keylock switch position.

** Only applicable to penetration flow paths with only one containment isolation valve and a closed system.

SURVEILLANCE REQUIREMENTS (Continued)

4.6.3.2 At least once per 31 days, verify each 8 inch purge valve is closed except when the 8 inch purge valves are open for pressure control, ALARA, or air qualify considerations for personnel entry, or for Surveillances that require the valves to be open.

4.6.3.3 At least once per 31 days, verify each containment isolation manual valve and blind flange that is located outside containment and not locked, sealed, or otherwise secure and required to be closed during accident conditions is closed, except for containment isolation valves that are open for administrative controls. Isolation devices that are in high radiation areas may be verified by administrative means.

4.6.3.4 Prior to entering MODE 4 from MODE 5, if not performed within the previous 92 days, verify each containment isolation valve and blind flange that is located inside containment and not locked, sealed, or otherwise secure and required to be closed during accident conditions is closed, except for containment isolation valves that are open for administrative controls. Isolation devices that are in high radiation areas may be verified by administrative means.

4.6.3.5 Verify the isolation time of each automatic power operated containment isolation valve is within limits in accordance with the Inservice Testing Program.

4.6.3.6 At least once per 184 days and within 92 days after opening the valve, perform leakage rate testing of containment purge valves (42 inch and 8 inch).

4.6.3.7 At least once per 18 months, verify each automatic containment isolation valve that is not locked, sealed or otherwise secured in position, actuates to the isolation position on an actual or simulated actuation signal.

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

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

a. The equipment door closed and held in place by a minimum of four bolts,

b. A minimum of one door in each airlock is capable of being closed*, and

c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:

1. Be capable of being* closed by a manual or automatic isolation valve, blind flange or equivalent, or

2. Be capable of being closed by OPERABLE automatic normal containment purge and containment pre-entry purge makeup and exhaust isolation valves.

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within the containment.

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving CORE ALTERATIONS or movement of irradiated fuel in the containment building.

SURVEILLANCE REQUIREMENTS

4.9.4.1 At least once per seven days verify each required containment penetration is in the required status.

4.9.4.2 At least once per 18 months test the normal containment purge and containment pre-entry purge makeup and exhaust isolation valves per the applicable portions of Specification 4.6.3.7.

* Penetrations may be opened under administrative controls except for containment purge and exhaust penetrations. This allowance is permitted for refueling outage 9 and cycle 10 only. Operation under these administrative controls has not been approved for refueling outage 10.

3/4.9.9 CONTAINMENT VENTILATION ISOLATION SYSTEM - DELETED

PAGE 3/4 9-11 HAS BEEN DELETED

3/4.6.1.5 AIR TEMPERATURE

The limitations on containment average air temperature ensure that the overall containment average air temperature does not exceed the initial temperature condition assumed in the safety analysis for a LOCA or steam line break accident. Measurements shall be made at all listed locations, whether by fixed or portable instruments, prior to determining the average air temperature.

3/4.6.1.6 CONTAINMENT STRUCTURAL INTEGRITY

This limitation ensures that the structural integrity of the containment will be maintained comparable to the original design standards for the life of the facility. Structural integrity is required to ensure that the containment will withstand the maximum pressure of a postulated main steam line break accident (41.2 psig). A visual inspection in conjunction with the Containment Leakage Rate Testing Program is sufficient to demonstrate this capability.

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

3/4.6.2.1 CONTAINMENT SPRAY SYSTEM

The OPERABILITY of the Containment Spray System ensures that containment depressurization and cooling capability will be available in the event of a LOCA or steam line break. The pressure reduction and resultant lower containment leakage rate are consistent with the assumptions used in the safety analyses.

The Containment Spray System and the Containment Fan Coolers are redundant to each other in providing post-accident cooling of the containment atmosphere. However, the Containment Spray System also provides a mechanism for removing iodine from the containment atmosphere and therefore the time requirements for restoring an inoperable spray system to OPERABLE status have been maintained consistent with that assigned other inoperable ESF equipment.

3/4.6.2.2 SPRAY ADDITIVE SYSTEM

The OPERABILITY of the Spray Additive System ensures that sufficient NaOH is added to the containment spray in the event of a LOCA. The limits on NaOH volume and concentration ensure a pH value of between 8.5 and 11.0 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. The contained solution volume limit includes an allowance for solution not usable because of tank discharge line location or other physical characteristics. These assumptions are consistent with the iodine removal efficiency assumed in the safety analyses.

