

August 28, 2019

TSTF-19-10
PROJ0753

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

SUBJECT: Transmittal of Errata Changes to TSTF-541, Revision 2, "Add Exceptions to Surveillance Requirements for Valves and Dampers Locked in the Actuated Position"

Enclosed for NRC review is an updated TSTF-541, Revision 2, "Add Exceptions to Surveillance Requirements for Valves and Dampers Locked in the Actuated Position." This document supersedes the version of TSTF-541, Revision 2, transmitted on Jun 18, 2019.

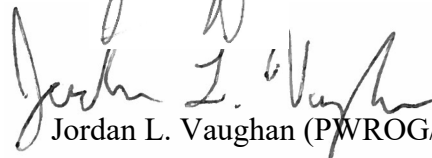
During an August 16, 2019 teleconference with the NRC, the TSTF agreed to revise word choices in four locations of the justification to clarify the intent. In two locations in the Technical Evaluation section of the justification and in two locations in the model application, the phrase "following an accident" was replaced with "following an event." In the Technical Evaluation section of the justification, the term "safety analysis" was equated to analyses of design basis accidents, anticipated operational occurrences, and transients. This does not affect the intent or implementation of the change.

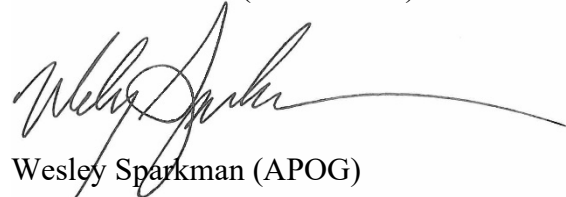
Should you have any questions, please do not hesitate to contact us.


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Enclosure

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Technical Specifications Task Force Improved Standard Technical Specifications Change Traveler

Add Exceptions to Surveillance Requirements for Valves and Dampers Locked in the Actuated Position

NUREGs Affected: 1430 1431 1432 1433 1434 2194

Classification: 1) Technical Change

Recommended for CLIP?: Yes

Correction or Improvement: Improvement

NRC Fee Status: Not Exempt

Benefit: Increases Equipment Operability

Changes Marked on ISTS Rev 4.0

PWROG RISD & PA (if applicable): N/A,LSC-1525

See attached justification.

Revision History

OG Revision 0

Revision Status: Closed

Revision Proposed by: PWROG

Revision Description:
Original Issue

Owners Group Review Information

Date Originated by OG: 03-Jul-13

Owners Group Comments
(No Comments)

Owners Group Resolution: Approved Date: 29-Jul-13

TSTF Review Information

TSTF Received Date: 31-Jul-13

Date Distributed for Review 31-Jul-13

TSTF Comments:
(No Comments)

TSTF Resolution: Approved

Date: 09-Sep-13

NRC Review Information

NRC Received Date: 10-Sep-13

Final Resolution: NRC Requests Changes: TSTF Will Revise

Final Resolution Date: 08-Nov-18

TSTF Revision 1

Revision Status: Closed

Revision Proposed by: NRC

28-Aug-19

TSTF Revision 1**Revision Status: Closed**

Revision Description:

Section 3,"Technical Evaluation," of the justification is revised to provide additional support for the change. In addition, the justification and model application are updated to reflect the current format, and an omitted "Background" description of the BWR Plant Service Water and Station Service Water systems was added.

Owners Group Review Information

Date Originated by OG: 12-Apr-19

Owners Group Comments
(No Comments)

Owners Group Resolution: Approved Date: 27-Apr-19

TSTF Review Information

TSTF Received Date: 07-May-18

Date Distributed for Review 07-May-18

TSTF Comments:
(No Comments)

TSTF Resolution: Approved

Date: 28-May-18

NRC Review Information

NRC Received Date: 29-May-18

NRC Comments:

NRC provided feedback at the February 2019 TSTF/NRC quarterly meeting.

Final Resolution: NRC Requests Changes: TSTF Will Revise

TSTF Revision 2**Revision Status: Active**

Revision Proposed by: TSTF

Revision Description:

Revised the format of the exceptions, eliminating notes. Revised the Bases to discuss the need to assess system operability. A draft traveler was provided in May 2018. The NRC provided feedback at the February 2019 TSTF/NRC meeting. The traveler and model application were revised to incorporate the NRC comments. TS 3.5.2, "ECCS - Shutdown," is eliminated for BWR/4 and BWR/6 TS, as those TS were revised the TSTF-542 and this change is no longer applicable.

Owners Group Review Information

Date Originated by OG: 28-Feb-19

Owners Group Comments
(No Comments)

Owners Group Resolution: Approved Date: 15-Mar-19

TSTF Review Information

28-Aug-19

TSTF Revision 2**Revision Status: Active**

TSTF Received Date: 21-Mar-19 Date Distributed for Review 21-Mar-19

TSTF Comments:

Draft Revision 2 provided to NRC on 4/5/2019 to support a presubmittal teleconference. NRC pointed out some inconsistencies. An independent review was performed and the comments were incorporated.

TSTF Resolution: Approved

Date: 17-May-19

NRC Review Information

NRC Received Date: 18-Jun-19

NRC Comments:

An administrative clarification was made based on NRC comments. In two locations in the Technical Evaluation and two locations in the model application, the phrase "following an accident" was replaced with "following an event" and in the Technical Evaluation, the term "safety analysis" was equated to analyses of design basis accidents, anticipated operational occurrences, and transients. This does not affect the intention or implementation of the change. A revised traveler was provided on August 28, 2019, and it continued to be designated as Revision 2.

Affected Technical Specifications

SR 3.6.7.4	Spray Additive System	NUREG(s)- 1430 Only
SR 3.6.7.4 Bases	Spray Additive System	NUREG(s)- 1430 Only
SR 3.7.10.3	CREVS	NUREG(s)- 1430 Only
SR 3.7.10.3 Bases	CREVS	NUREG(s)- 1430 Only
SR 3.7.12.3	EVS	NUREG(s)- 1430 Only
SR 3.7.12.3 Bases	EVS	NUREG(s)- 1430 Only
SR 3.7.12.5	EVS	NUREG(s)- 1430 Only
SR 3.7.12.5 Bases	EVS	NUREG(s)- 1430 Only
SR 3.7.13.3	FSPVS	NUREG(s)- 1430 Only
SR 3.7.13.3 Bases	FSPVS	NUREG(s)- 1430 Only
SR 3.7.13.5	FSPVS	NUREG(s)- 1430 Only
SR 3.7.13.5 Bases	FSPVS	NUREG(s)- 1430 Only
SR 3.6.11.3	ICS (Atmospheric and Subatmospheric)	NUREG(s)- 1431 Only
SR 3.6.11.3 Bases	ICS (Atmospheric and Subatmospheric)	NUREG(s)- 1431 Only

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SR 3.6.11.4	ICS (Atmospheric and Subatmospheric)	NUREG(s)- 1431 Only
SR 3.6.11.4 Bases	ICS (Atmospheric and Subatmospheric)	NUREG(s)- 1431 Only
SR 3.6.13.3	SBACS (Dual and Ice Condenser)	NUREG(s)- 1431 Only
SR 3.6.13.3 Bases	SBACS (Dual and Ice Condenser)	NUREG(s)- 1431 Only
SR 3.6.13.4	SBACS (Dual and Ice Condenser)	NUREG(s)- 1431 Only
SR 3.6.13.4 Bases	SBACS (Dual and Ice Condenser)	NUREG(s)- 1431 Only
SR 3.7.10.3	CREFS	NUREG(s)- 1431 Only
SR 3.7.10.3 Bases	CREFS	NUREG(s)- 1431 Only
SR 3.7.12.3	ECCS PREACS	NUREG(s)- 1431 Only
SR 3.7.12.3 Bases	ECCS PREACS	NUREG(s)- 1431 Only
SR 3.7.12.5	ECCS PREACS	NUREG(s)- 1431 Only
SR 3.7.12.5 Bases	ECCS PREACS	NUREG(s)- 1431 Only
SR 3.7.13.3	FBACS	NUREG(s)- 1431 Only
SR 3.7.13.3 Bases	FBACS	NUREG(s)- 1431 Only
SR 3.7.13.5	FBACS	NUREG(s)- 1431 Only
SR 3.7.13.5 Bases	FBACS	NUREG(s)- 1431 Only
SR 3.7.14.3	PREACS	NUREG(s)- 1431 Only
SR 3.7.14.3 Bases	PREACS	NUREG(s)- 1431 Only
SR 3.7.14.5	PREACS	NUREG(s)- 1431 Only
SR 3.7.14.5 Bases	PREACS	NUREG(s)- 1431 Only
SR 3.6.8.3	SBEACS (Dual)	NUREG(s)- 1432 Only
SR 3.6.8.3 Bases	SBEACS (Dual)	NUREG(s)- 1432 Only
SR 3.6.8.4	SBEACS (Dual)	NUREG(s)- 1432 Only
SR 3.6.8.4 Bases	SBEACS (Dual)	NUREG(s)- 1432 Only
SR 3.6.10.3	ICS (Atmospheric and Dual)	NUREG(s)- 1432 Only
SR 3.6.10.3 Bases	ICS (Atmospheric and Dual)	NUREG(s)- 1432 Only
SR 3.6.10.4	ICS (Atmospheric and Dual)	NUREG(s)- 1432 Only

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SR 3.6.10.4 Bases	ICS (Atmospheric and Dual)	NUREG(s)- 1432 Only
SR 3.7.10.2	ECW	NUREG(s)- 1432 Only
SR 3.7.10.2 Bases	ECW	NUREG(s)- 1432 Only
SR 3.7.11.3	CREACS	NUREG(s)- 1432 Only
SR 3.7.11.3 Bases	CREACS	NUREG(s)- 1432 Only
SR 3.7.13.3	ECCS PREACS	NUREG(s)- 1432 Only
SR 3.7.13.3 Bases	ECCS PREACS	NUREG(s)- 1432 Only
SR 3.7.13.5	ECCS PREACS	NUREG(s)- 1432 Only
SR 3.7.13.5 Bases	ECCS PREACS	NUREG(s)- 1432 Only
SR 3.7.14.3	FBACS	NUREG(s)- 1432 Only
SR 3.7.14.3 Bases	FBACS	NUREG(s)- 1432 Only
SR 3.7.14.5	FBACS	NUREG(s)- 1432 Only
SR 3.7.14.5 Bases	FBACS	NUREG(s)- 1432 Only
SR 3.7.15.3	PREACS	NUREG(s)- 1432 Only
SR 3.7.15.3 Bases	PREACS	NUREG(s)- 1432 Only
SR 3.7.15.5	PREACS	NUREG(s)- 1432 Only
SR 3.7.15.5 Bases	PREACS	NUREG(s)- 1432 Only
SR 3.5.1.10	ECCS - Operating	NUREG(s)- 1433 Only
SR 3.5.1.10 Bases	ECCS - Operating	NUREG(s)- 1433 Only
SR 3.5.3.5	RCIC System	NUREG(s)- 1433 Only
SR 3.5.3.5 Bases	RCIC System	NUREG(s)- 1433 Only
SR 3.6.4.3.3	SGT System	NUREG(s)- 1433 Only
SR 3.6.4.3.3 Bases	SGT System	NUREG(s)- 1433 Only
SR 3.6.4.3.4	SGT System	NUREG(s)- 1433 Only
SR 3.6.4.3.4 Bases	SGT System	NUREG(s)- 1433 Only
SR 3.7.2.6	[PSW] System and [UHS]	NUREG(s)- 1433 Only
SR 3.7.2.6 Bases	[PSW] System and [UHS]	NUREG(s)- 1433 Only

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SR 3.7.4.3	[MCREC] System	NUREG(s)- 1433 Only
SR 3.7.4.3 Bases	[MCREC] System	NUREG(s)- 1433 Only
SR 3.5.1.5	ECCS - Operating	NUREG(s)- 1434 Only
SR 3.5.1.5 Bases	ECCS - Operating	NUREG(s)- 1434 Only
SR 3.5.3.5	RCIC System	NUREG(s)- 1434 Only
SR 3.5.3.5 Bases	RCIC System	NUREG(s)- 1434 Only
SR 3.6.1.7.3	RHR Containment Spray System	NUREG(s)- 1434 Only
SR 3.6.1.7.3 Bases	RHR Containment Spray System	NUREG(s)- 1434 Only
SR 3.6.4.3.3	SGT System	NUREG(s)- 1434 Only
SR 3.6.4.3.3 Bases	SGT System	NUREG(s)- 1434 Only
SR 3.6.4.3.4	SGT System	NUREG(s)- 1434 Only
SR 3.6.4.3.4 Bases	SGT System	NUREG(s)- 1434 Only
SR 3.7.1.6	[SSW] System and [UHS]	NUREG(s)- 1434 Only
SR 3.7.1.6 Bases	[SSW] System and [UHS]	NUREG(s)- 1434 Only
SR 3.7.2.3	HPCS SWS	NUREG(s)- 1434 Only
SR 3.7.2.3 Bases	HPCS SWS	NUREG(s)- 1434 Only
SR 3.7.3.3	[CRFA] System	NUREG(s)- 1434 Only
SR 3.7.3.3 Bases	[CRFA] System	NUREG(s)- 1434 Only

1. SUMMARY DESCRIPTION

The proposed change will revise Surveillance Requirements (SRs) in the following Technical Specifications (TS) by adding exceptions for automatic valves or dampers that are locked, sealed or otherwise secured in the actuated position, in order to consider the SR met. Securing the automatic valve or damper in the actuated position may affect system operability. The associated Limiting Condition for Operation (LCO) is met if the subject structure, system or component (SSC) remains operable (i.e., capable of performing its specified safety function).

The following SRs are affected by the proposed change:

NUREG-1430, "Standard Technical Specifications Babcock and Wilcox Plants"

- TS 3.6.7, "Spray Additive System,"
- TS 3.7.10, "Control Room Emergency Ventilation System (CREVS),"
- TS 3.7.12, "Emergency Ventilation System (EVS),"
- TS 3.7.13, "Fuel Storage Pool Ventilation System (FSPVS),"

NUREG-1431, "Standard Technical Specifications Westinghouse Plants"

- TS 3.6.11, "Iodine Cleanup System (ICS) (Atmospheric and Subatmospheric),"
- TS 3.6.13, "Shield Building Air Cleanup System (SBACS) (Dual and Ice Condenser),"
- TS 3.7.10, "Control Room Emergency Filtration System (CREFS),"
- TS 3.7.12, "Emergency Core Cooling System (ECCS) Pump Room Exhaust Air Cleanup System (PREACS),"
- TS 3.7.13, "Fuel Building Air Cleanup System (FBACS),"
- TS 3.7.14, "Penetration Room Exhaust Air Cleanup System (PREACS),"

NUREG-1432, "Standard Technical Specifications Combustion Engineering Plants"

- TS 3.6.8, "Shield Building Exhaust Air Cleanup System (SBEACS) (Dual),"
- TS 3.6.10, "Iodine Cleanup System (ICS) (Atmospheric and Dual),"
- TS 3.7.10, "Essential Chilled Water (ECW),"
- TS 3.7.11, "Control Room Emergency Air Cleanup System (CREACS),"
- TS 3.7.13, "Emergency Core Cooling System (ECCS) Pump Room Exhaust Air Cleanup System (PREACS),"
- TS 3.7.14, "Fuel Building Air Cleanup System (FBACS)," and
- TS 3.7.15, "Penetration Room Exhaust Air Cleanup System (PREACS)."

NUREG-1433, "Standard Technical Specifications General Electric BWR/4 Plants"

- TS 3.5.1, "Emergency Core Cooling Systems (ECCS) Operating,"
- TS 3.5.3, "Reactor Core Isolation Cooling (RCIC) System,"
- TS 3.6.4.3, "Standby Gas Treatment (SGT) System,"
- TS 3.7.2, "[Plant Service Water (PSW)] System and [Ultimate Heat Sink (UHS)]," and
- TS 3.7.4 "[Main Control Room Environmental Control (MCREC)] System."

