

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
6. Auxiliary Feedwater (Continued)					
f. Containment Depres- surization Actuation (CDA) Start Motor-Driven Pumps	See Item 2. above for all CDA functions and requirements.				
7. Control Building Isolation					
a. Manual Actuation	2	1	2	*	19
b. Manual Safety Injection Actuation	2	1	2	1, 2, 3, 4	19
c. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3, 4	14
d. Containment Pressure-- High-1	3	2	2	1, 2, 3	16
e. Control Building Inlet Ventilation Radiation	2/intake	1	2/intake	*	18
8. Loss of Power					
a. 4 kV Bus Under- voltage-Loss of Voltage	4/bus	2/bus	3/bus	1, 2, 3, 4	20
b. 4 kV Bus Undervoltage- Grid Degraded Voltage	4/bus	2/bus	3/bus	1, 2, 3, 4	20

TABLE 3.3-3 (Continued)

TABLE NOTATIONS

- # The Steamline Isolation Logic and Safety Injection Logic for this trip function may be blocked in this MODE below the P-11 (Pressurizer Pressure Interlock) Setpoint.
- * MODES 1, 2, 3, 4, 5, and 6.
During fuel movement within containment or the spent fuel pool.
- **** Trip function automatically blocked above P-11 and may be blocked below P-11 when Safety Injection on low steam line pressure is not blocked.
- ‡ During core alterations or movement of irradiated fuel within the containment. The provisions of Specification 3.0.3 are not applicable.

ACTION STATEMENTS

- ACTION 14 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1, provided the other channel is OPERABLE.
- ACTION 15 - (not used).
- ACTION 16 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed until performance of the next required ANALOG CHANNEL OPERATIONAL TEST provided the inoperable channel is placed in the tripped condition within 1 hour.
- ACTION 17 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the bypassed condition and the Minimum Channels OPERABLE requirement is met. One additional channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.
- ACTION 18 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 7 days. After 7 days, or if no channels are OPERABLE, immediately suspend CORE ALTERATIONS and fuel movement, if applicable, and be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- ACTION 19 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>ANALOG CHANNEL OPERATIONAL TEST</u>	<u>TRIP ACTUATING DEVICE OPERATIONAL TEST</u>	<u>ACTUATION LOGIC TEST</u>	<u>MASTER RELAY TEST</u>	<u>SLAVE RELAY TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
6. Auxiliary Feedwater								
a. Manual Initiation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3
b. Automatic Actuation and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3
c. Steam Generator Water Level-Low-Low	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
d. Safety Injection	See Item 1. above for all Safety Injection Surveillance Requirements.							
e. Loss-of-Offsite Power	See Item 8. below for all Loss of Power Surveillance.							
f. Containment Depressurization Actuation (CDA)	See Item 2. above for all CDA Surveillance Requirements.							
7. Control Building Isolation								
a. Manual Actuation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	* 1
b. Manual Safety Injection Actuation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3, 4
c. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
d. Containment Pressure--High-1	S	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3

TABLE 4.3-2 (Continued)

**ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS**

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
7. Control Building Isolation (Continued)								
e. Control Building Inlet Ventilation Radiation	S	R	Q	N.A.	N.A.	N.A.	N.A.	*
8. Loss of Power								
a. 4 kV Bus Undervoltage (Loss of Voltage)	N.A.	R	N.A	M(3)	N.A.	N.A.	N.A.	1, 2, 3, 4
b. 4 kV Bus Undervoltage (Grid Degraded Voltage)	N.A.	R	N.A.	M(3)	N.A.	N.A.	N.A.	1, 2, 3, 4
9. Engineered Safety Features Actuation System Interlocks								
a. Pressurizer Pressure, P-11	N.A.	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
b. Low-Low T _{avg} , P-12	N.A.	R	Q	N.A.	N.A.	N.A.	N.A.	1, 2, 3
c. Reactor Trip, P-4	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3
10. Emergency Generator Load Sequencer	N.A.	N.A.	N.A.	N.A.	Q(1, 2)	N.A.	N.A.	1, 2, 3, 4

TABLE 4.3-2 (Continued)

