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February 14, 2002
NOC-AE-02001247
10CFR50.90
STI: 31394160

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

South Texas Project
Units 1 and 2
Docket Nos. STN 50-498, STN 50-499
Proposed Change to Containment Purge Radiation Monitoring and
Reactor Coolant System Leakage Detection Technical Specifications

STP Nuclear Operating Company (STPNOC) submits the attached proposed amendment to South Texas Project Operating Licenses, NPF-76 and NPF-80. This license amendment request proposes revising various Technical Specifications governing radiation monitoring instrumentation and reactor coolant system leakage detection to eliminate the associated shutdown action requirements and relax certain other restrictions.

STPNOC requests approval of the proposed amendment by January 31, 2003. STPNOC requests 60 days for implementation of the amendment after it is approved.

The STPNOC Plant Operations Review Committee and Nuclear Safety Review Board have reviewed and concurred with the proposed change to the Technical Specifications.

In accordance with 10 CFR 50.91(b), STPNOC is notifying the State of Texas of this request for license amendment by providing a copy of this letter and its attachments.

A001

If there are any questions regarding the proposed amendment, please contact Mr. A. W. Harrison (361) 972-7298 or me at (361) 972-8757.

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

Executed on 2/14/02 .
date

J. J. Sheppard
Vice President
Engineering & Technical Services

awh/

Attachments:
1. Description of Changes and Safety Evaluation
2. Annotated Technical Specification Pages
3. Technical Specification Pages with Proposed Changes Incorporated

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U. S. Nuclear Regulatory Commission
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ATTACHMENT 1

DESCRIPTION OF CHANGES

AND

SAFETY EVALUATION

1.0 Introduction

The proposed amendment will revise various Technical Specifications to relax shutdown actions and other restrictive requirements associated with radiation monitoring and RCS leakage detection instrumentation. The proposed changes will enhance plant reliability by reducing its exposure to unnecessary shutdowns and increase operational flexibility. Inoperable radiation monitoring and leakage detection instrumentation has little or no direct effect on plant safety and generally there are effective compensatory actions that can be taken for inoperable instrumentation.

2.0 Description

Each of the proposed changes to the Technical Specifications is described in Table 1 below.

Table 1

Page	Affected Section	Description of Change	Reason for Change
3/4 3-26	Table 3.3-3, ACTION STATEMENTS, ACTION 18 for Functional Unit 3.b.4	ACTION 18 specifies the action to be taken when less than the minimum channels are operable for the functional units associated with Containment Ventilation Isolation. With less than the minimum channels operable, the action currently allows operation to continue provided containment purge supply and exhaust valves are maintained closed. The proposed change breaks ACTION 18 into ACTION 18.a., 18.b, and 18.c. ACTION 18.a. would apply to automatic actuation logic and actuation relays and the requirements are unchanged from the current ACTION 18. ACTION 18.b. would apply to the RCB purge radioactivity-high with one less than the minimum channels operable and allow the purge supply and exhaust valves to be opened with administrative controls. ACTION 18.c. would apply to the RCB purge radioactivity-high with two channels inoperable and allow continued operation provided the purge and exhaust valves are under administrative control with alternate monitoring capability.	ACTION 18 was split into three actions to be able to separately account for the functional units associated with Containment Ventilation Isolation. This split allows the radiation monitoring function to be handled separately and be made less restrictive. Allowing the purge supply and exhaust valves to be open under administrative control with one inoperable channel of purge radioactivity-high provides for routine RCB pressure control while in this condition. One channel is still available for automatic actuation, routine RCB pressure control evolutions are typically very brief (a few minutes) and the likelihood of a coincident accident is very small. With both channels inoperable, the SI actuation function is still available for automatic isolation. Maintaining an alternate monitoring capability will allow manual isolation to mitigate potential release from leakage events that do not cause SI actuation.