NUREG-1434, "Standard Technical Specifications General Electric BWR/6 Plants"

- TS 3.5.1, "Emergency Core Cooling Systems (ECCS) Operating,"
- TS 3.5.3, "Reactor Core Isolation Cooling (RCIC) System,"
- TS 3.6.1.7, "Residual Heat Removal (RHR) Containment Spray System,"
- TS 3.6.4.3, "Standby Gas Treatment (SGT) System,"

TS 3.7.1, "[Standby Service Water (SSW)] System and [Ultimate Heat Sink (UHS)],"
 TS 3.7.2, "High Pressure Core Spray (HPCS) Service Water System (SWS)," and
 TS 3.7.3, "[Control Room Fresh Air (CRFA)] System."

2. DETAILED DESCRIPTION

2.1 System Design and Operation

The Spray Additive System (NUREG-1430) is a subsystem of the Containment Spray System that assists in reducing the iodine fission product inventory in the containment atmosphere resulting from a Design Basis Accident (DBA). In the event of an accident such as a loss of coolant accident (LOCA), the Spray Additive System will be automatically actuated upon a high containment pressure signal by the Engineered Safety Features Actuation System (ESFAS). The purpose of SR 3.6.7.4 (NUREG-1430) is to verify that each automatic valve in the Spray Additive System flow path actuates to its correct position upon receipt of an actual or simulated actuation signal.

The EVS (NUREG-1430) filters air from the area of the active ECCS components during the recirculation phase of a LOCA. Ductwork, valves or dampers, and instrumentation also form part of the system. During emergency operations, the EVS dampers are realigned, and fans are started to begin filtration. Upon receipt of the actuation signal(s), normal air discharges from the negative pressure area are isolated, and the stream of ventilation air discharges through the system filter trains. The prefilters remove any large particles in the air, and any entrained water droplets present, to prevent excessive loading of the HEPA filters and charcoal adsorbers. The purpose of SR 3.7.12.3 (NUREG-1430) is to verify proper actuation of all train components, including dampers, on an actual or simulated actuation signal. The purpose of SR 3.7.12.5 is to ensure that the system is functioning properly by operating the EVS filter bypass damper.

The FSPVS (NUREG-1430) provides negative pressure in the fuel storage area, and filters airborne radioactive particulates from the area of the fuel pool following a fuel handling accident. The FSPVS consists of portions of the normal Fuel Handling Area Ventilation System (FHAVS), the station EVS, ductwork bypasses, and dampers. The portion of the normal FHAVS used by the FSPVS consists of ducting between the spent fuel pool and the normal FHAVS exhaust fans or dampers, and redundant radiation detectors installed close to the suction end of the FHAVS exhaust fan ducting. The purpose of SR 3.7.13.3 (NUREG-1430) is to verify proper actuation of all train components, including dampers, on an actual or simulated actuation signal. The purpose of SR 3.7.13.5 is to ensure that the system is functioning properly by operating the FSPVS filter bypass damper.

The CREVS (NUREG-1430), CREFS (NUREG-1431), CREACS (NUREG-1432), [MREC] (NUREG-1433), and [CRFA] (NUREG-1434) provide a protected environment from which occupants can control the unit following an uncontrolled release of radioactivity, hazardous chemicals, or smoke. The purpose of SR 3.7.10.3 (NUREG-1430 and NUREG-1431), SR 3.7.11.3 (NUREG-1432), SR 3.7.4.3 (NUREG-1433), and SR 3.7.3.3 (NUREG-1434) is to verify that each train / subsystem starts and operates on an actual or simulated actuation signal.

The SBACS (NUREG-1431) and SBEACS (NUREG-1432) are required to ensure that radioactive materials that leak from the primary containment into the shield building (secondary containment) following a DBA are filtered and adsorbed prior to exhausting to the environment. The containment has a secondary containment called the shield building, which is a concrete structure that surrounds the steel primary containment vessel. Between the containment vessel and the shield building inner wall is an annular space that collects any containment leakage that may occur following a LOCA. The SBACS and SBEACS establish a negative pressure in the annulus between the shield building and the steel containment vessel. Filters in the system then control the release of radioactive contaminants to the environment. The SBACS and SBEACS each consist of two separate and redundant trains. Each train includes a heater, [cooling coils,] a prefilter, moisture separators, a HEPA filter, an activated charcoal adsorber section for removal of radioiodines, and a fan. Ductwork, valves and/or dampers, and instrumentation also form part of the system. The system initiates and maintains a negative air pressure in the shield building by means of filtered exhaust ventilation of the shield building following receipt of a safety injection (SI) signal. The purpose of SR 3.6.13.3 (NUREG-1431) and SR 3.6.8.3 (NUREG-1432) is to verify proper actuation of all train components, including dampers, on an actual or simulated actuation signal. The purpose of SR 3.6.13.4 (NUREG-1431) and SR 3.6.8.4 (NUREG-1432) is to ensure that the system is functioning properly by operating the filter bypass damper.

The ICS (NUREG-1431 and NUREG-1432) is provided to reduce the concentration of fission products released to the containment atmosphere following a postulated accident. The ICS would function together with the Containment Spray and Cooling Systems following a DBA to reduce the potential release of radioactive material, principally iodine, from the containment to the environment. The ICS consists of two 100% capacity, separate, independent, and redundant trains. Each train includes a heater, [cooling coils,] a prefilter, a demister, a high efficiency particulate air (HEPA) filter, an activated charcoal adsorber section for removal of radioiodines, and a fan. Ductwork, valves and/or dampers, and instrumentation also form part of the system. The system initiates filtered recirculation of the containment atmosphere following receipt of a safety injection signal. The purpose of SR 3.6.11.3 (NUREG-1431) and SR 3.6.10.3 (NUREG-1432) is to verify proper actuation of all train components, including dampers, on an actual or simulated actuation signal. The purpose of SR 3.6.11.4 (NUREG-1431) and SR 3.6.10.4 (NUREG-1432) is to ensure that the system is functioning properly by operating the ICS filter bypass damper.

The ECCS PREACS (NUREG-1431 and NUREG-1432), in conjunction with other normally operating systems, also provides environmental control of temperature and humidity in the ECCS pump room area and the lower reaches of the Auxiliary Building. Ductwork, valves or dampers, and instrumentation also form part of the system, as well as demisters functioning to reduce the relative humidity of the air stream. During emergency operations, the ECCS PREACS dampers are realigned, and fans are started to begin filtration. Upon receipt of the actuating ESFAS signal(s), normal air discharges from the ECCS pump room isolate, and the stream of ventilation air discharges through the system filter trains. The prefilters or demisters remove any large particles in the air, and any entrained water droplets present, to prevent excessive loading of the HEPA filters and charcoal adsorbers. The purpose of SR 3.7.12.3 (NUREG-1431) and SR 3.7.13.3 (NUREG-1432) is to verify proper actuation of all train components, including dampers, on an actual or simulated actuation signal. The purpose of

SR 3.7.12.5 (NUREG-1431) and SR 3.7.13.5 (NUREG-1432) is to ensure that the system is functioning properly by operating the ECCS PREACS filter bypass damper.

The FBACS (NUREG-1431 and NUREG-1432) filters airborne radioactive particulates from the area of the fuel pool following a fuel handling accident or LOCA. The FBACS, in conjunction with other normally operating systems, also provides environmental control of temperature and humidity in the fuel pool area. FBACS consists of two independent and redundant trains. Each train consists of a heater, a prefilter or demister, a HEPA filter, an activated charcoal adsorber section for removal of gaseous activity (principally iodines), and a fan. Ductwork, valves or dampers, and instrumentation also form part of the system, as well as demisters, functioning to reduce the relative humidity of the airstream. The system initiates filtered ventilation of the fuel handling building following receipt of a high radiation signal. The FBACS is a standby system, parts of which may also be operated during normal plant operations. Upon receipt of the actuating signal, normal air discharges from the building, the fuel handling building is isolated, and the stream of ventilation air discharges through the system filter trains. The purpose of SR 3.7.13.3 (NUREG-1431) and SR 3.7.14.3 (NUREG-1432) is to verify proper actuation of all train components, including dampers, on an actual or simulated actuation signal. The purpose of SR 3.7.13.5 (NUREG-1431) and SR 3.7.14.5 (NUREG-1432) is to ensure that the system is functioning properly by operating the FBACS filter bypass damper.

The PREACS (NUREG-1431 and NUREG-1432) filters air from the penetration area between containment and the Auxiliary Building. The PREACS consists of two independent and redundant trains. Each train consists of a heater, a prefilter or demister, a HEPA filter, an activated charcoal adsorber section for removal of gaseous activity (principally iodines), and a fan. Ductwork, valves or dampers, and instrumentation, as well as demisters, functioning to reduce the relative humidity of the air stream, also form part of the system. The PREACS is a standby system, parts of which may also operate during normal unit operations. Upon receipt of the actuating signal(s), the PREACS dampers are realigned and fans are started to initiate filtration. The purpose of SR 3.7.14.3 (NUREG-1431) and SR 3.7.15.3 (NUREG-1432) is to verify proper actuation of all train components, including dampers, on an actual or simulated actuation signal. The purpose of SR 3.7.14.5 (NUREG-1431) and SR 3.7.15.5 (NUREG-1432) is to ensure that the system is functioning properly by operating the PREACS filter bypass damper.

The ECW System (NUREG-1432) provides a heat sink for the removal of process and operating heat from selected safety related air handling systems during a DBA or transient. The ECW System is a closed loop system consisting of two independent trains. Each 100% capacity train includes a heat exchanger, surge tank, pump, chemical addition tank, piping, valves, controls, and instrumentation. An independent 100% capacity chilled water refrigeration unit cools each train. The ECW System is actuated on a Safety Injection Actuation Signal (SIAS) and supplies chilled water to the heating, ventilation, and air conditioning units in Engineered Safety Feature (ESF) equipment areas (e.g., the main control room, electrical equipment room, and safety injection pump area). The purpose of SR 3.7.10.2 (NUREG-1432) is to verify proper automatic operation of the ECW System components and that the ECW pumps will start in the event of any accident or transient that generates an SIAS. This SR also ensures that each automatic valve in the flow paths actuates to its correct position on an actual or simulated SIAS.

The ECCS (NUREG-1433 and NUREG-1434) is designed to limit the release of radioactive materials to the environment following a loss of coolant accident (LOCA) and consists of the High Pressure Coolant Injection (HPCI) System (High Pressure Core Spray (HPCS) System in NUREG-1434), the Core Spray (CS) System (Low Pressure Core Spray (LPCS) System in NUREG-1434), the low pressure coolant injection (LPCI) mode of the Residual Heat Removal (RHR) System, and the Automatic Depressurization System (ADS). The purpose of SR 3.5.1.10 (NUREG-1433) and SR 3.5.1.5 (NUREG-1434) is to verify the automatic initiation logic of HPCI (or HPCS), CS (or LPCS), and LPCI will cause the systems or subsystems to operate as designed, including actuation of the system throughout its emergency operating sequence, automatic pump startup and actuation of all automatic valves to their required positions on receipt of an actual or simulated actuation signal.

The function of the RCIC System (NUREG-1433 and NUREG-1434) is to respond to transient events by providing makeup coolant to the reactor. The purpose of SR 3.5.3.5 (NUREG-1433 and NUREG-1434) is to verify the system operates as designed, including actuation of the system throughout its emergency operating sequence; that is, automatic pump startup and actuation of all automatic valves to their required positions on receipt of an actual or simulated actuation signal.

The Plant Service Water System (PSW) and Ultimate Heat Sink (NUREG-1433) and the Standby Service Water (SSW) and Ultimate Heat Sink (NUREG-1434) are designed to provide cooling water for the removal of heat from equipment, such as the diesel generators, RHR pump coolers and heat exchangers, and room coolers for Emergency Core Cooling System equipment, required for a safe reactor shutdown following a DBA or transient. The PSW and SSW systems also provide cooling to unit components, as required, during normal shutdown and reactor isolation modes. During a DBA, the equipment required only for normal operation is isolated and cooling is directed to only safety related equipment. The purpose of SR 3.7.2.6 (NUREG-1433) and SR 3.7.1.6 (NUREG-1434) is to verify the systems will automatically switch to the position to provide cooling water exclusively to safety related equipment during an accident.

The RHR Containment Spray System (NUREG-1434) is designed to mitigate the effects of primary containment bypass leakage and low energy line breaks. The purpose of SR 3.6.1.7.3 is to verify that each RHR containment spray subsystem automatic valve actuates to its correct position upon receipt of an actual or simulated automatic actuation signal.

The function of the Standby Gas Treatment (SGT) System (NUREG-1433 and NUREG-1434) is to ensure that radioactive materials that leak from the primary containment into the secondary containment following a DBA are filtered and adsorbed prior to exhausting to the environment. The purpose of SR 3.6.4.3.3 (NUREG-1433 and NUREG-1434) is to verify that each SGT subsystem starts on receipt of an actual or simulated initiation signal. The purpose of SR 3.6.4.3.4 (NUREG-1433 and NUREG-1434) is to verify that the filter cooler bypass damper can be opened and the fan started. This ensures that the ventilation mode of SGT System operation is available.

The HPCS SWS (NUREG-1434) provides cooling water for the removal of heat from components of the Division 3 HPCS system. The purpose of SR 3.7.2.3 (NUREG-1434) is to verify that the automatic valves of the HPCS SWS will automatically switch to the safety or

emergency position to provide cooling water exclusively to the safety related equipment on an actual or simulated initiation signal.

2.2 Current Technical Specifications Requirements

The current TS SRs affected by the proposed change are similar to one of the following examples:

- Verify each [system train or subsystem] automatic valve in the flow path actuates to the correct position on an actual or simulated actuation signal.
- Verify each [system train or subsystem] actuates on an actual or simulated actuation signal.
- Verify [area isolates] on an actual or simulated actuation signal.
- Verify each [system name] bypass damper can be [opened][closed].
- Verify each automatic [system name] isolation valve actuates to the isolation position on an actual or simulated isolation signal.

2.3 Reason for the Proposed Change

Surveillance Requirement 3.0.1 states:

SRs shall be met during the MODES or other specified conditions in the Applicability for individual LCOs, unless otherwise stated in the SR. Failure to meet a Surveillance, whether such failure is experienced during the performance of the Surveillance or between performances of the Surveillance, shall be failure to meet the LCO. Failure to perform a Surveillance within the specified Frequency shall be failure to meet the LCO except as provided in SR 3.0.3. Surveillances do not have to be performed on inoperable equipment or variables outside specified limits. (Emphasis added.)

This requirement makes clear that when a SR is not met, the LCO is not met. In most cases, failure to meet the SR also results in the inoperability of the subject SSC (i.e., the inability to perform the specified safety function). However, there are instances in which an SSC is not capable of meeting a SR but is still capable of performing its specified safety function(s). Automatic valves or dampers may be locked in their actuated position for maintenance or repair, to support plant operation, or to support maintenance or repair of other components. If the supported system can still perform its specified safety function with the automatic valve or damper locked in the actuated position, the system should not be considered inoperable strictly for that reason and risk a plant shutdown (a higher risk evolution).

To avoid unnecessarily declaring the LCO not met and following the Conditions and Required Actions, the Standard Technical Specifications (STS) address several of these instances through exceptions in the SR.