The maximum and minimum volumes for the Spray Additive Tank are based on the analytical limits. The specified indicated levels used for surveillance include instrument uncertainties and unusable tank volume.

3/4.6.2.3 CONTAINMENT COOLING SYSTEM

The OPERABILITY of the Containment Fan Coolers ensures that adequate heat removal capacity is available when operated in conjunction with the Containment Spray Systems during post-LOCA conditions.

ESW flowrate to the Containment Fan Coolers will vary based on reservoir level. Acceptable ESW flowrate is dependent on the number of heat exchanger tubes in service. Surveillance test acceptance criteria should be adjusted for these factors.

CONTAINMENT COOLING SYSTEM (Continued)

The Containment Fan Coolers and the Containment Spray System are redundant to each other in providing post-accident cooling of the containment atmosphere.

As a result of this redundancy in cooling capability, the allowable out-of-service time requirements for the Containment Fan Coolers have been appropriately adjusted. However, the allowable out-of-service time requirements for the Containment Spray System have been maintained consistent with that assigned other inoperable ESF equipment since the Containment Spray System also provides a mechanism for removing iodine from the containment atmosphere.

3/4.6.3 CONTAINMENT ISOLATION VALVES

The OPERABILITY of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment and is consistent with the requirements of General Design Criteria 54 through 57 of Appendix A to 10 CFR Part 50. Containment isolation within the time limits specified for those isolation valves designed to close automatically ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a LOCA.

The ACTIONS are modified by a Note allowing penetration flow paths, except for 42-inch purge valves, to be unisolated intermittently under administrative controls. These administrative controls consist of stationing a dedicated operator at the valve controls, who is in continuous communications with the control room. In this way, the penetration can be rapidly isolated when a need for containment isolation is indicated.

ACTION c. is modified by a note indicating that this Action is only applicable to those penetration flow paths with only one containment isolation valve and a closed system. This closed system must meet the requirements of Standard Review Plan Section 6.2.4.

3/4.6.4 COMBUSTIBLE GAS CONTROL

The OPERABILITY of the equipment and systems required for the detection and control of hydrogen gas ensures that this equipment will be available to maintain the hydrogen concentration within containment below its flammable limit during post-LOCA conditions. Either recombiner unit is capable of controlling the expected hydrogen generation associated with: (1) zirconium-water reactions, (2) radiolytic decomposition of water, and (3) corrosion of metals within containment. This hydrogen control system is consistent with the recommendations of Regulatory Guide 1.7, "Control of Combustible Gas Concentrations in Containment Following a LOCA," Rev. 2, November 1978.

3/4.6.5 VACUUM RELIEF SYSTEM

The OPERABILITY of the primary containment to atmosphere vacuum relief valves ensures that the containment internal pressure does not become more negative than -1.93 psig. This condition is necessary to prevent exceeding the containment design limit for internal vacuum of -2 psig.

3/4.9.6 REFUELING MACHINE - DELETED

3/4.9.7 CRANE TRAVEL - FUEL HANDLING BUILDING - DELETED

3/4.9.8 RESIDUAL HEAT REMOVAL AND COOLANT CIRCULATION

The requirement that at least one residual heat removal (RHR) loop be in operation ensures that: (1) sufficient cooling capacity is available to remove decay heat and maintain the water in the reactor vessel below 140°F as required during the REFUELING MODE, and (2) sufficient coolant circulation is maintained through the core to minimize the effect of a boron dilution incident and prevent boron stratification.

The requirement to have two RHR loops OPERABLE when there is less than 23 feet of water above the reactor vessel flange ensures that a single failure of the operating RHR loop will not result in a complete loss of residual heat removal capability. With the reactor vessel head removed and at least 23 feet of water above the reactor pressure vessel flange, a large heat sink is available for core cooling. Thus, in the event of a failure of the operating RHR loop, adequate time is provided to initiate emergency procedures to cool the core.

The minimum RHR flow requirement is reduced to 900 gpm when the reactor water level is below the reactor vessel flange. The 900 gpm limit reduces the possibility of cavitation during operation of the RHR pumps and ensures sufficient mixing in the event of a MODE 6 boron dilution incident.

3/4.9.9 CONTAINMENT VENTILATION ISOLATION SYSTEM - DELETED