Page	Affected Section	Description of Change	Reason for Change
3/4 4-19	TS 3/4.4.6.1	STPNOC proposes to delete ACTION a.1 that establishes a 30 day allowed outage time for the containment atmosphere radioactivity monitor and renumber ACTION a.2 and a.3 accordingly. ACTION b.1 that establishes a 30 day allowed outage time for the normal sump level and flow monitoring system would be deleted. ACTION c. that currently requires entry into TS 3.0.3 with both leakage detection systems inoperable would be changed to allow a 72 hour allowed outage time.	The proposed changes to TS 3/4.4.6.1 to remove the shutdown action with only one of the leakage detection systems inoperable reflect the effectiveness of the existing required compensatory actions and recognition that a shutdown action is not warranted if at least one of the leakage detection systems is operable. The incorporation of a 72 hour allowed outage time for a condition where both leakage detection systems are inoperable is a reasonable time to effect a corrective action to restore at least one of the systems. The likelihood of an accident or significant leak developing in this brief time is very small. The changes increase operational flexibility and plant reliability.

3.0 Background

STPNOC believes that the overall reliability of the plant can be enhanced by the elimination of unnecessarily restrictive TS requirements for radiation monitors and RCS leakage detection. An overview of the basis for each of the proposed changes is described in Table 1, above.

4.0 Technical Analysis

A technical review of each of the proposed changes described in Table 1 is provided below. The review identifies the affected instrumentation, describes its function, including relevant references to the STP UFSAR, and provides a technical justification for the proposed change.

STPNOC is not proposing the changes described in this application as risk-informed changes to be reviewed in conformance with the criteria of Regulatory Guides 1.174 and 1.177. Where risk information for initiating events is presented, it is clear that their likelihood is very small. In addition, the radiation monitors affected by the proposed changes are not modeled in the STP PRA so there is no detailed risk quantification. STPNOC applied deterministic and risk insights to rank the affected radiation monitors as either non-risk-significant or as low safety significant.

Containment Ventilation Isolation (Table 3.3-3, ACTION 18 for Functional Unit 3.b.4)

The proposed change to the TS affects only the radiation monitoring instrumentation associated with the containment ventilation isolation function. The affected detectors and transmitters are RE/RT-8012 and RE/RT-8013, which monitor containment normal and supplementary purge exhaust.

The STP UFSAR 7.3.1.1.2 description of the function of the instrumentation is provided below:

> For the Containment ventilation isolation function, input is provided to the Westinghouse ESFAS from radiation detection equipment monitoring the Normal Containment Purge System exhaust line or the Supplementary Containment Purge system exhaust line. During a plant shutdown for refueling, the Normal containment Purge System is in operation, as discussed in Section 9.4.5. Also discussed in the section is the Supplementary Containment Purge system, which may be used during normal plant operation. Redundant Class 1E radiation monitors (i.e., the Reactor containment Building [RCB] Purge Isolation) monitor the radiation in these purge lines, as discussed in Sections 11.5. Upon either monitor sensing radiation above a preset limit, a signal is sent to the logic trains of the Westinghouse ESFAS, and the Containment ventilation isolation signal is actuated.

STPNOC's proposed change affects the current TS action that requires the purge to be isolated when one or both of the two required channels is inoperable. The proposed action with one inoperable channel would allow the supplementary purge valves to be opened under administrative control to permit routine purges for containment pressure control. The pressure control purges typically take only a few minutes. The likelihood of an event that would cause a significant radioactive release in the containment requiring containment isolation occurring during a purge activity is very small (~1E-07/yr.). The operable radiation monitoring channel would still be available to actuate containment isolation. Events that would cause a significant radioactive release in the containment in MODEs 1 – 4 would typically involve a LOCA, and the associated SI actuation or Containment Spray manual actuation will also initiate a containment ventilation isolation signal. An exception, to be described in the Bases, is that failure of the output power supply to either channel of these radiation monitors will be considered inoperable actuation logic and the isolation valves will be maintained closed in accordance with proposed ACTION 18a. This is because this failure mode will result in the inability of the other actuation signals to close the purge valves if the initial signal is reset. The procedurally required administrative control would also compensate for the inoperable channel by requiring appropriate limitations on the purge duration and operator monitoring of radiation levels during the evolution. The administrative controls will be

described in the Bases for the TS. STPNOC will provide revised Bases pages subsequent to NRC approval of the proposed change.