For example:

- NUREG-1431, SR 3.5.2.5, states, "Verify each ECCS automatic valve in the flow path *that is not locked, sealed, or otherwise secured in position*, actuates to the correct position on an actual or simulated actuation signal."
- NUREG-1432, SR 3.7.5.3, states, "Verify each AFW automatic valve *that is not locked, sealed, or otherwise secured in position*, actuates to the correct position on an actual or simulated actuation signal."
- NUREG-1433, SR 3.5.3.2, states, "Verify each RCIC System manual, power operated, and automatic valve in the flow path, *that is not locked, sealed, or otherwise secured in position*, is in the correct position."

There are additional SRs in the STS that do not need to be met in all circumstances for the SSC to be able to perform its specified safety function(s), but these SRs do not contain exceptions. As a result, in some cases the SRs may be declared not met and the Conditions and Required Actions entered even though the subject SSC is still capable of performing its specified safety function(s).

For example, SR 3.6.11.4 states, "Verify each ICS filter bypass damper can be opened." The active phrase "can be opened" means that the SR would not be met if the filter bypass damper is locked open. The purpose of the damper is to conserve the operating life of the filter by bypassing air flow around it unless the damper is opened by a signal. There is no assumption that the damper is able to close following an event. When the damper is locked opened, the filter is performing its specified safety function (albeit at the cost of more frequent replacement of the filter materials). Nevertheless, in this case the LCO would be declared not met per SR 3.0.1 since the SR is not met, even though the ICS is operable. This circumstance is adverse to plant safety as it may lead to an unnecessary plant shutdown (a transient) when the system is otherwise operable.

A review of the STS identified other SRs that do not have exceptions but for which exceptions would be appropriate to avoid unnecessary entry into Conditions and Required Actions. Many system SRs require verification that an valve or damper actuates on an actual or simulated actuation signal. If the valve or damper is locked in the "actuated," post-accident position, it cannot "actuate" (i.e., move or start working) and the SR is not met. However, if the valve or damper is not assumed to move following actuation and the system is otherwise capable of performing its specified safety function, it should be considered operable. In these cases, an exception in the SR is appropriate. If the specification contains Actions that apply when the valve or damper is in the actuated position and those Actions permit continued plant operation, a change to the SR is not proposed.

2.4 Description of the Proposed Change

The proposed change revises the affected SRs by adding an exception for valves or dampers that are locked, sealed, or otherwise secured in the actuated position.

The proposed revisions are shown below in italics.

NUREG-1430 (Babcock and Wilcox (B&W))

- SR 3.6.7.4 "Verify each spray additive automatic valve in the flow path actuates to the correct position on an actual or simulated actuation signal, *except for valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.7.10.3 "Verify [each CREVS train actuates] [or the control room isolates] on an actual or simulated actuation signal, *except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.7.12.3, "Verify each EVS train actuates on an actual or simulated actuation signal, *except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.7.12.5 "Verify each EVS filter cooling bypass damper can be opened, *except for dampers that are locked, sealed, or otherwise secured in the open position.*"
- SR 3.7.13.3 "Verify each FSPVS train actuates on an actual or simulated actuation signal, *except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.7.13.5 "Verify each FSPVS filter bypass damper can be opened, *except for dampers that are locked, sealed, or otherwise secured in the open position.*"

NUREG-1431 (Westinghouse)

- SR 3.6.11.3 "Verify each ICS train actuates on an actual or simulated actuation signal, *except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.6.11.4 "Verify each ICS filter bypass damper can be opened, *except for dampers that are locked, sealed, or otherwise secured in the open position.*"
- SR 3.6.13.3 "Verify each SBACS train actuates on an actual or simulated actuation signal, *except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.6.13.4 "Verify each SBACS filter bypass damper can be opened, *except for dampers that are locked, sealed, or otherwise secured in the open position.*"
- SR 3.7.10.3 "Verify each CREFS train actuates on an actual or simulated actuation signal, *except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.7.12.3 "Verify each ECCS PREACS train actuates on an actual or simulated actuation signal, *except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.*"

- SR 3.7.12.5 "Verify each ECCS PREACS filter bypass damper can be closed, *except for dampers that are locked, sealed, or otherwise secured in the closed position.*"
- SR 3.7.13.3 "Verify each FBACS train actuates on an actual or simulated actuation signal, *except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.7.13.5 "Verify each FBACS filter bypass damper can be closed, *except for dampers that are locked, sealed, or otherwise secured in the closed position.*"
- SR 3.7.14.3 "Verify each PREACS train actuates on an actual or simulated actuation signal, *except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.7.14.5 "Verify each PREACS filter bypass damper can be closed, *except for dampers that are locked, sealed, or otherwise secured in the closed position.*"

NUREG-1432 (Combustion Engineering (CE))

- SR 3.6.8.3 "Verify each SBEACS train actuates on an actual or simulated actuation signal, *except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.6.8.4 "Verify each SBEACS filter bypass damper can be opened, *except for dampers that are locked, sealed, or otherwise secured in the open position.*"
- SR 3.6.10.3 "Verify each ICS train actuates on an actual or simulated actuation signal, *except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.6.10.4 "Verify each ICS filter bypass damper can be opened, *except for dampers that are locked, sealed, or otherwise secured in the open position.*"
- SR 3.7.10.2 "Verify the proper actuation of each ECW System component on an actual or simulated actuation signal, *except for valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.7.11.3 "Verify each CREACS train actuates on an actual or simulated actuation signal, *except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.7.13.3 "Verify each ECCS PREACS train actuates on an actual or simulated actuation signal, *except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.7.13.5 "Verify each ECCS PREACS filter bypass damper can be opened, *except for dampers that are locked, sealed, or otherwise secured in the open position.*"
- SR 3.7.14.3 "Verify each FBACS train actuates on an actual or simulated actuation signal, *except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.7.14.5 "Verify each FBACS filter bypass damper can be opened, *except for dampers that are locked, sealed, or otherwise secured in the open position.*"

- SR 3.7.15.3 "Verify each PREACS train actuates on an actual or simulated actuation signal, *except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.7.15.5 "Verify each PREACS filter bypass damper can be opened, *except for dampers that are locked, sealed, or otherwise secured in the open position.*"

NUREG-1433 (General Electric (GE) BWR/4)

- SR 3.5.1.10 "Verify each ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal, *except for valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.5.3.5 "Verify the RCIC System actuates on an actual or simulated automatic initiation signal, *except for valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.6.4.3.3 "Verify each SGT subsystem actuates on an actual or simulated initiation signal, *except for dampers that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.6.4.3.4 "Verify each SGT filter cooler bypass damper can be opened and the fan started, *except for dampers that are locked, sealed, or otherwise secured in the open position.*"
- SR 3.7.2.6 "Verify each [PSW] subsystem actuates on an actual or simulated initiation signal, *except for valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.7.4.3 "Verify each [MCREC] subsystem actuates on an actual or simulated initiation signal, *except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.*"

NUREG-1434 (General Electric (GE) BWR/6)

- SR 3.5.1.5 "Verify each ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal, *except for valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.5.3.5 "Verify the RCIC System actuates on an actual or simulated automatic initiation signal, *except for valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.6.1.7.3 "Verify each RHR containment spray subsystem automatic valve in the flow path actuates to its correct position on an actual or simulated automatic initiation signal, *except for valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.6.4.3.3 "Verify each SGT subsystem actuates on an actual or simulated initiation signal, *except for dampers that are locked, sealed, or otherwise secured in the actuated position.*"

- SR 3.6.4.3.4 "Verify each SGT filter cooler bypass damper can be opened and the fan started, *except for dampers that are locked, sealed, or otherwise secured in the open position.*"
- SR 3.7.1.6 "Verify each SSW subsystem actuates on an actual or simulated initiation signal, *except for valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.7.2.3 "Verify the HPCS SWS actuates on an actual or simulated initiation signal, *except for valves that are locked, sealed, or otherwise secured in the actuated position.*"
- SR 3.7.3.3 "Verify each CRFA subsystem actuates on an actual or simulated initiation signal, *except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.*"

There are plant-specific SRs that are similar to the SRs in the proposed change but that do not appear in the STS. The model application provides a variation that permits licensees to justify inclusion of plant-specific SRs that are similar to the proposed changes.

The proposed change is supported by changes to the TS Bases. For example (the revisions are shown in italics):

This SR verifies that each ... subsystem actuates on receipt of an actual or simulated initiation signal. *The SR excludes automatic dampers and valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to dampers or valves that are locked, sealed, or otherwise secured in the actuated position since the affected dampers or valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve or damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve or damper to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve or damper to the non-actuated position requires verification that the SR has been met within its required Frequency.*

An error is corrected in the following SR Bases:

- NUREG-1430, SR 3.7.12.5
- NUREG-1432, SR 3.7.13.5
- NUREG-1432, SR 3.7.14.5
- NUREG-1432, SR 3.7.15.5

The corresponding SR requires that each damper can be opened, but the Bases erroneously states that operability is verified if the damper can be closed. The Bases are correct for similar SRs (e.g., NUREG-1430 and NUREG-1431 SR 3.7.13.5.)

The regulation at Title 10 of the Code of Federal Regulations (10 CFR), Part 50.36, states, "A summary statement of the bases or reasons for such specifications, other than those covering administrative controls, shall also be included in the application, but shall not become part of the technical specifications." Changes to the TS Bases will be made in accordance with the Technical Specifications Bases Control Program following approval of the requested

amendment. The proposed TS Bases changes are consistent with the proposed TS changes and provide the purpose for each requirement in the specification consistent with the Commission's Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors, dated July 2, 1993 (58 FR 39132). Therefore, the Bases changes are provided for information and approval of the Bases is not requested.

A model application is included. The model may be used by licensees desiring to adopt the proposed change following NRC approval.

3. TECHNICAL EVALUATION

The definition of operable - Operability states:

A system, subsystem, train, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, train, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s). (Emphasis added.)

The proposed change revises SRs that verify the ability to actuate on an actual or simulated actuation signal by incorporating an allowance excluding valves and dampers that are locked, sealed or otherwise secured in the actuated position.

These allowances permit components to be exempted from testing under the SR. However, the proposed change does not permit a system that is inoperable to be considered operable. As stated in the SR 3.0.1 Bases, "Nothing in this Specification, however, is to be construed as implying that systems or components are OPERABLE when: a. The systems or components are known to be inoperable, although still meeting the SRs."

Placing a component in a condition not consistent with the design requires consideration of the effect on the operability of the associated system or any supported systems under the licensee's administrative processes, such as the operability determination process. The model application requires licensees to verify that their administrative processes require assessing the operability of the system or any supported systems when utilizing the SR allowances. The operability assessment will consider whether movement of the affected valves or dampers following an event is assumed in the safety analysis (i.e., the analysis of design basis accidents, anticipated operational occurrences, and transients).

As stated in the proposed TS Bases, the automatic valve or damper is verified to be in the correct position prior to locking, sealing, or securing it in position. Valves and dampers that are locked, sealed, or otherwise secured are entered into the licensee's tagging program, which is routinely inspected by the NRC under various 71111 procedures in the NRC Inspection Manual. While in the actuated position, verification of automatic actuation or valve isolation time is not necessary as the specified safety function is assured. However, as with the existing similar SR allowances, the SR must be verified to be met within its required Frequency after removing the valve or damper from the locked, sealed or otherwise secured status.

These allowances and the proposed change do not permit changing the plant design, which must be evaluated under 10 CFR 50.59, and the Final Safety Analysis Report (FSAR) must be updated per 10 CFR 50.71(e). If the valve or damper is locked, sealed, or otherwise secured to support plant operation (such as changing modes, or removing or placing systems in operation), restoration to the design condition is controlled by plant procedures, changes to which are also governed by 10 CFR 50.59. If the valve or damper is locked, sealed, or otherwise secured to facilitate maintenance, restoration is governed by 10 CFR 50, Appendix B, Criterion XVI, and 10 CFR 50.65. If the SR exception is utilized to not test the actuation of a valve or damper and the specified Frequency of the SR is exceeded without testing the component, the SR must be performed on the component when it is returned to service in order to meet the SR.

Under the proposed change, the affected valves and dampers may be excluded from testing when locked, sealed or otherwise secured in the actuated position. However, if the exception is used the operability of the system or any supported systems must be assessed, including whether the safety analysis assumes movement from the actuated position following an event. If the system cannot perform its specified safety function it is inoperable regardless of whether the SR is met. Therefore, the proposed allowance has no effect on the ability to satisfy the safety analysis assumptions.

4. REGULATORY EVALUATION

Section IV, "The Commission Policy," of the "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors" (58 Federal Register 39132), dated July 22, 1993, states in part:

The purpose of Technical Specifications is to impose those conditions or limitations upon reactor operation necessary to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety by identifying those features that are of controlling importance to safety and establishing on them certain conditions of operation which cannot be changed without prior Commission approval.

...[T]he Commission will also entertain requests to adopt portions of the improved STS, even if the licensee does not adopt all STS improvements.

...The Commission encourages all licensees who submit Technical Specification related submittals based on this Policy Statement to emphasize human factors principles.

...In accordance with this Policy Statement, improved STS have been developed and will be maintained for [BWR designs]. The Commission encourages licensees to use the improved STS as the basis for plant-specific Technical Specifications.

...[I]t is the Commission intent that the wording and Bases of the improved STS be used ... to the extent practicable.

As described in the Commission's "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors," recommendations were made by NRC and industry task groups for new STS that include greater emphasis on human factors principles in order to add clarity and understanding to the text of the STS, and provide improvements to the Bases of

STS, which provides the purpose for each requirement in the specification. Improved vendor-specific STS were developed and issued by the NRC in September 1992.

Additionally, 10 CFR 50.36(b) requires:

Each license authorizing operation of a ... utilization facility ... will include technical specifications. The technical specifications will be derived from the analyses and evaluation included in the safety analysis report, and amendments thereto, submitted pursuant to [10 CFR] 50.34 ["Contents of applications; technical information"]. The Commission may include such additional technical specifications as the Commission finds appropriate.

The categories of items required to be in the TSs are provided in 10 CFR 50.36(c). As required by 10 CFR 50.36(c)(3), the TSs will include SRs, which are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met.

Per 10 CFR 50.90, whenever a holder of a license desires to amend the license, application for an amendment must be filed with the Commission, fully describing the changes desired, and following as far as applicable, the form prescribed for original applications.

Per 10 CFR 50.92(a), in determining whether an amendment to a license will be issued to the applicant, the Commission will be guided by the considerations which govern the issuance of initial licenses to the extent applicable and appropriate.

The NRC staff's guidance for the review of TSs is in Chapter 16, "Technical Specifications," of NUREG-0800, Revision 3, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants" (SRP), dated March 2010 (ADAMS Accession No. ML100351425). As described therein, as part of the regulatory standardization effort, the NRC staff has prepared STS for each of the light-water reactor nuclear designs.

In conclusion, based on the considerations discussed above, the proposed revision does not alter the current manner of operation and (1) there is reasonable assurance that the health and safety of the public will not be endangered by continued operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the approval of the proposed change will not be inimical to the common defense and security or to the health and safety of the public.

5. REFERENCES

None

Model Application

[DATE]

10 CFR 50.90

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

DOCKET NO. PLANT NAME
 50-[xxx]
 SUBJECT: APPLICATION TO REVISE TECHNICAL SPECIFICATIONS TO
 ADOPT TSTF-541, "ADD EXCEPTIONS TO SURVEILLANCE
 REQUIREMENTS FOR VALVES AND DAMPERS LOCKED IN THE
 ACTUATED POSITION"

Pursuant to 10 CFR 50.90, [LICENSEE] is submitting a request for an amendment to the Technical Specifications (TS) for [PLANT NAME, UNIT NOS.].