With both of the radiation monitoring channels inoperable, STPNOC proposes to allow routine purges for containment pressure control provided the administrative controls include an alternate method of radiation monitoring. As mentioned previously, the SI and manual Containment Spray signals will still automatically isolate containment ventilation. Events that might cause RCS leakage that does not reach a level that would actuate SI would not be expected to cause a core damage or a significant radiological event. Manual actuation of the containment ventilation isolation would be adequate to mitigate the potential radiological consequences. Consequently, STPNOC proposes the requirement for the alternate method of radiation monitoring while the supplementary purge is open in this condition. The alternate monitoring would be in addition to the administrative controls on purge duration and operator monitoring mentioned above and will be described in the Bases. As noted above, the duration of the pressure control evolution is short, and the likelihood of a leakage event initiating during the evolution is very small.

STPNOC notes that the justification above demonstrates that the probability of a core damage event during RCB pressure control purges is very small that there are compensatory actions that maintain adequate defense in depth.

Radiation Monitors for RCS Leakage Detection (TS 3/4.4.6.1)

The Reactor Coolant Pressure Boundary (RCPB) Leakage Detection System provides a means of detecting significant leakage from the RCS. The system was designed to conform with NRC General Design Criterion (GDC) 30 and RG 1.45. Identifiable leakage from the reactor pressure vessel (RPV) flange leakoff, valve leakoffs, RCP leakoffs, and drain line leakage is collected and measured in the reactor coolant drain tank (RCDT). Unidentified leakage is determined by measuring the increase in Containment sump level, Containment air particulate radioactivity, and Containment noble gas radioactivity. Leakage from the RCPB to auxiliary systems is monitored by the measurement of radioactivity and water inventory balances. Measurement of RCPB leakages is sufficiently sensitive to assure that small increases in leakage can be detected while total leakage remains below a value consistent with safe plant operation.

STPNOC proposes to eliminate the 30 day limitation in TS 3/4.4.6.1 ACTION a.1 and TS 3/4.4.6.1 ACTION b.1. Both of these action statements require actions to compensate for the inoperable function. The required compensatory actions are sufficient to assure adequate leakage detection for continued operation, and a plant shutdown is not warranted if one of the two leakage detection methods is inoperable. If both leakage detection methods are inoperable, 72 hours to restore at least one method to operable status is a more reasonable requirement than immediate entry into TS 3.0.3. There is very low probability (~5E-05) for RCS leakage to initiate in this short time period, and operators monitoring the RCS in the control room would readily identify any significant

leak through indications such as increased charging flow. However, the leak-before-break licensing basis credits RCS leakage detection, so relatively prompt restoration of the function is appropriate.

Note that the attached marked up TS pages and the proposed new TS pages anticipate the approval of the STPNOC proposed changes to various radiation monitor TS that was submitted on February 14, 2002 (NOC-AE-01001168).

5.0 Regulatory Safety Analysis

5.1 No Significant Hazards Determination

STPNOC has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10CFR50.92, "Issuance of amendment," as discussed below.

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

Response: No.

The radiation monitors and leakage detection instrumentation affected by the proposed amendment are not potential accident initiators. Adequate measures are available to compensate for instrumentation that is out of service. The proposed amendment does not affect how the affected instrumentation normally functions or its role in the response of an operator to an accident or transient. The core damage frequency in the STP PRA is not impacted by the proposed changes. Therefore, STPNOC concludes that there is no significant increase in the probability or consequences of an accident previously evaluated.

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

Response: No.

The instrumentation affected by the proposed amendment is not credited for the prevention of any accident not evaluated in the safety analysis. The proposed amendment involves no changes in the way the plant is operated or controlled. It involves no change in the design configuration of the plant. No new operating environments are created. Therefore, STPNOC concludes the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

Response: No.

The proposed change has no significant effect on functions that are supported by the affected instrumentation. There will be no significant effect on the availability and reliability of the affected instrumentation. Adequate measures are available to compensate for instrumentation that is out of service. Therefore, STPNOC concludes the proposed change does not involve a significant reduction in the margin of safety.

Conclusion

Based upon the analysis provided herein, the proposed amendments will not increase the probability or consequences of an accident previously evaluated, create the possibility of a new or different kind of accident from any accident previously evaluated, or involve a reduction in a margin of safety. Therefore, the proposed amendments meet the requirements of 10 CFR 50.92 and do not involve a significant hazards consideration.

5.2 Applicable Regulatory Requirements/Criteria

Containment Ventilation Isolation Actuation:

The 48-inch normal containment purge lines are sealed closed during operating conditions other than cold shutdown and refueling. Valve position indication lights are provided to permit verifying that the valves are closed. The supplementary containment purge system may be used during normal plant operation (operating modes 1 through 4). Normal and supplementary purge system isolation valves are designed to close on receipt of a containment ventilation isolation signal. This signal is initiated by the following: safety injection signal, containment phase A isolation manual actuation, containment spray manual actuation, and high containment purge radiation.

The radiation monitor function to isolate containment ventilation meets the requirements of NUREG-0737 Item II.E.4.2, SRP Section 6.2.4, and BTP CSB 6-4.

The radiation monitor actuation of the containment ventilation system is an ESFAS function and is subject to the requirements of GDC 2, 4, 20 through 24, and 10 CFR 50.55a(h).

The proposed changes to the Technical Specifications would not change the function of the affected radiation monitors and there is no significant impact on compliance with the regulatory requirements.

RCS Leakage Detection Instrumentation:

GDC 30 of Appendix A to 10 CFR 50 requires means for detecting and, to the extent practical, identifying the location of the source of RCS LEAKAGE. Regulatory Guide 1.45 describes acceptable methods for selecting leakage detection systems.

STPNOC's proposed changes to the RCS leakage detection radiation monitoring instrumentation do not affect how the monitors perform their function.

6.0 Environmental Considerations

10 CFR 51.22(b) specifies the criteria for categorical exclusions from the requirements for a specific environmental assessment per 10 CFR 51.21. This amendment request meets the criteria specified in 10 CFR 51.22(c)(9). The specific criteria contained in this section are discussed below.

(i) the amendment involves no significant hazards consideration

As demonstrated in the No Significant Hazards Consideration Determination, the requested license amendment does not involve any significant hazards consideration.

(ii) there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite

The requested license amendment involves no change to the facility and does not involve any change in the manner of operation of any plant systems involving the generation, collection or processing of radioactive materials or other types of effluents. Therefore, no increase in the amounts of effluents or new types of effluents would be created.

(iii) there is no significant increase in individual or cumulative occupational radiation exposure

The requested license amendment involves no change to the facility and will not increase the radiation dose resulting from the operation of any plant system. Furthermore, implementation of this proposed change will not involve work activities that could contribute to occupational radiation exposure. Therefore, there will be no increase in individual or cumulative occupational radiation exposure associated with this proposed change.

Based on the above it is concluded that there will be no impact on the environment resulting from this change. The change meets the criteria specified in 10 CFR 51.22 for a categorical exclusion from the requirements of 10 CFR 51.21 relative to specific environmental assessment by the Commission.