[LICENSEE] requests adoption of TSTF-541, "Add Exceptions to Surveillance Requirements for Valves and Dampers Locked in the Actuated Position," which is an approved change to the Standard Technical Specifications (STS), into the [PLANT NAME, UNIT NOS] Technical Specifications (TS). The proposed amendment modifies certain TS Surveillance Requirements (SRs) by adding exceptions to consider the SR met when automatic valves or dampers are locked, sealed, or otherwise secured in the actuated position, in order to consider the SR met. Securing the automatic valve or damper in the actuated position may affect the operability of the system or any supported systems. The associated Limiting Condition for Operation (LCO) is met if the subject structure, system or component (SSC) remains operable (i.e., capable of performing its specified safety function).

The enclosure provides a description and assessment of the proposed changes. Attachment 1 provides the existing TS pages marked up to show the proposed changes. Attachment 2 provides revised (clean) TS pages. Attachment 3 provides existing TS Bases pages marked to show the proposed changes for information only. {Note: the attachments are not included in the model application.}

[[LICENSEE] requests that the amendment be reviewed under the Consolidated Line Item Improvement Process (CLIIP).] Approval of the proposed amendment is requested by [date]. Once approved, the amendment shall be implemented within [] days.

There are no regulatory commitments made in this submittal.

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

[In accordance with 10 CFR 50.30(b), a license amendment request must be executed in a signed original under oath or affirmation. This can be accomplished by attaching a notarized affidavit confirming the signature authority of the signatory, or by including the following statement in the cover letter: "I declare under penalty of perjury that the foregoing is true and correct. Executed on (date)." The alternative statement is pursuant to 28 USC 1746. It does not require notarization.]

If you should have any questions regarding this submittal, please contact [NAME, TELEPHONE NUMBER].

Sincerely,

[Name, Title]

Attachments: 1. Proposed Technical Specification Changes (Mark-Up)
 2. Revised Technical Specification Pages
 3. Proposed Technical Specification Bases Changes (Mark-Up) for
 Information Only

[The attachments are to be provided by the licensee and are not included in the model application.]

cc: NRC Project Manager
NRC Regional Office
NRC Resident Inspector
State Contact

ATTACHMENT 1 - DESCRIPTION AND ASSESSMENT

1.0 DESCRIPTION

[LICENSEE] requests adoption of TSTF-541, "Add Exceptions to Surveillance Requirements for Valves and Dampers Locked in the Actuated Position," which is an approved change to the Standard Technical Specifications (STS), into the [PLANT NAME, UNIT NOS] Technical Specifications (TS). The proposed amendment modifies the TS Surveillance Requirements (SRs) by adding exceptions to consider the SR met when automatic valves or dampers are locked, sealed, or otherwise secured in the actuated position, in order to consider the SR met. Securing the automatic valve or damper in the actuated position may affect the operability of the system or of any supported systems. The associated Limiting Condition for Operation (LCO) is met if the subject structure, system or component (SSC) remains operable (i.e., capable of performing its specified safety function). The following SRs are affected by the proposed change.

[[SRs in NUREG-1430, "Standard Technical Specifications Babcock and Wilcox Plants"]

- TS 3.6.7, "Spray Additive System,"
- TS 3.7.10, "Control Room Emergency Ventilation System (CREVS),"
- TS 3.7.12, "Emergency Ventilation System (EVS),"
- TS 3.7.13, "Fuel Storage Pool Ventilation System (FSPVS),"]

[[SRs in NUREG-1431, "Standard Technical Specifications Westinghouse Plants"]

- TS 3.6.11, "Iodine Cleanup System (ICS) (Atmospheric and Subatmospheric),"
- TS 3.6.13, "Shield Building Air Cleanup System (SBACS) (Dual and Ice Condenser),"
- TS 3.7.10, "Control Room Emergency Filtration System (CREFS),"
- TS 3.7.12, "Emergency Core Cooling System (ECCS) Pump Room Exhaust Air Cleanup System (PREACS),"
- TS 3.7.13, "Fuel Building Air Cleanup System (FBACS),"
- TS 3.7.14, "Penetration Room Exhaust Air Cleanup System (PREACS),"]

[[SRs in NUREG-1432, "Standard Technical Specifications Combustion Engineering Plants"]

- TS 3.6.8, "Shield Building Exhaust Air Cleanup System (SBEACS) (Dual),"
- TS 3.6.10, "Iodine Cleanup System (ICS) (Atmospheric and Dual),"
- TS 3.7.10, "Essential Chilled Water (ECW),"
- TS 3.7.11, "Control Room Emergency Air Cleanup System (CREACS),"
- TS 3.7.13, "Emergency Core Cooling System (ECCS) Pump Room Exhaust Air Cleanup System (PREACS),"
- TS 3.7.14, "Fuel Building Air Cleanup System (FBACS)," and
- TS 3.7.15, "Penetration Room Exhaust Air Cleanup System (PREACS)."]

[[SRs in NUREG-1433, "Standard Technical Specifications General Electric BWR/4 Plants"]

- TS 3.5.1, "Emergency Core Cooling Systems (ECCS) Operating,"
- TS 3.5.3, "Reactor Core Isolation Cooling (RCIC) System,"
- TS 3.6.4.3, "Standby Gas Treatment (SGT) System,"
- TS 3.7.2, "[Plant Service Water (PSW)] System and [Ultimate Heat Sink (UHS)]," and
- TS 3.7.4 "[Main Control Room Environmental Control (MCREC)] System."]

[[SRs in NUREG-1434, "Standard Technical Specifications General Electric BWR/6 Plants"]
 TS 3.5.1, "Emergency Core Cooling Systems (ECCS) Operating,"
 TS 3.5.3, "Reactor Core Isolation Cooling (RCIC) System,"
 TS 3.6.1.7, "Residual Heat Removal (RHR) Containment Spray System,"
 TS 3.6.4.3, "Standby Gas Treatment (SGT) System,"
 TS 3.7.1, "[Standby Service Water (SSW)] System and [Ultimate Heat Sink (UHS)],"
 TS 3.7.2, "High Pressure Core Spray (HPCS) Service Water System (SWS)," and
 TS 3.7.3, "[Control Room Fresh Air (CRFA)] System."]]

While the proposed exceptions permit automatic valves and dampers that are locked, sealed, or otherwise secured in the actuated position to be excluded from the SR in order to consider the SR met, the proposed changes will not permit a system that is made inoperable by locking, sealing, or otherwise securing an automatic valve or damper in the actuated position to be considered operable. As stated in the [SR 3.0.1] Bases, "Nothing in this Specification, however, is to be construed as implying that systems or components are OPERABLE when: a. The systems or components are known to be inoperable, although still meeting the SRs."

2.0 ASSESSMENT

2.1 Applicability of Safety Evaluation

[LICENSEE] has reviewed the safety evaluation for TSTF-541 provided to the Technical Specifications Task Force in a letter dated [DATE]. This review included a review of the NRC staff's evaluation, as well as the information provided in TSTF-541. [As described herein,] [LICENSEE] has concluded that the justifications presented in TSTF-541 and the safety evaluation prepared by the NRC staff are applicable to [PLANT, UNIT NOS.] and justify this amendment for the incorporation of the changes to the [PLANT] TS.

[LICENSEE] acknowledges that under the proposed change, the affected valves and dampers may be excluded from the SR when locked, sealed or otherwise secured in the actuated position. However, if the safety analysis assumes movement from the actuated position following an event, or the system is rendered inoperable by locking, sealing, or otherwise securing the valve or damper in the actuated position, then the system cannot perform its specified safety function and is inoperable regardless of whether the SR is met.

[LICENSEE] acknowledges for components for which the SR allowance can be utilized, the SR must be verified to have been met within its required Frequency after removing the valve or damper from the locked, sealed or otherwise secured status. If the SR exception is utilized to not test the actuation of a valve or damper and the specified Frequency of the SR is exceeded without testing the component, the SR must be performed on the component when it is returned to service in order to meet the SR.

2.2 Variations

[LICENSEE is not proposing any variations from the TS changes described in TSTF-541 or the applicable parts of the NRC staff's safety evaluation dated [DATE].] [LICENSEE is proposing the following variations from the TS changes described in TSTF-541 or the applicable parts of the NRC staff's safety evaluation: describe the variations.]

[The [PLANT] TS utilize different [numbering][and][titles] than the Standard Technical Specifications on which TSTF-541 was based. Specifically, [describe differences between the plant-specific TS numbering and/or titles and TSTF-541 numbering and titles.] These differences are administrative and do not affect the applicability of TSTF-541 to the [PLANT] TS.]

[The [PLANT] TS contain requirements that differ from the Standard Technical Specifications on which TSTF-541 was based, but these differences do not affect the applicability of the TSTF-541 justification. [Describe differences and why TSTF-541 is still applicable.]

[The [PLANT] TS have incorporated TSTF-542, Revision 2, "Reactor Pressure Vessel Water Inventory Control," which had not been incorporated into the standard TS on which TSTF-541 was based. The changes in TSTF-541 are equally applicable to new [SR 3.5.2.7 and SR 3.5.2.8] added by TSTF-542. Therefore, the TSTF-541 allowance is added to those SRs.]

[The [PLANT] TS contain SRs similar to those that are affected by TSTF-541, but that do not appear in the traveler. The justification in TSTF-541 is equally applicable to proposed changes to those SRs. [Describe differences and why TSTF-541 is still applicable.]]

[The [PLANT] Technical Specifications contain a Surveillance Frequency Control Program. Therefore, the Frequency for the affected SRs is "In accordance with the Surveillance Frequency Control Program." This has no effect on the applicability of the proposed change.]

2.3 Licensee Verifications

[LICENSEE] confirms that existing administrative processes, such as the Corrective Action Program, Operability Determination process, the maintenance, design control, configuration control, and operating procedures, etc., will be used to assess the operability of the system or of any supported systems when utilizing the SR allowances, which includes consideration of whether movement of the affected valves or dampers following an event is assumed in the safety analysis.

3.0 REGULATORY ANALYSIS

3.1 No Significant Hazards Consideration Determination

[LICENSEE] requests adoption of TSTF-541, "Add Exceptions to Surveillance Requirements for Valves and Dampers Locked in the Actuated Position," which is an approved change to the Standard Technical Specifications (STS), into the [PLANT NAME, UNIT NOS] Technical Specifications (TS). The proposed amendment modifies the TS Surveillance Requirements (SRs) by adding exceptions to consider the SR met when automatic valves or dampers are locked, sealed, or otherwise secured in the actuated position, in order to consider the SR met. Securing the automatic valve or damper in the actuated position may affect the operability of the system or of any supported systems. The associated Limiting Condition for Operation (LCO) is met if the subject structure, system or component (SSC) remains operable (i.e., capable of performing its specified safety function).

[LICENSEE] has evaluated whether or not a significant hazards consideration is involved with the proposed amendment(s) by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

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

Response: No

The proposed change revises SRs by adding exceptions excluding from actuation and isolation time testing those valves and dampers that are locked, sealed or otherwise secured in the actuated position. The performance or lack of performance of SRs is not an initiator of any accident previously evaluated. As a result, the proposed change has no effect on the probability of any accident previously evaluated. The proposed change excludes performance of portions of certain SRs, but the SSC must still be capable of performing the safety functions assumed in the accident analysis. Otherwise, the SSC is inoperable, and the associated TS Actions are followed. As a result, the SSCs continue to perform their mitigating functions and the consequences of any accident previously evaluated are not affected.

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

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

Response: No

The proposed change revises SRs by adding exceptions excluding from actuation and isolation time testing those valves and dampers that are locked, sealed or otherwise secured in the actuated position. The proposed change will not change the design function or operability requirements of the affected SSCs. The SSC must still be capable of performing the safety functions assumed in the accident analysis or the SSC is inoperable, and the associated TS Actions are followed. The proposed change does not create any credible new failure mechanisms, malfunctions, or accident initiators not considered in the design and licensing bases.

Therefore, 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 amendment involve a significant reduction in a margin of safety?

Response: No

The proposed change revises SRs by adding exceptions excluding from actuation and isolation time testing those valves and dampers that are locked, sealed or otherwise secured in the actuated position. The proposed change does not alter the manner in which safety limits, limiting safety system settings or limiting conditions for operation are

determined. The safety analysis assumptions and acceptance criteria are not affected by this change.

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

Based on the above, [LICENSEE] concludes that the proposed change presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

3.2 Conclusion

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

4. ENVIRONMENTAL CONSIDERATION

The proposed change would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed change.

Technical Specifications and Bases Proposed Changes

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.7.2	Verify spray additive tank solution volume is \geq [12,970] gal and \leq [13,920] gal.	[184 days <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.6.7.3	Verify spray additive tank [NaOH] solution concentration is \geq [60,000 ppm] and \leq [65,000 ppm].	[184 days <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.6.7.4	Verify each spray additive automatic valve in the flow path actuates to the correct position on an actual or simulated actuation signal, <i>except for valves that are locked, sealed, or otherwise secured in the actuated position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.6.7.5	Verify Spray Additive System flow [rate] from each solution's flow path.	[5 years <u>OR</u> In accordance with the Surveillance Frequency Control Program]

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.7.10.2	Perform required CREVS filter testing in accordance with the [Ventilation Filter Testing Program (VFTP)].	In accordance with the [VFTP]
SR 3.7.10.3	Verify [each CREVS train actuates] [or the control room isolates] on an actual or simulated actuation signal, <i>except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.7.10.4	Perform required CRE unfiltered air inleakage testing in accordance with the Control Room Envelope Habitability Program.	In accordance with the Control Room Envelope Habitability Program
SR 3.7.10.5	[Verify the system makeup flow rate is \geq [270] and \leq [330] cfm when supplying the the control room with outside air.	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]]

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.12.1	Operate each EVS train for [\geq 10 continuous hours with the heaters operating or (for systems without heaters) \geq 15 minutes].	[31 days <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.7.12.2	Perform required EVS filter testing in accordance with the [Ventilation Filter Testing Program (VFTP)].	In accordance with the [VFTP]
SR 3.7.12.3	Verify each EVS train actuates on an actual or simulated actuation signal, <i>except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.7.12.4	Verify one EVS train can maintain a pressure \leq [] inches water gauge relative to atmospheric pressure during the [post accident] mode of operation at a flow rate of \leq [3000] cfm.	[[18] months on a STAGGERED TEST BASIS <u>OR</u> In accordance with the Surveillance Frequency Control Program]

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.7.12.5 [Verify each EVS filter cooling bypass damper can be opened, <i>except for dampers that are locked, sealed, or otherwise secured in the open position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]]

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.13.1	[Operate each FSPVS train for ≥ 10 continuous hours with the heaters operating or (for systems without heaters) ≥ 15 minutes].	[31 days <u>OR</u> In accordance with the Surveillance Frequency Control Program]]
SR 3.7.13.2	[Perform required FSPVS filter testing in accordance with the [Ventilation Filter Testing Program (VFTP)].	In accordance with the [VFTP]]
SR 3.7.13.3	[Verify each FSPVS train actuates on an actual or simulated actuation signal, <i>except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]]
SR 3.7.13.4	Verify one FSPVS train can maintain a pressure $\leq []$ inches water gauge with respect to atmospheric pressure during the [post accident] mode of operation at a flow rate $\leq [3000]$ cfm.	[[18] months on a STAGGERED TEST BASIS <u>OR</u> In accordance with the Surveillance Frequency Control Program]]

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.7.13.5 [Verify each FSPVS filter bypass damper can be opened, <i>except for dampers that are locked, sealed, or otherwise secured in the open position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]]

BASES

SURVEILLANCE REQUIREMENTS (continued)

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

SR 3.6.7.4

This SR provides verification that each automatic valve in the Spray Additive System flow path actuates to its correct position. *The SR excludes automatic valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to valves that are locked, sealed, or otherwise secured in the actuated position since the affected valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve to the non-actuated position requires verification that the SR has been met within its required Frequency.* [The [18] month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown that these components usually pass the Surveillance when performed at the [18] month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.10.2

This SR verifies that the required CREVS testing is performed in accordance with the [Ventilation Filter Testing Program (VFTP)]. The [VFTP] includes testing HEPA filter performance, charcoal absorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal. Specific test Frequencies and additional information are discussed in detail in the [VFTP].