7.0 References

1. South Texas Project Updated Final Safety Analysis Report, Revision 8

ATTACHMENT 2

PROPOSED TECHNICAL SPECIFICATION CHANGES

NO CHANGES ON THIS PAGE.
INCLUDED FOR COMPLETENESS.

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)					
b. Containment Ventilation Isolation					
1) Automatic Actuation Logic	2	1	2	1, 2, 3, 4	18
2) Actuation Relays***	3	2	3	1, 2, 3, 4	18
3) Safety Injection ***	See Item 1. above for all Safety Injection initiating functions and requirements.				
4) RCB Purge Radioactivity- High	2	1	2	1, 2, 3, 4, 5##, 6##	18
5) Containment Spray- Manual Initiation	See Item 2. above for Containment Spray manual initiating functions and requirements.				
6) Phase "A" Isolation- Manual Isolation	See Item 3.a. above for Phase "A" Isolation manual initiating functions and requirements.				
c. Phase "B" Isolation					
1) Automatic Actuation Logic	2	1	2	1, 2, 3, 4	14
2) Actuation Relays	3	2	3	1, 2, 3, 4	14
3) Containment Pressure -- High-3	4	2	3	1, 2, 3	17
4) Containment Spray-- Manual Initiation	See Item 2. above for Containment Spray manual initiating functions and requirements.				
d. RCP Seal Injection Isolation					
1) Automatic Actuation Logic and Actuation Relays	1	1	1	1, 2, 3, 4	16

TABLE 3.3-3 (Continued)
TABLE NOTATIONS

*** Function is actuated by either actuation train A or actuation train B. Actuation train C is not used for this function.

**** Automatic switchover to containment sump is accomplished for each train using the corresponding RWST level transmitter.

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

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

###Trip function automatically blocked above P-11 and may be blocked below P-11 when Low Compensated Steamline Pressure Protection is not blocked.

ACTION STATEMENTS

ACTION 14 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 2 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 ANALOG CHANNEL OPERATIONAL TEST provided the inoperable channel is placed in the tripped condition within 1 hour.

ACTION 16 - With the Charging Header Pressure channel inoperable:

a) Place the Charging Header Pressure channel in the tripped condition within one hour and

b) Restore the Charging Header Pressure channel to operable status within 7 days or be in at least Hot Standby within the next 6 hours and in Cold Shutdown within the following 30 hours.

ACTION 17 - 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 and the Minimum Channels OPERABLE requirement is met. One additional channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1.

ACTION 18 - ~~With less than the Minimum Channels OPERABLE requirement, operation may continue provided the containment purge supply and exhaust valves are maintained closed.~~

a) **With less than the Minimum Channels OPERABLE requirement for Automatic Actuation Logic or Actuation Relays, operation may continue provided the containment purge supply and exhaust valves are maintained closed.**

b) **With one less than the Minimum Channels OPERABLE requirement for RCB Purge Radioactivity High, operation may continue provided the containment purge supply and exhaust valves are under administrative control.**

c) **With two less than the Minimum Channels OPERABLE requirement for RCB Purge Radioactivity High, operation may continue provided the containment purge supply and exhaust valves are under administrative control with an alternate monitoring capability.**

REACTOR COOLANT SYSTEM

3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE

LEAKAGE DETECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.4.6.1 The following Reactor Coolant System Leakage Detection Instrumentation shall be OPERABLE:

a. One Containment Atmosphere Radioactivity Monitor (gaseous or particulate), and

b. The Containment Normal Sump Level and Flow Monitoring System.

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

ACTION:

a. With the required containment atmosphere radioactivity monitor inoperable perform the following actions or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours:

~~1) Restore one containment atmosphere monitoring system to OPERABLE status within 30 days and,~~

1) Obtain and analyze a grab sample of the containment atmosphere for gaseous and particulate radioactivity at least once per 24 hours, or

2) Perform a Reactor Coolant System water inventory balance at least once per 24 hours.

b. With the required containment normal sump level and flow monitoring system inoperable **perform a Reactor Coolant System water inventory balance at least once per 24 hours** ~~the following actions~~ or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours:

~~1) Restore the containment normal sump and flow monitoring system to OPERABLE status within 30 days and,~~

~~2) Perform a Reactor Coolant System water inventory balance at least once per 24 hours.~~

c. With both a. and b. inoperable, ~~enter 3.0.3.~~ **restore at least one leakage detection system within 72 hours or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.**

SURVEILLANCE REQUIREMENTS

4.4.6.1 The Leakage Detection Systems shall be demonstrated OPERABLE by:

a. Containment Atmosphere Gaseous and Particulate Monitoring Systems performance of the following:
   1) CHANNEL CHECK at least once per 12 hours
   2) CHANNEL CALIBRATION at least once per 18 months

b. Containment Normal Sump Level and Flow Monitoring System performance of CHANNEL CALIBRATION at least once per 18 months.

ATTACHMENT 3

TECHNICAL SPECIFICATION PAGE WITH PROPOSED CHANGES INCORPORATED

TABLE 3.3-3 (Continued)
TABLE NOTATIONS

*** Function is actuated by either actuation train A or actuation train B. Actuation train C is not used for this function.

**** Automatic switchover to containment sump is accomplished for each train using the corresponding RWST level transmitter.

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

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

###Trip function automatically blocked above P-11 and may be blocked below P-11 when Low Compensated Steamline Pressure Protection is not blocked.

ACTION STATEMENTS

ACTION 14 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 2 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 ANALOG CHANNEL OPERATIONAL TEST provided the inoperable channel is placed in the tripped condition within 1 hour.

ACTION 16 - With the Charging Header Pressure channel inoperable:

a) Place the Charging Header Pressure channel in the tripped condition within one hour and

b) Restore the Charging Header Pressure channel to operable status within 7 days or be in at least Hot Standby within the next 6 hours and in Cold Shutdown within the following 30 hours.

ACTION 17 - 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 and the Minimum Channels OPERABLE requirement is met. One additional channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1.

ACTION 18 - a) With less than the Minimum Channels OPERABLE requirement for Automatic Actuation Logic or Actuation Relays, operation may continue provided the containment purge supply and exhaust valves are maintained closed.

b) With one less than the Minimum Channels OPERABLE requirement for RCB Purge Radioactivity High, operation may continue provided the containment purge supply and exhaust valves are under administrative control.

c) With two less than the Minimum Channels OPERABLE requirement for RCB Purge Radioactivity High, operation may continue provided the containment purge supply and exhaust valves are under administrative control with an alternate monitoring capability.

REACTOR COOLANT SYSTEM

3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE

LEAKAGE DETECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

3.4.6.1 The following Reactor Coolant System Leakage Detection Instrumentation shall be OPERABLE:

a. One Containment Atmosphere Radioactivity Monitor (gaseous or particulate), and

b. The Containment Normal Sump Level and Flow Monitoring System.

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

ACTION:

a. With the required containment atmosphere radioactivity monitor inoperable perform the following actions or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours:

1) Obtain and analyze a grab sample of the containment atmosphere for gaseous and particulate radioactivity at least once per 24 hours, or

2) Perform a Reactor Coolant System water inventory balance at least once per 24 hours.

b. With the required containment normal sump level and flow monitoring system inoperable perform a Reactor Coolant System water inventory balance at least once per 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours:

c. With both a. and b. inoperable, restore at least one leakage detection system within 72 hours or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.4.6.1 The Leakage Detection Systems shall be demonstrated OPERABLE by:

a. Containment Atmosphere Gaseous and Particulate Monitoring Systems performance of the following:
   1) CHANNEL CHECK at least once per 12 hours
   2) CHANNEL CALIBRATION at least once per 18 months

b. Containment Normal Sump Level and Flow Monitoring System performance of CHANNEL CALIBRATION at least once per 18 months.