SR 3.7.10.3

This SR verifies that [each CREVS train starts] [or the CRE isolates] and operates on an actual or simulated actuation signal. The SR excludes automatic dampers and valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to dampers or valves that are locked, sealed, or otherwise secured in the actuated position since the affected dampers or valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve or damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve or damper to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve or damper to the non-actuated position requires verification that the SR has been met within its required Frequency. [The Frequency of [18] months is based on industry operating experience and is consistent with the typical refueling cycle.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----

Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.

SR 3.7.10.4

This SR verifies the OPERABILITY of the CRE boundary by testing for unfiltered air leakage past the CRE boundary and into the CRE. The

BASES

SURVEILLANCE
REQUIREMENTSSR 3.7.12.1

Standby systems should be checked periodically to ensure that they function properly. Since the environment and normal operating conditions on this system are not severe, testing each train once a month provides an adequate check on this system. Monthly heater operations dry out any moisture that may have accumulated in the charcoal from humidity in the ambient air. [Systems with heaters must be operated ≥ 10 continuous hours with the heaters energized. Systems without heaters need only be operated for ≥ 15 minutes to demonstrate the function of the system.] [The 31 day Frequency is based on known reliability of equipment and the two train redundancy available.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

SR 3.7.12.2

This SR verifies that the required EVS testing is performed in accordance with the [Ventilation Filter Testing Program (VFTP)]. The [VFTP] includes testing HEPA filter performance, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specific test frequencies and additional information are discussed in detail in the [VFTP].

SR 3.7.12.3

This SR verifies that each EVS train starts and operates on an actual or simulated actuation signal. *The SR excludes automatic dampers and valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to dampers or valves that are locked, sealed, or otherwise secured in the actuated position since the affected dampers or valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve or damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve or damper to be*

repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve or damper to the non-actuated position requires verification that the SR has been met within its required Frequency. [The [18] month Frequency is consistent with that specified in Reference 5.

OR

BASES

SURVEILLANCE REQUIREMENTS (continued)

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

SR 3.7.12.4

This SR verifies the integrity of the negative pressure boundary area. The ability of the EVS to maintain a negative pressure, with respect to potentially uncontaminated adjacent areas, is periodically tested to verify proper functioning of the EVS. During the [post accident] mode of operation, the EVS is designed to maintain a slight negative pressure in the negative pressure boundary area with respect to adjacent areas to prevent unfiltered LEAKAGE. The EVS is designed to maintain this negative pressure at a flow rate of [3000] cfm from the negative pressure boundary area. [The Frequency of [18] months on a STAGGERED TEST BASIS is consistent with industry practice and other filtration SRs.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

[SR 3.7.12.5

Operating the EVS filter bypass damper is necessary to ensure that the system functions properly. The OPERABILITY of the EVS filter bypass damper is verified if it can be *opened closed*. *The SR excludes automatic dampers that are locked, sealed, or otherwise secured in the open position. The SR does not apply to dampers that are locked, sealed, or otherwise secured in the open position since the affected dampers were verified to be in the open position prior to being locked, sealed, or*

otherwise secured. Placing an automatic damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the damper to be closed to support the accident analysis. Restoration of an automatic damper to the closed position requires verification that the SR has been met within its required Frequency. [An [18] month Frequency is consistent with that specified in Reference 5.

BASES

SURVEILLANCE
REQUIREMENTS[SR 3.7.13.1

Standby systems should be checked periodically to ensure that they function properly. As the environment and normal operating conditions on this system are not severe, testing each train once every month provides an adequate check on this system. Monthly heater operation dries out any moisture accumulated in the charcoal from humidity in the ambient air. [Systems with heaters must be operated for ≥ 10 continuous hours with the heaters energized. Systems without heaters need only be operated for ≥ 15 minutes to demonstrate the function of the system.] [The 31 day Frequency is based on the known reliability of the equipment and the two train redundancy available.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]]

[SR 3.7.13.2

This SR verifies that the required FSPVS testing is performed in accordance with the [Ventilation Filter Testing Program (VFTP)]. The [VFTP] includes testing HEPA filter performance, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specific test frequencies and additional information are discussed in detail in the [VFTP].]

[SR 3.7.13.3

This SR verifies that each FSPVS train starts and operates on an actual or simulated actuation signal. *The SR excludes automatic dampers and valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to dampers or valves that are locked, sealed, or otherwise secured in the actuated position since the affected dampers or valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve or damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems,*

including whether it is necessary for the valve or damper to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve or damper to the non-actuated position requires verification that the SR has been met within its required Frequency. [The 18 month Frequency is consistent with that specified in Reference 6.

OR

BASES

SURVEILLANCE REQUIREMENTS (continued)

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]]

SR 3.7.13.4

This SR verifies the integrity of the fuel handling area. The ability of the fuel handling area to maintain a negative pressure, with respect to potentially uncontaminated adjacent areas, is periodically tested to verify proper function of the FSPVS. During the [post accident] mode of operation, the FSPVS is designed to maintain a slight negative pressure in the fuel handling area to prevent unfiltered LEAKAGE. The FSPVS is designed to maintain this negative pressure at a flow rate of \leq [3000] cfm to the fuel handling area. [The Frequency of [18] months on a STAGGERED TEST BASIS is consistent with industry practice.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]]

SR 3.7.13.5

Operating the FSPVS filter bypass damper is necessary to ensure that the system functions properly. The OPERABILITY of the FSPVS filter bypass damper is verified if it can be opened. *The SR excludes automatic dampers that are locked, sealed, or otherwise secured in the open position. The SR does not apply to dampers that are locked, sealed, or otherwise secured in the open position since the affected dampers were verified to be in the open position prior to being locked, sealed, or otherwise secured. Placing an automatic damper in a locked,*

sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the damper to be closed to support the accident analysis. Restoration of an automatic damper to the closed position requires verification that the SR has been met within its required Frequency. [A
Frequency of [18] months is specified in Reference 6.

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.11.3	Verify each ICS train actuates on an actual or simulated actuation signal, <i>except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.6.11.4	[Verify each ICS filter bypass damper can be opened, <i>except for dampers that are locked, sealed, or otherwise secured in the open position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]]

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.6.13.3 Verify each SBACS train actuates on an actual or simulated actuation signal, <i>except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.6.13.4 [Verify each SBACS filter bypass damper can be opened, <i>except for dampers that are locked, sealed, or otherwise secured in the open position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]]
SR 3.6.13.5 Verify each SBACS train flow rate is \geq [] cfm.	[[18] months on a STAGGERED TEST BASIS <u>OR</u> In accordance with the Surveillance Frequency Control Program]

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.7.10.2	Perform required CREFS filter testing in accordance with the [Ventilation Filter Testing Program (VFTP)].	In accordance with the [VFTP]
SR 3.7.10.3	Verify each CREFS train actuates on an actual or simulated actuation signal, <i>except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.7.10.4	Perform required CRE unfiltered air inleakage testing in accordance with the Control Room Envelope Habitability Program.	In accordance with the Control Room Envelope Habitability Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.12.1	Operate each ECCS PREACS train for ≥ 10 continuous hours with the heaters operating or (for systems without heaters) ≥ 15 minutes].	[31 days <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.7.12.2	Perform required ECCS PREACS filter testing in accordance with the [Ventilation Filter Testing Program (VFTP)].	In accordance with the [VFTP]
SR 3.7.12.3	Verify each ECCS PREACS train actuates on an actual or simulated actuation signal, <i>except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.7.12.4	Verify one ECCS PREACS train can maintain a pressure $\leq [-0.125]$ inches water gauge relative to atmospheric pressure during the [post accident] mode of operation at a flow rate of $\leq [3000]$ cfm.	[[18] months on a STAGGERED TEST BASIS <u>OR</u> In accordance with the Surveillance Frequency Control Program]

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.7.12.5 [Verify each ECCS PREACS filter bypass damper can be closed, <i>except for dampers that are locked, sealed, or otherwise secured in the closed position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]]

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.13.1	Operate each FBACS train for ≥ 10 continuous hours with the heaters operating or (for systems without heaters) ≥ 15 minutes].	[31 days <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.7.13.2	Perform required FBACS filter testing in accordance with the [Ventilation Filter Testing Program (VFTP)].	In accordance with the [VFTP]
SR 3.7.13.3	[Verify each FBACS train actuates on an actual or simulated actuation signal, <i>except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]]
SR 3.7.13.4	Verify one FBACS train can maintain a pressure $\leq [-0.125]$ inches water gauge with respect to atmospheric pressure during the [post accident] mode of operation at a flow rate $\leq [20,000]$ cfm.	[[18] months on a STAGGERED TEST BASIS <u>OR</u> In accordance with the Surveillance Frequency Control Program]

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.7.13.5 [Verify each FBACS filter bypass damper can be closed, <i>except for dampers that are locked, sealed, or otherwise secured in the closed position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]]

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.14.1	Operate each PREACS train for [≥ 10 continuous hours with heaters operating or (for systems without heaters) ≥ 15 minutes].	[31 days <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.7.14.2	Perform required PREACS filter testing in accordance with the [Ventilation Filter Testing Program (VFTP)].	In accordance with the [VFTP]
SR 3.7.14.3	[Verify each PREACS train actuates on an actual or simulated actuation signal, <i>except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]]
SR 3.7.14.4	[Verify one PREACS train can maintain a pressure $\leq [-0.125]$ inches water gauge relative to atmospheric pressure during the [post accident] mode of operation at a flow rate of $\leq [3000]$ cfm.	[[18] months on a STAGGERED TEST BASIS <u>OR</u> In accordance with the Surveillance Frequency Control Program]]

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.7.14.5 [Verify each PREACS filter bypass damper can be closed, <i>except for dampers that are locked, sealed, or otherwise secured in the closed position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]]

BASES

SURVEILLANCE REQUIREMENTS (continued)

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

SR 3.6.11.2

This SR verifies that the required ICS filter testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The VFTP includes testing HEPA filter performance, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specific test frequencies and additional information are discussed in detail in the VFTP.

SR 3.6.11.3

The automatic startup test verifies that both trains of equipment start upon receipt of an actual or simulated test signal. *The SR excludes automatic dampers and valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to dampers or valves that are locked, sealed, or otherwise secured in the actuated position since the affected dampers or valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve or damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve or damper to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve or damper to the non-actuated position requires verification that the SR has been met within its required Frequency.* [The [18] month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown that these components usually pass the Surveillance when performed at the [18] month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint. Furthermore, the Frequency was developed considering that the system equipment OPERABILITY is demonstrated at a 31 day Frequency by SR 3.6.11.1.

OR

BASES

SURVEILLANCE REQUIREMENTS (continued)

[SR 3.6.11.4

The ICS filter bypass dampers are tested to verify OPERABILITY. The dampers are in the bypass position during normal operation and must reposition for accident operation to draw air through the filters. *The SR excludes automatic dampers that are locked, sealed, or otherwise secured in the open position. The SR does not apply to dampers that are locked, sealed, or otherwise secured in the open position since the affected dampers were verified to be in the open position prior to being locked, sealed, or otherwise secured. Placing an automatic damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the damper to be closed to support the accident analysis. Restoration of an automatic damper to the closed position requires verification that the SR has been met within its required Frequency.* [The [18] month Frequency is considered to be acceptable based on the damper reliability and design, the mild environmental conditions in the vicinity of the dampers, and the fact that operating experience has shown that the dampers usually pass the Surveillance when performed at the [18] month Frequency.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----

Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.

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- REFERENCES
1. 10 CFR 50, Appendix A, GDC 41, GDC 42, and GDC 43.
 2. FSAR, Section [6.5].
 3. Regulatory Guide 1.52, Revision [2].
 4. FSAR, Chapter [15].
-

BASES

SURVEILLANCE REQUIREMENTS (continued)

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

SR 3.6.13.2

This SR verifies that the required SBACS filter testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The VFTP includes testing HEPA filter performance, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specific test frequencies and additional information are discussed in detail in the VFTP.

SR 3.6.13.3

The automatic startup ensures that each SBACS train responds properly. *The SR excludes automatic dampers and valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to dampers or valves that are locked, sealed, or otherwise secured in the actuated position since the affected dampers or valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve or damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve or damper to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve or damper to the non-actuated position requires verification that the SR has been met within its required Frequency.* [The [18] month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown that these components usually pass the Surveillance when performed at the [18] month Frequency. Therefore the Frequency was concluded to be acceptable from a reliability standpoint. Furthermore, the SR interval was developed considering that the SBACS

BASES

SURVEILLANCE REQUIREMENTS (continued)

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

[SR 3.6.13.4

The SBACS filter bypass dampers are tested to verify OPERABILITY. The dampers are in the bypass position during normal operation and must reposition for accident operation to draw air through the filters. *The SR excludes automatic dampers that are locked, sealed, or otherwise secured in the open position. The SR does not apply to dampers that are locked, sealed, or otherwise secured in the open position since the affected dampers were verified to be in the open position prior to being locked, sealed, or otherwise secured. Placing an automatic damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the damper to be closed to support the accident analysis. Restoration of an automatic damper to the closed position requires verification that the SR has been met within its required Frequency.* [The [18] month Frequency is considered to be acceptable based on damper reliability and design, mild environmental conditions in the vicinity of the dampers, and the fact that operating experience has shown that the dampers usually pass the Surveillance when performed at the [18] month Frequency.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
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SR 3.6.13.5

The proper functioning of the fans, dampers, filters, adsorbents, etc., as a system is verified by the ability of each train to produce the required

BASES

SURVEILLANCE
REQUIREMENTSSR 3.7.10.1

Standby systems should be checked periodically to ensure that they function properly. As the environment and normal operating conditions on this system are not too severe, testing each train once every month provides an adequate check of this system. Monthly heater operations dry out any moisture accumulated in the charcoal from humidity in the ambient air. [Systems with heaters must be operated for ≥ 10 continuous hours with the heaters energized. Systems without heaters need only be operated for ≥ 15 minutes to demonstrate the function of the system.] [The 31 day Frequency is based on the reliability of the equipment and the two train redundancy.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

SR 3.7.10.2

This SR verifies that the required CREFS testing is performed in accordance with the [Ventilation Filter Testing Program (VFTP)]. The [VFTP] includes testing the performance of the HEPA filter, charcoal adsorber efficiency, minimum flow rate, and the physical properties of the activated charcoal. Specific test Frequencies and additional information are discussed in detail in the [VFTP].

SR 3.7.10.3

This SR verifies that each CREFS train starts and operates on an actual or simulated actuation signal. *The SR excludes automatic dampers and valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to dampers or valves that are locked, sealed, or otherwise secured in the actuated position since the affected dampers or valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve or damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve or damper to be*

repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve or damper to the non-actuated position requires verification that the SR has been met within its required Frequency. [The Frequency of [18] months is based on industry operating experience and is consistent with the typical refueling cycle.

OR

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.12.2

This SR verifies that the required ECCS PREACS testing is performed in accordance with the [Ventilation Filter Testing Program (VFTP)]. The [VFTP] includes testing HEPA filter performance, charcoal adsorbers efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specific test Frequencies and additional information are discussed in detail in the [VFTP].

SR 3.7.12.3

This SR verifies that each ECCS PREACS train starts and operates on an actual or simulated actuation signal. *The SR excludes automatic dampers and valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to dampers or valves that are locked, sealed, or otherwise secured in the actuated position since the affected dampers or valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve or damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve or damper to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve or damper to the non-actuated position requires verification that the SR has been met within its required Frequency.* [The [18] month Frequency is consistent with that specified in Reference 4.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

SR 3.7.12.4

This SR verifies the integrity of the ECCS pump room enclosure. The ability of the ECCS pump room to maintain a negative pressure, with

respect to potentially uncontaminated adjacent areas, is periodically tested to verify proper functioning of the ECCS PREACS. During the [post accident] mode of operation, the ECCS PREACS is designed to maintain a slight negative pressure in the ECCS pump room, with respect to adjacent areas, to prevent unfiltered LEAKAGE. The ECCS PREACS is designed to maintain a $\leq[-0.125]$ inches water gauge relative to atmospheric pressure at a flow rate of [3000] cfm from the ECCS pump room. [The Frequency of [18] months is consistent with the guidance provided in NUREG-0800, Section 6.5.1 (Ref. 6).

BASES

SURVEILLANCE REQUIREMENTS (continued)

This test is conducted with the tests for filter penetration; thus, an [18] month Frequency on a STAGGERED TEST BASIS is consistent with that specified in Reference 4.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----

Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.

[SR 3.7.12.5

Operating the ECCS PREACS bypass damper is necessary to ensure that the system functions properly. The OPERABILITY of the ECCS PREACS bypass damper is verified if it can be specified in Reference 4. *The SR excludes automatic dampers that are locked, sealed, or otherwise secured in the closed position. The SR does not apply to dampers that are locked, sealed, or otherwise secured in the closed position since the affected dampers were verified to be in the closed position prior to being locked, sealed, or otherwise secured. Placing an automatic damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the damper to be opened to support the accident analysis. Restoration of an automatic damper to the opened position requires verification that the SR has been met within its required Frequency.* [An [18] month Frequency is consistent with that specified in Reference 4.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----

Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.

BASES

SURVEILLANCE REQUIREMENTS (continued)

[SR 3.7.13.3

This SR verifies that each FBACS train starts and operates on an actual or simulated actuation signal. *The SR excludes automatic dampers and valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to dampers or valves that are locked, sealed, or otherwise secured in the actuated position since the affected dampers or valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve or damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve or damper to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve or damper to the non-actuated position requires verification that the SR has been met within its required Frequency.* [The [18] month Frequency is consistent with Reference 6.]

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

SR 3.7.13.4

This SR verifies the integrity of the fuel building enclosure. The ability of the fuel building to maintain negative pressure with respect to potentially uncontaminated adjacent areas is periodically tested to verify proper function of the FBACS. During the [post accident] mode of operation, the FBACS is designed to maintain a slight negative pressure in the fuel building, to prevent unfiltered LEAKAGE. The FBACS is designed to maintain a \leq [-0.125] inches water gauge with respect to atmospheric pressure at a flow rate of [20,000] cfm to the fuel building. [The Frequency of [18] months is consistent with the guidance provided in NUREG-0800, Section 6.5.1 (Ref. 7).

An [18] month Frequency (on a STAGGERED TEST BASIS) is consistent with Reference 6.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

BASES

SURVEILLANCE REQUIREMENTS (continued)

-----REVIEWER'S NOTE-----
 Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
 -----]

[SR 3.7.13.5

Operating the FBACS filter bypass damper is necessary to ensure that the system functions properly. The OPERABILITY of the FBACS filter bypass damper is verified if it can be closed. *The SR excludes automatic dampers that are locked, sealed, or otherwise secured in the closed position. The SR does not apply to dampers that are locked, sealed, or otherwise secured in the closed position since the affected dampers were verified to be in the closed position prior to being locked, sealed, or otherwise secured. Placing an automatic damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the damper to be opened to support the accident analysis. Restoration of an automatic damper to the opened position requires verification that the SR has been met within its required Frequency.* [An [18] month Frequency is consistent with Reference 6.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
 Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
 -----]]

REFERENCES

1. FSAR, Section [6.5.1].
2. FSAR, Section [9.4.5].
3. FSAR, Section [15.7.4].
4. Regulatory Guide 1.25.
5. 10 CFR 100.

BASES

SURVEILLANCE REQUIREMENTS (continued)

[SR 3.7.14.3

This SR verifies that each PREACS starts and operates on an actual or simulated actuation signal. *The SR excludes automatic dampers and valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to dampers or valves that are locked, sealed, or otherwise secured in the actuated position since the affected dampers or valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve or damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve or damper to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve or damper to the non-actuated position requires verification that the SR has been met within its required Frequency.* [The [18] month Frequency is consistent with that specified in Reference 5.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]]

[SR 3.7.14.4

This SR verifies the integrity of the penetration room enclosure. The ability of the penetration room to maintain a negative pressure, with respect to potentially uncontaminated adjacent areas, is periodically tested to verify proper function of PREACS. During the [post accident] mode of operation, the PREACS is designed to maintain a $\leq[-0.125]$ inches water gauge relative to atmospheric pressure at a flow rate of [3000] cfm in the penetration room, with respect to adjacent areas, to prevent unfiltered LEAKAGE.

The minimum system flow rate maintains a slight negative pressure in the penetration room area, and provides sufficient air velocity to transport particulate contaminants, assuming only one filter train is operating. The number of filter elements is selected to limit the flow rate through any

individual element to about [3000] cfm. This may vary based on filter housing geometry. The maximum limit ensures that the flow through, and pressure drop across, each filter element are not excessive.

The number and depth of the adsorber elements ensure that, at the maximum flow rate, the residence time of the air stream in the charcoal bed achieves the desired adsorption rate. At least a [0.125] second residence time is necessary for an assumed [99]% efficiency.

BASES

SURVEILLANCE REQUIREMENTS (continued)

The filters have a certain pressure drop at the design flow rate when clean. The magnitude of the pressure drop indicates acceptable performance, and is based on manufacturers' recommendations for the filter and adsorber elements at the design flow rate. An increase in pressure drop or a decrease in flow indicates that the filter is being loaded or that there are other problems with the system.

[This test is conducted along with the tests for filter penetration; thus, the [18] month Frequency is consistent with that specified in Reference 5. The Frequency of [18] months is also consistent with the guidance provided in NUREG-0800 (Ref. 6).

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]]

[SR 3.7.14.5

It is necessary to operate the PREACS filter bypass damper to ensure that the system functions properly. The OPERABILITY of the PREACS filter bypass damper is verified if it can be closed. *The SR excludes automatic dampers that are locked, sealed, or otherwise secured in the closed position. The SR does not apply to dampers that are locked, sealed, or otherwise secured in the closed position since the affected dampers were verified to be in the closed position prior to being locked, sealed, or otherwise secured. Placing an automatic damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the damper to be opened to support the accident analysis. Restoration of an automatic damper to the opened position requires verification that the SR has been met within its required Frequency.* [An [18] month Frequency is consistent with that specified in Reference 5.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.6.8.3 Verify each SBEACS train actuates on an actual or simulated actuation signal, <i>except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.</i>	[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.6.8.4 [Verify each SBEACS filter bypass damper can be opened, <i>except for dampers that are locked, sealed, or otherwise secured in the open position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]]
SR 3.6.8.5 Verify each SBEACS train flow rate is $\geq [\]$ cfm.	[[18] months on a STAGGERED TEST BASIS <u>OR</u> In accordance with the Surveillance Frequency Control Program]

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.10.3	Verify each ICS train actuates on an actual or simulated actuation signal, <i>except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.6.10.4	[Verify each ICS filter bypass damper can be opened, <i>except for dampers that are locked, sealed, or otherwise secured in the open position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]]

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.7.10.1</p> <p>-----NOTE----- Isolation of ECW flow to individual components does not render the ECW System inoperable. -----</p> <p>Verify each ECW manual, power operated, and automatic valve in the flow path, that is not locked, sealed, or otherwise secured in position, is in the correct position.</p>	<p>[31 days</p> <p><u>OR</u></p> <p>In accordance with the Surveillance Frequency Control Program]</p>
<p>SR 3.7.10.2</p> <p>Verify the proper actuation of each ECW System component on an actual or simulated actuation signal, <i>except for valves that are locked, sealed, or otherwise secured in the actuated position.</i></p>	<p>[[18] months</p> <p><u>OR</u></p> <p>In accordance with the Surveillance Frequency Control Program]</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.7.11.2	Perform required CREACS filter testing in accordance with the [Ventilation Filter Testing Program (VFTP)].	In accordance with the [VFTP]
SR 3.7.11.3	Verify each CREACS train actuates on an actual or simulated actuation signal, <i>except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.7.11.4	Perform required CRE unfiltered air inleakage testing in accordance with the Control Room Envelope Habitability Program.	In accordance with the Control Room Envelope Habitability Program

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.13.1	Operate each ECCS PREACS train for ≥ 10 continuous hours with the heater operating or (for systems without heaters) ≥ 15 minutes].	[31 days <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.7.13.2	Perform required ECCS PREACS filter testing in accordance with the [Ventilation Filter Testing Program (VFTP)].	In accordance with the [VFTP]
SR 3.7.13.3	Verify each ECCS PREACS train actuates on an actual or simulated actuation signal, <i>except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.7.13.4	Verify one ECCS PREACS train can maintain a negative pressure $\geq []$ inches water gauge relative to atmospheric pressure during the [post accident] mode of operation at a flow rate of $\leq [20,000]$ cfm.	[[18] months on a STAGGERED TEST BASIS <u>OR</u> In accordance with the Surveillance Frequency Control Program]

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.7.13.5 [Verify each ECCS PREACS filter bypass damper can be opened, <i>except for dampers that are locked, sealed, or otherwise secured in the open position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]]

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.14.1	Operate each FBACS train for ≥ 10 continuous hours with the heaters operating or (for systems without heaters) ≥ 15 minutes].	[31 days <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.7.14.2	Perform required FBACS filter testing in accordance with the [Ventilation Filter Testing Program (VFTP)].	In accordance with the [VFTP]
SR 3.7.14.3	[Verify each FBACS train actuates on an actual or simulated actuation signal, <i>except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]]
SR 3.7.14.4	Verify one FBACS train can maintain a negative pressure $\geq []$ inches water gauge with respect to atmospheric pressure, during the [post accident] mode of operation at a flow rate $\leq [3000]$ cfm.	[[18] months on a STAGGERED TEST BASIS <u>OR</u> In accordance with the Surveillance Frequency Control Program]

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.7.14.5 [Verify each FBACS filter bypass damper can be opened, <i>except for dampers that are locked, sealed, or otherwise secured in the open position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]]

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.15.1	Operate each PREACS train for $[\geq 10]$ continuous hours with the heater operating or (for systems without heaters) ≥ 15 minutes].	[31 days <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.7.15.2	Verify required PREACS filter testing in accordance with the [Ventilation Filter Testing Program (VFTP)].	In accordance with the [VFTP]
SR 3.7.15.3	[Verify each PREACS train actuates on an actual or simulated actuation signal, <i>except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]]
SR 3.7.15.4	[Verify one PREACS train can maintain a negative pressure $\geq []$ inches water gauge with respect to atmospheric pressure during the [post accident] mode of operation at a flow rate of $\leq [3000]$ cfm.	[[18] months on a STAGGERED TEST BASIS <u>OR</u> In accordance with the Surveillance Frequency Control Program]]

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.7.15.5 [Verify each PREACS filter bypass damper can be opened, <i>except for dampers that are locked, sealed, or otherwise secured in the open position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]]

BASES

SURVEILLANCE REQUIREMENTS (continued)

elimination on the adsorbers and HEPA filters. [The 31 day Frequency was developed considering the known reliability of fan motors and controls, the two train redundancy available, and the iodine removal capability of the Containment Spray System.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

SR 3.6.8.2

This SR verifies that the required SBEACS filter testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The VFTP includes testing of HEPA filter performance, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specific test frequencies and additional information are discussed in detail in the VFTP.

SR 3.6.8.3

The automatic startup ensures that each SBEACS train responds properly. *The SR excludes automatic dampers and valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to dampers or valves that are locked, sealed, or otherwise secured in the actuated position since the affected dampers or valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve or damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve or damper to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve or damper to the non-actuated position requires verification that the SR has been met within its required Frequency.* [The [18] month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an

unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown that these components usually pass the Surveillance when performed at the [18] month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint. Furthermore, the SR interval was developed considering that the SBEACS equipment OPERABILITY is demonstrated at a 31 day Frequency by SR 3.6.8.1.

BASES

SURVEILLANCE REQUIREMENTS (continued)

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

[SR 3.6.8.4

The filter bypass dampers are tested to verify OPERABILITY. The dampers are in the bypass position during normal operation and must reposition for accident operation to draw air through the filters. *The SR excludes automatic dampers that are locked, sealed, or otherwise secured in the open position. The SR does not apply to dampers that are locked, sealed, or otherwise secured in the open position since the affected dampers were verified to be in the open position prior to being locked, sealed, or otherwise secured. Placing an automatic damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the damper to be closed to support the accident analysis. Restoration of an automatic damper to the closed position requires verification that the SR has been met within its required Frequency.* [The [18] month Frequency is considered to be acceptable based on the damper reliability and design, the mild environmental conditions in the vicinity of the dampers, and the fact that operating experience has shown that the dampers usually pass the Surveillance when performed at the [18] month Frequency.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]]

BASES

SURVEILLANCE REQUIREMENTS (continued)

-----REVIEWER'S NOTE-----
 Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
 -----]

SR 3.6.10.2

This SR verifies that the required ICS filter testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The VFTP includes testing HEPA filter performance, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specific test frequencies and additional information are discussed in detail in the VFTP.

SR 3.6.10.3

The automatic startup test verifies that both trains of equipment start upon receipt of an actual or simulated test signal. *The SR excludes automatic dampers and valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to dampers or valves that are locked, sealed, or otherwise secured in the actuated position since the affected dampers or valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve or damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve or damper to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve or damper to the non-actuated position requires verification that the SR has been met within its required Frequency.* [The [18] month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown that these components usually pass the Surveillance when performed at the [18] month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint. Furthermore, the Frequency was developed considering that the system equipment OPERABILITY is demonstrated on a 31 day Frequency by SR 3.6.10.1.

OR

BASES

SURVEILLANCE REQUIREMENTS (continued)

[SR 3.6.10.4

The ICS filter bypass dampers are tested to verify OPERABILITY. The dampers are in the bypass position during normal operation and must reposition for accident operation to draw air through the filters. *The SR excludes automatic dampers that are locked, sealed, or otherwise secured in the open position. The SR does not apply to dampers that are locked, sealed, or otherwise secured in the open position since the affected dampers were verified to be in the open position prior to being locked, sealed, or otherwise secured. Placing an automatic damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the damper to be closed to support the accident analysis. Restoration of an automatic damper to the closed position requires verification that the SR has been met within its required Frequency.* [The [18] month Frequency is considered to be acceptable based on the damper reliability and design, the mild environmental conditions in the vicinity of the dampers, and the fact that operating experience has shown that the dampers usually pass the Surveillance when performed at the [18] month Frequency.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----

Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.

-----]]

REFERENCES

1. 10 CFR 50, Appendix A, GDC 41, GDC 42, and GDC 43.
2. FSAR, Section [].
3. Regulatory Guide 1.52, Revision [2].
4. FSAR, Section [].

BASES

SURVEILLANCE REQUIREMENTS (continued)

This SR is modified by a Note indicating that the isolation of ECW flow to components or systems may render those components inoperable but does not affect the OPERABILITY of the ECW System.

[The 31 day Frequency is based on engineering judgment, is consistent with the procedural controls governing valve operation, and ensures correct valve positions.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

SR 3.7.10.2

This SR verifies proper automatic operation of the ECW System components that the ECW pumps will start in the event of any accident or transient that generates an SIAS. This SR also ensures that each automatic valve in the flow paths actuates to its correct position on an actual or simulated SIAS. *The SR excludes automatic valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to valves that are locked, sealed, or otherwise secured in the actuated position since the affected valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve to the non-actuated position requires verification that the SR has been met within its required Frequency.* The ECW System cannot be fully actuated as part of the SIAS CHANNEL FUNCTIONAL TEST during normal operation. The actuation logic is tested as part of the SIAS functional test every 92 days, except for the subgroup relays that actuate the system that cannot be tested during normal unit operation. [The [18] month Frequency is based on the need to perform this Surveillance under the conditions that apply during a unit outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. The [18] month Frequency is based on operating experience and design reliability of the equipment.

BASES

SURVEILLANCE REQUIREMENTS (continued)

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

SR 3.7.11.2

This SR verifies that the required CREACS testing is performed in accordance with the [Ventilation Filter Testing Program (VFTP)]. The [VFTP] includes testing HEPA filter performance, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specific test Frequencies and additional information are discussed in detail in the [VFTP].

SR 3.7.11.3

This SR verifies that each CREACS train starts and operates on an actual or simulated actuation signal. *The SR excludes automatic dampers and valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to dampers or valves that are locked, sealed, or otherwise secured in the actuated position since the affected dampers or valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve or damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve or damper to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve or damper to the non-actuated position requires verification that the SR has been met within its required Frequency.* [The Frequency of [18] months is based on industry operating experience and is consistent with the typical refueling cycle.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.13.2

This SR verifies that the required ECCS PREACS testing is performed in accordance with the [Ventilation Filter Testing Program (VFTP)]. The [VFTP] includes testing HEPA filter performance, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specific test frequencies and additional information are discussed in detail in the [VFTP].

SR 3.7.13.3

This SR verifies that each ECCS PREACS train starts and operates on an actual or simulated actuation signal. *The SR excludes automatic dampers and valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to dampers or valves that are locked, sealed, or otherwise secured in the actuated position since the affected dampers or valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve or damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve or damper to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve or damper to the non-actuated position requires verification that the SR has been met within its required Frequency.* [The [18] month Frequency is consistent with that specified in Regulatory Guide 1.52 (Ref. 4).

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

SR 3.7.13.4

This SR verifies the integrity of the ECCS pump room enclosure. The ability of the ECCS pump room to maintain a negative pressure, with

BASES

SURVEILLANCE REQUIREMENTS (continued)

This test is conducted with the tests for filter penetration; thus, an [18] month Frequency, on a STAGGERED TEST BASIS is consistent with other filtration SRs.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----

Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.

[SR 3.7.13.5

Operating the ECCS PREACS filter bypass damper is necessary to ensure that the system functions properly. The OPERABILITY of the bypass damper is verified if it can be ~~closed~~opened. *The SR excludes automatic dampers that are locked, sealed, or otherwise secured in the open position. The SR does not apply to dampers that are locked, sealed, or otherwise secured in the open position since the affected dampers were verified to be in the open position prior to being locked, sealed, or otherwise secured. Placing an automatic damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the damper to be closed to support the accident analysis. Restoration of an automatic damper to the closed position requires verification that the SR has been met within its required Frequency.* [An [18] month Frequency is consistent with that specified in Reference 4.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----

Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.

BASES

SURVEILLANCE REQUIREMENTS (continued)

[SR 3.7.14.3

This SR verifies that each FBACS train starts and operates on an actual or simulated actuation signal. *The SR excludes automatic dampers and valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to dampers or valves that are locked, sealed, or otherwise secured in the actuated position since the affected dampers or valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve or damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve or damper to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve or damper to the non-actuated position requires verification that the SR has been met within its required Frequency.* [The [18] month Frequency is consistent with that specified in Reference 6.]

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]]

SR 3.7.14.4

This SR verifies the integrity of the fuel building enclosure. The ability of the fuel building to maintain negative pressure with respect to potentially uncontaminated adjacent areas is periodically tested to verify proper function of the FBACS. During the post accident mode of operation, the FBACS is designed to maintain a slight negative pressure in the fuel building, with respect to adjacent areas, to prevent unfiltered LEAKAGE. The FBACS is designed to maintain this negative pressure at a flow rate of \leq [3000] cfm to the fuel building. [The Frequency of [18] months is consistent with the guidance provided in NUREG-0800, Section 6.5.1 (Ref. 7).

This test is conducted with the tests for filter penetration; thus, an [18] month Frequency, on a STAGGERED TEST BASIS is consistent with other filtration SRs.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

BASES

SURVEILLANCE REQUIREMENTS (continued)

-----REVIEWER'S NOTE-----
 Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
 -----]

[SR 3.7.14.5

Operating the FBACS filter bypass damper is necessary to ensure that the system functions properly. The OPERABILITY of the FBACS filter bypass damper is verified if it can be ~~opened~~*closed*. *The SR excludes automatic dampers that are locked, sealed, or otherwise secured in the open position. The SR does not apply to dampers that are locked, sealed, or otherwise secured in the open position since the affected dampers were verified to be in the open position prior to being locked, sealed, or otherwise secured. Placing an automatic damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the damper to be closed to support the accident analysis. Restoration of an automatic damper to the closed position requires verification that the SR has been met within its required Frequency.* [The 18 month Frequency is consistent with that specified in Reference 6.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
 Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
 -----]]

REFERENCES

1. FSAR, Section [6.5.1].
2. FSAR, Section [9.4.5].
3. FSAR, Section [15.7.4].
4. Regulatory Guide 1.25.
5. 10 CFR 100.

BASES

SURVEILLANCE
REQUIREMENTSSR 3.7.15.1

Standby systems should be checked periodically to ensure that they function properly. As the environment and normal operating conditions on this system are not severe, testing each train once every month provides an adequate check on this system.

Monthly heater operation dries out any moisture that may have accumulated in the charcoal as a result of humidity in the ambient air. [Systems with heaters must be operated for ≥ 10 continuous hours with the heaters energized. Systems without heaters need only be operated for ≥ 15 minutes to demonstrate the function of the system.] [The 31 day Frequency is based on the known reliability of the equipment and the two train redundancy available.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

SR 3.7.15.2

This SR verifies the performance of PREACS filter testing in accordance with the [Ventilation Filter Testing Program (VFTP)]. The [VFTP] includes testing the performance of the HEPA filter, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specific test frequencies and additional information are discussed in detail in the [VFTP].

[SR 3.7.15.3

This SR verifies that each PREACS train starts and operates on an actual or simulated actuation signal. *The SR excludes automatic dampers and valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to dampers or valves that are locked, sealed, or otherwise secured in the actuated position since the affected dampers or valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve*

or damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve or damper to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve or damper to the non-actuated position requires verification that the SR has been met within its required Frequency. [The [18] month Frequency is consistent with that specified in Reference 4.]

OR

BASES

SURVEILLANCE REQUIREMENTS (continued)

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]]

[SR 3.7.15.5

Operating the PREACS filter bypass damper is necessary to ensure that the system functions properly. The OPERABILITY of the PREACS filter bypass damper is verified if it can be ~~closed~~*opened*. *The SR excludes automatic dampers that are locked, sealed, or otherwise secured in the open position. The SR does not apply to dampers that are locked, sealed, or otherwise secured in the open position since the affected dampers were verified to be in the open position prior to being locked, sealed, or otherwise secured. Placing an automatic damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the damper to be closed to support the accident analysis. Restoration of an automatic damper to the closed position requires verification that the SR has been met within its required Frequency.* [An [18] month Frequency is consistent with that specified in Reference 4.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]]

REFERENCES

1. FSAR, Section [6.5.1].
2. FSAR, Section [9.4.5].

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.5.1.10</p> <p>-----NOTE----- Vessel injection/spray may be excluded. -----</p> <p>Verify each ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal, <i>except for valves that are locked, sealed, or otherwise secured in the actuated position.</i></p>	<p>[[18] months</p> <p><u>OR</u></p> <p>In accordance with the Surveillance Frequency Control Program]</p>
<p>SR 3.5.1.11</p> <p>-----NOTE----- Valve actuation may be excluded. -----</p> <p>Verify the ADS actuates on an actual or simulated automatic initiation signal.</p>	<p>[[18] months</p> <p><u>OR</u></p> <p>In accordance with the Surveillance Frequency Control Program]</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.5.3.4</p> <p>-----NOTE----- Not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test. -----</p> <p>Verify, with [reactor pressure] ≤ [165] psig, the RCIC pump can develop a flow rate ≥ [400] gpm [against a system head corresponding to reactor pressure].</p>	<p>[[18] months</p> <p><u>OR</u></p> <p>In accordance with the Surveillance Frequency Control Program]</p>
<p>SR 3.5.3.5</p> <p>-----NOTE----- Vessel injection may be excluded. -----</p> <p>Verify the RCIC System actuates on an actual or simulated automatic initiation signal, <i>except for valves that are locked, sealed, or otherwise secured in the actuated position.</i></p>	<p>[[18] months</p> <p><u>OR</u></p> <p>In accordance with the Surveillance Frequency Control Program]</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.4.3.2	Perform required SGT filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.6.4.3.3	Verify each SGT subsystem actuates on an actual or simulated initiation signal, <i>except for dampers that are locked, sealed, or otherwise secured in the actuated position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.6.4.3.4	[Verify each SGT filter cooler bypass damper can be opened and the fan started, <i>except for dampers that are locked, sealed, or otherwise secured in the open position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]]

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.7.2.5</p> <p>-----NOTE----- Isolation of flow to individual components does not render [PSW] System inoperable. -----</p> <p>Verify each [PSW] subsystem manual, power operated, and automatic valve in the flow paths servicing safety related systems or components, that is not locked, sealed, or otherwise secured in position, is in the correct position.</p>	<p>[31 days</p> <p><u>OR</u></p> <p>In accordance with the Surveillance Frequency Control Program]</p>
<p>SR 3.7.2.6</p> <p>[Verify each [PSW] subsystem actuates on an actual or simulated initiation signal, <i>except for valves that are locked, sealed, or otherwise secured in the actuated position.</i></p>	<p>[[18] months</p> <p><u>OR</u></p> <p>In accordance with the Surveillance Frequency Control Program]</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.7.4.3 Verify each [MCREC] subsystem actuates on an actual or simulated initiation signal, <i>except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.7.4.4 Perform required CRE unfiltered air leakage testing in accordance with the Control Room Envelope Habitability Program.	In accordance with the Control Room Envelope Habitability Program

BASES

SURVEILLANCE REQUIREMENTS (continued)

The Surveillance Frequencies for [SR 3.5.1.7,] SR 3.5.1.8, and SR 3.5.1.9 are controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

SR 3.5.1.10

The ECCS subsystems are required to actuate automatically to perform their design functions. This Surveillance verifies that, with a required system initiation signal (actual or simulated), the automatic initiation logic of HPCI, CS, and LPCI will cause the systems or subsystems to operate as designed, including actuation of the system throughout its emergency operating sequence, automatic pump startup and actuation of all automatic valves to their required positions. This SR also ensures that the HPCI System will automatically restart on an RPV low water level (Level 2) signal received subsequent to an RPV high water level (Level 8) trip and that the suction is automatically transferred from the CST to the suppression pool. *The SR excludes automatic valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to valves that are locked, sealed, or otherwise secured in the actuated position since the affected valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve to the non-actuated position requires verification that the SR has been met within its required Frequency.* The LOGIC SYSTEM FUNCTIONAL TEST performed in LCO 3.3.5.1 overlaps this Surveillance to provide complete testing of the assumed safety function.

[The 18 month Frequency is based on the need to perform the Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power.

Operating experience has shown that these components usually pass the SR when performed at the 18 month Frequency, which is based on the

BASES

SURVEILLANCE REQUIREMENTS (continued)

when the RCIC System diverts steam flow. Reactor steam pressure must be \geq [920] psig to perform SR 3.5.3.3 and \geq [150] psig to perform SR 3.5.3.4. Adequate steam flow is represented by [at least 1.25 turbine bypass valves open, or total steam flow $\geq 10^6$ lb/hr]. Therefore, sufficient time is allowed after adequate pressure and flow are achieved to perform these SRs. Reactor startup is allowed prior to performing the low pressure Surveillance because the reactor pressure is low and the time allowed to satisfactorily perform the Surveillance is short. The reactor pressure is allowed to be increased to normal operating pressure since it is assumed that the low pressure Surveillance has been satisfactorily completed and there is no indication or reason to believe that RCIC is inoperable. Therefore, these SRs are modified by Notes that state the Surveillances are not required to be performed until 12 hours after the reactor steam pressure and flow are adequate to perform the test.

[A 92 day Frequency for SR 3.5.3.3 is consistent with the Inservice Testing Program requirements. The 18 month Frequency for SR 3.5.3.4 is based on the need to perform the Surveillance under conditions that apply just prior to or during a startup from a plant outage. Operating experience has shown that these components usually pass the SR when performed at the 18 month Frequency, which is based on the refueling cycle. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

SR 3.5.3.5

The RCIC System is required to actuate automatically in order to verify its design function satisfactorily. This Surveillance verifies that, with a required system initiation signal (actual or simulated), the automatic initiation logic of the RCIC System will cause the system to operate as designed, including actuation of the system throughout its emergency operating sequence; that is, automatic pump startup and actuation of all automatic valves to their required positions. This test also ensures the

BASES

SURVEILLANCE REQUIREMENTS (continued)

RCIC System will automatically restart on an RPV low water level (Level 2) signal received subsequent to an RPV high water level (Level 8) trip and that the suction is automatically transferred from the CST to the suppression pool. *The SR excludes automatic valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to valves that are locked, sealed, or otherwise secured in the actuated position since the affected valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve to the non-actuated position requires verification that the SR has been met within its required Frequency.* The LOGIC SYSTEM FUNCTIONAL TEST performed in LCO 3.3.5.2 overlaps this Surveillance to provide complete testing of the assumed safety function.

[The 18 month Frequency is based on the need to perform the Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown that these components usually pass the SR when performed at the 18 month Frequency, which is based on the refueling cycle. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

This SR is modified by a Note that excludes vessel injection during the Surveillance. Since all active components are testable and full flow can be demonstrated by recirculation through the test line, coolant injection into the RPV is not required during the Surveillance.

REFERENCES

1. 10 CFR 50, Appendix A, GDC 33.
2. FSAR, Section [5.5.6].

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.4.3.3

This SR verifies that each SGT subsystem starts on receipt of an actual or simulated initiation signal. *The SR excludes automatic dampers that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to dampers that are locked, sealed, or otherwise secured in the actuated position since the affected dampers were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the damper to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic damper to the non-actuated position requires verification that the SR has been met within its required Frequency.* [While this Surveillance can be performed with the reactor at power, operating experience has shown that these components usually pass the Surveillance when performed at the [18] month Frequency. The LOGIC SYSTEM FUNCTIONAL TEST in SR 3.3.6.2.6 overlaps this SR to provide complete testing of the safety function. Therefore, the Frequency was found to be acceptable from a reliability standpoint.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----

Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.

[SR 3.6.4.3.4

This SR verifies that the filter cooler bypass damper can be opened and the fan started. This ensures that the ventilation mode of SGT System operation is available. *The SR excludes automatic dampers that are locked, sealed, or otherwise secured in the open position. The SR does not apply to dampers that are locked, sealed, or otherwise secured in the open position since the affected dampers were verified to be in the open position prior to being locked, sealed, or otherwise secured. Placing an automatic damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported*

systems, including whether it is necessary for the damper to be closed to support the accident analysis. Restoration of an automatic damper to the closed position requires verification that the SR has been met within its required Frequency. [While this Surveillance can be performed with the reactor at power, operating experience has shown that these components usually pass the Surveillance when performed at the [18] month Frequency, which is based on the refueling cycle. Therefore, the Frequency was found to be acceptable from a reliability standpoint.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
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BASES

SURVEILLANCE REQUIREMENTS (continued)

to locking, sealing, or securing. A valve is also allowed to be in the nonaccident position, and yet considered in the correct position, provided it can be automatically realigned to its accident position within the required time. This SR does not require any testing or valve manipulation; rather, it involves verification that those valves capable of being mispositioned are in the correct position. This SR does not apply to valves that cannot be inadvertently misaligned, such as check valves.

This SR is modified by a Note indicating that isolation of the [PSW] System to components or systems may render those components or systems inoperable, but does not affect the OPERABILITY of the [PSW] System. As such, when all [PSW] pumps, valves, and piping are OPERABLE, but a branch connection off the main header is isolated, the [PSW] System is still OPERABLE.

[The 31 day Frequency is based on engineering judgment, is consistent with the procedural controls governing valve operation, and ensures correct valve positions.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

SR 3.7.2.6

This SR verifies that the automatic isolation valves of the [PSW] System will automatically switch to the safety or emergency position to provide cooling water exclusively to the safety related equipment during an accident event. This is demonstrated by the use of an actual or simulated initiation signal. This SR also verifies the automatic start capability of one of the two [PSW] pumps in each subsystem. *The SR excludes automatic valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to valves that are locked, sealed, or otherwise secured in the actuated position since the affected valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve in a locked, sealed, or otherwise secured position requires an assessment of the operability of*

the system or any supported systems, including whether it is necessary for the valve to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve to the non-actuated position requires verification that the SR has been met within its required Frequency.

[Operating experience has shown that these components usually pass the SR when performed at the [18] month Frequency. Therefore, this Frequency is concluded to be acceptable from a reliability standpoint.

OR

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.4.2

This SR verifies that the required [MCREC] testing is performed in accordance with the [Ventilation Filter Testing Program (VFTP)]. The [VFTP] includes testing HEPA filter performance, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specific test Frequencies and additional information are discussed in detail in the [VFTP].

SR 3.7.4.3

This SR verifies that on an actual or simulated initiation signal, each [MCREC] subsystem starts and operates. The LOGIC SYSTEM FUNCTIONAL TEST in SR 3.3.7.1.5 overlaps this SR to provide complete testing of the safety function. *The SR excludes automatic dampers and valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to dampers or valves that are locked, sealed, or otherwise secured in the actuated position since the affected dampers or valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve or damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve or damper to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve or damper to the non-actuated position requires verification that the SR has been met within its required Frequency.* [The Frequency of [18] months is based on industry operating experience and is consistent with the typical refueling cycle.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

SR 3.7.4.4

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.5.1.5</p> <p>-----NOTE----- Vessel injection/spray may be excluded. -----</p> <p>Verify each ECCS injection/spray subsystem actuates on an actual or simulated automatic initiation signal, <i>except for valves that are locked, sealed, or otherwise secured in the actuated position.</i></p>	<p>[[18] months</p> <p><u>OR</u></p> <p>In accordance with the Surveillance Frequency Control Program]</p>
<p>SR 3.5.1.6</p> <p>-----NOTE----- Valve actuation may be excluded. -----</p> <p>Verify the ADS actuates on an actual or simulated automatic initiation signal.</p>	<p>[[18] months</p> <p><u>OR</u></p> <p>In accordance with the Surveillance Frequency Control Program]</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.5.3.4</p> <p>-----NOTE----- Not required to be performed until 12 hours after reactor steam pressure and flow are adequate to perform the test. -----</p> <p>Verify, with [RCIC steam supply pressure] \leq [165] psig, the RCIC pump can develop a flow rate \geq [800] gpm [against a system head corresponding to reactor pressure].</p>	<p>[[18] months</p> <p><u>OR</u></p> <p>In accordance with the Surveillance Frequency Control Program]</p>
<p>SR 3.5.3.5</p> <p>-----NOTE----- Vessel injection may be excluded. -----</p> <p>Verify the RCIC System actuates on an actual or simulated automatic initiation signal, <i>except for valves that are locked, sealed, or otherwise secured in the actuated position.</i></p>	<p>[[18] months</p> <p><u>OR</u></p> <p>In accordance with the Surveillance Frequency Control Program]</p>

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.6.1.7.3 Verify each RHR containment spray subsystem automatic valve in the flow path actuates to its correct position on an actual or simulated automatic initiation signal, <i>except for valves that are locked, sealed, or otherwise secured in the actuated position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.6.1.7.4 Verify each spray nozzle is unobstructed.	[At first refueling] <u>AND</u> [10 years <u>OR</u> In accordance with the Surveillance Frequency Control Program]

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.4.3.2	Perform required SGT filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.6.4.3.3	Verify each SGT subsystem actuates on an actual or simulated initiation signal, <i>except for dampers that are locked, sealed, or otherwise secured in the actuated position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.6.4.3.4	[Verify each SGT filter cooler bypass damper can be opened and the fan started, <i>except for dampers that are locked, sealed, or otherwise secured in the open position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]]

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.7.1.4	[Operate each [SSW] cooling tower fan for \geq [15] minutes.	[31 days <u>OR</u> In accordance with the Surveillance Frequency Control Program]]
SR 3.7.1.5	<p>-----NOTE----- Isolation of flow to individual components does not render [SSW] System inoperable. -----</p> <p>Verify each [SSW] subsystem manual, power operated, and automatic valve in the flow path servicing safety related systems or components, that is not locked, sealed, or otherwise secured in position, is in the correct position.</p>	[31 days <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.7.1.6	[Verify each [SSW] subsystem actuates on an actual or simulated initiation signal, <i>except for valves that are locked, sealed, or otherwise secured in the actuated position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.7.2.2</p> <p>-----NOTE----- Isolation of flow to individual components does not render [HPCS SWS] System inoperable. -----</p> <p>Verify each HPCS SWS manual, power operated, and automatic valve in the flow path [servicing safety related systems or components], that is not locked, sealed, or otherwise secured in position, is in the correct position.</p>	<p>[31 days</p> <p><u>OR</u></p> <p>In accordance with the Surveillance Frequency Control Program]</p>
<p>SR 3.7.2.3</p> <p>Verify the HPCS SWS actuates on an actual or simulated initiation signal, <i>except for valves that are locked, sealed, or otherwise secured in the actuated position.</i></p>	<p>[[18] months</p> <p><u>OR</u></p> <p>In accordance with the Surveillance Frequency Control Program]</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.3.1	Operate each [CRFA] subsystem for ≥ 10 continuous hours with the heaters operating or (for systems without heaters) ≥ 15 minutes].	[31 days <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.7.3.2	Perform required [CRFA] filter testing in accordance with the [Ventilation Filter Testing Program (VFTP)].	In accordance with the [VFTP]
SR 3.7.3.3	Verify each [CRFA] subsystem actuates on an actual or simulated initiation signal, <i>except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position.</i>	[[18] months <u>OR</u> In accordance with the Surveillance Frequency Control Program]
SR 3.7.3.4	Perform required CRE unfiltered air inleakage testing in accordance with the Control Room Envelope Habitability Program.	In accordance with the Control Room Envelope Habitability Program

BASES

SURVEILLANCE REQUIREMENTS (continued)

of HPCS, LPCS, and LPCI will cause the systems or subsystems to operate as designed, including actuation of the system throughout its emergency operating sequence, automatic pump startup, and actuation of all automatic valves to their required positions. This Surveillance also ensures that the HPCS System will automatically restart on an RPV low water level (Level 2) signal received subsequent to an RPV high water level (Level 8) trip and that the suction is automatically transferred from the CST to the suppression pool. *The SR excludes automatic valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to valves that are locked, sealed, or otherwise secured in the actuated position since the affected valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve to the non-actuated position requires verification that the SR has been met within its required Frequency.* The LOGIC SYSTEM FUNCTIONAL TEST performed in LCO 3.3.5.1 overlaps this Surveillance to provide complete testing of the assumed safety function.

[The 18 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown that these components usually pass the SR when performed at the 18 month Frequency, which is based on the refueling cycle. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
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This SR is modified by a Note that excludes vessel injection/spray during the Surveillance. Since all active components are testable and full flow can be demonstrated by recirculation through the test line, coolant injection into the RPV is not required during the Surveillance.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.5.3.5

The RCIC System is required to actuate automatically to perform its design function. This Surveillance verifies that with a required system initiation signal (actual or simulated) the automatic initiation logic of RCIC will cause the system to operate as designed, including actuation of the system throughout its emergency operating sequence, automatic pump startup and actuation of all automatic valves to their required positions. This Surveillance test also ensures that the RCIC System will automatically restart on an RPV low water level (Level 2) signal received subsequent to an RPV high water level (Level 8) trip and that the suction is automatically transferred from the CST to the suppression pool. *The SR excludes automatic valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to valves that are locked, sealed, or otherwise secured in the actuated position since the affected valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve to the non-actuated position requires verification that the SR has been met within its required Frequency.* The LOGIC SYSTEM FUNCTIONAL TEST performed in LCO 3.3.5.2 overlaps this Surveillance to provide complete testing of the assumed safety function.

[The 18 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown that these components usually pass the SR when performed at the 18 month Frequency, which is based on the refueling cycle. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.

BASES

SURVEILLANCE REQUIREMENTS (continued)

-----REVIEWER'S NOTE-----

If the testing is within the scope of the licensee's Inservice Testing Program, the Frequency "In accordance with the Inservice Testing Program" should be used. Otherwise, the periodic Frequency of 92 days or the reference to the Surveillance Frequency Control Program should be used.

[The Frequency of this SR is [in accordance with the Inservice Testing Program] [92 days.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----

Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.

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SR 3.6.1.7.3

This SR verifies that each RHR containment spray subsystem automatic valve actuates to its correct position upon receipt of an actual or simulated automatic actuation signal. Actual spray initiation is not required to meet this SR. *The SR excludes automatic valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to valves that are locked, sealed, or otherwise secured in the actuated position since the affected valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve to the non-actuated position requires verification that the SR has been met within its required Frequency.* The LOGIC SYSTEM FUNCTIONAL TEST in SR 3.3.6.3.6 overlaps this SR to provide complete testing of the safety function. [The [18] month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown that these components usually

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.4.3.2

This SR verifies that the required SGT filter testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The VFTP includes testing HEPA filter performance, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specified test frequencies and additional information are discussed in detail in the VFTP.

SR 3.6.4.3.3

This SR requires verification that each SGT subsystem starts upon receipt of an actual or simulated initiation signal. *The SR excludes automatic dampers that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to dampers that are locked, sealed, or otherwise secured in the actuated position since the affected dampers were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the damper to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic damper to the non-actuated position requires verification that the SR has been met within its required Frequency.* The LOGIC SYSTEM FUNCTIONAL TEST in SR 3.3.6.2.5 overlaps this SR to provide complete testing of the safety function. [While this Surveillance can be performed with the reactor at power, operating experience has shown these components usually pass the Surveillance when performed at the [18] month Frequency, which is based on the refueling cycle. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

[SR 3.6.4.3.4

This SR requires verification that the SGT filter cooler bypass damper can be opened and the fan started. This ensures that the ventilation mode of SGT System operation is available. *The SR excludes automatic dampers that are locked, sealed, or otherwise secured in the open position. The SR does not apply to dampers that are locked, sealed, or otherwise secured in the open position since the affected dampers were verified to be in the open position prior to being locked, sealed, or otherwise secured. Placing an automatic damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the damper to be closed to support the accident analysis. Restoration of an automatic damper to the closed position requires verification that the SR has been met within its required Frequency.* [While this Surveillance can be performed with the reactor at power, operating experience has shown these components usually pass the Surveillance when performed at the [18] month Frequency, which is based on the refueling cycle. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.1.6

This SR verifies that the automatic isolation valves of the [SSW] System will automatically switch to the safety or emergency position to provide cooling water exclusively to the safety related equipment during an accident event. This is demonstrated by use of an actual or simulated initiation signal. This SR also verifies the automatic start capability of the [SSW] pump and cooling tower fans in each subsystem. *The SR excludes automatic valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to valves that are locked, sealed, or otherwise secured in the actuated position since the affected valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve to the non-actuated position requires verification that the SR has been met within its required Frequency.* The LOGIC SYSTEM FUNCTIONAL TEST in SR 3.3.5.1.6 overlaps this SR to provide complete testing of the safety function.

[Operating experience has shown that these components usually pass the SR when performed on the [18] month Frequency. Therefore, this Frequency is concluded to be acceptable from a reliability standpoint.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

REFERENCES

1. Regulatory Guide 1.27, Revision 2, January 1976.
2. FSAR, Section [9.2.1].
3. FSAR, Table [9.2-3].
4. FSAR, Section [6.2.1.1.3.3.1.6].

BASES

SURVEILLANCE REQUIREMENTS (continued)

A valve is also allowed to be in the nonaccident position and yet considered in the correct position, provided it can be automatically realigned to its accident position within the required time. This SR does not require any testing or valve manipulation; rather, it involves verification that those valves capable of potentially being mispositioned are in the correct position. This SR does not apply to valves that cannot be inadvertently misaligned, such as check valves.

This SR is modified by a Note indicating that isolation of the [HPCS SWS] System to components or systems may render those components or systems inoperable, but does not affect the OPERABILITY of the [HPCS SWS] System. As such, when all [HPCS SWS] pumps, valves, and piping are OPERABLE, but a branch connection off the main header is isolated, the [HPCS SWS] System is still OPERABLE.

[The 31 day Frequency is based on engineering judgment, is consistent with the procedural controls governing valve operation, and ensures correct valve positions.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

SR 3.7.2.3

This SR verifies that the automatic valves of the HPCS SWS will automatically switch to the safety or emergency position to provide cooling water exclusively to the safety related equipment during an accident event. This is demonstrated by use of an actual or simulated initiation signal. *The SR excludes automatic valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to valves that are locked, sealed, or otherwise secured in the actuated position since the affected valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve to be*

repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve to the non-actuated position requires verification that the SR has been met within its required Frequency. The LOGIC SYSTEM FUNCTIONAL TEST in SR 3.3.5.1.5 overlaps this SR to provide complete testing of the safety function.

[Operating experience has shown that these components usually pass the SR when performed at the [18] month Frequency. Therefore, this Frequency is concluded to be acceptable from a reliability standpoint.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.3.3

This SR verifies that each [CRFA] subsystem starts and operates on an actual or simulated initiation signal. *The SR excludes automatic dampers and valves that are locked, sealed, or otherwise secured in the actuated position. The SR does not apply to dampers or valves that are locked, sealed, or otherwise secured in the actuated position since the affected dampers or valves were verified to be in the actuated position prior to being locked, sealed, or otherwise secured. Placing an automatic valve or damper in a locked, sealed, or otherwise secured position requires an assessment of the operability of the system or any supported systems, including whether it is necessary for the valve or damper to be repositioned to the non-actuated position to support the accident analysis. Restoration of an automatic valve or damper to the non-actuated position requires verification that the SR has been met within its required Frequency.* The LOGIC SYSTEM FUNCTIONAL TEST in SR 3.3.7.1.5 overlaps this SR to provide complete testing of the safety function. [The Frequency of [18] months is based on industry operating experience and is consistent with the typical refueling cycle.

OR

The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

-----REVIEWER'S NOTE-----
Plants controlling Surveillance Frequencies under a Surveillance Frequency Control Program should utilize the appropriate Frequency description, given above, and the appropriate choice of Frequency in the Surveillance Requirement.
-----]

SR 3.7.3.4

This SR verifies the OPERABILITY of the CRE boundary by testing for unfiltered air inleakage past the CRE boundary and into the CRE. The details of the testing are specified in the Control Room Envelope Habitability Program.

The CRE is considered habitable when the radiological dose to CRE occupants calculated in the licensing basis analyses of DBA consequences is no more than [5 rem whole body or its equivalent to any part of the body] [5 rem TEDE] and the CRE occupants are protected from hazardous chemicals and smoke. This SR verifies that the unfiltered air inleakage into the CRE is no greater than the flow rate assumed in the