TABLE NOTATION

- (1) Each train shall be tested at least every 62 days on a STAGGERED TEST BASIS.
- (2) This surveillance may be performed continuously by the emergency generator load sequencer auto test system as long as the EGLS auto test system is demonstrated operable by the performance of an ACTUATION LOGIC TEST at least once per 92 days.
- (3) On a monthly basis, a loss of voltage condition will be initiated at each undervoltage monitoring relay to verify individual relay operation. Setpoint verification and actuation of the associated logic and alarm relays will be performed as part of the channel calibration required once per 18 months.
- # During core alterations or movement of irradiated fuel within the containment. The provisions of Specification 3.0.3 are not applicable.
- * MODES 1, 2, 3, 4, 5, and 6.
During fuel movement within containment or the spent fuel pool.

PLANT SYSTEMS

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7 Two independent Control Room Emergency Air Filtration Systems shall be OPERABLE.* #

APPLICABILITY: MODES 1, 2, 3, 4, 5, and 6.
During fuel movement within containment or the spent fuel pool.

ACTION:

MODES 1, 2, 3 and 4:

- a. With one Control Room Emergency Air Filtration System inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With both Control Room Emergency Air Filtration Systems inoperable, except as specified in ACTION c., immediately suspend the movement of fuel assemblies within the spent fuel pool. Restore at least one inoperable system to OPERABLE status within 1 hour or be in HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.
- c. With both Control Room Emergency Air Filtration Systems inoperable due to an inoperable Control Room boundary, immediately suspend the movement of fuel assemblies within the spent fuel pool and restore the Control Room boundary to OPERABLE status within 24 hours or be in HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.

MODES 5 and 6, and fuel movement within containment or the spent fuel pool:

- d. With one Control Room Emergency Air Filtration System inoperable, restore the inoperable system to OPERABLE status within 7 days. After 7 days, either initiate and maintain operation of the remaining OPERABLE Control Room Emergency Air Filtration System in the recirculation mode of operation, or immediately suspend CORE ALTERATIONS and the movement of fuel assemblies.
- e. With both Control Room Emergency Air Filtration Systems inoperable, or with the OPERABLE Control Room Emergency Air Filtration System required to be in the recirculation mode by ACTION d. not capable of being powered by an OPERABLE emergency power source, immediately suspend CORE ALTERATIONS and the movement of fuel assemblies.

* The requirements of Surveillance Requirement 4.7.7.e.2 do not apply during pressure testing of the Cable Spreading Room. This exception is valid until the first entry into MODE 4 following the completion of refueling operations associated with the seventh Refueling Outage.

The Control Room boundary may be opened intermittently under administrative control.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS

4.7.7 Each Control Room Emergency Air Filtration System shall be demonstrated OPERABLE:

- a. At least once per 12 hours by verifying that the control room air temperature is less than or equal to 95°F;
- b. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying a system flow rate of 1,120 cfm $\pm 20\%$ and that the system operates for at least 10 continuous hours with the heaters operating;
- c. At least once each REFUELING INTERVAL or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the system by:
 - 1) Verifying that the system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% and uses the test procedure guidance in Regulatory Position C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revisions 2, March 1978,* and the system flow rate is 1,120 cfm $\pm 20\%$;
 - 2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978,* shows the methyl iodide penetration less than or equal to 2.5% when tested in accordance with ASTM D3803-89 at a temperature of 30°C (86°F), a relative humidity of 70%, and a face velocity of 54 ft/min; and
 - 3) Verifying a system flow rate of 1,120 cfm $\pm 20\%$ during system operation when tested in accordance with ANSI N510-1980.
- d. After every 720 hours of charcoal adsorber operation, by verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978,* shows the methyl iodide penetration less than or equal to 2.5% when tested in accordance with ASTM D3803-89 at a temperature of 30°C (86°F), and a relative humidity of 70%, and a face velocity of 54 ft/min.
- e. At least once each REFUELING INTERVAL by:
 - 1) Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6.75 inches Water Gauge while operating the system at a flow rate of 1,120 cfm $\pm 20\%$;

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- 2) Verifying that the system maintains the control room at a positive pressure of greater than or equal to 1/8 inch Water Gauge at less than or equal to a pressurization flow of 230 cfm relative to adjacent areas and outside atmosphere during positive pressure system operation; and
 - 3) Verifying that the heaters dissipate 9.4 ± 1 kW when tested in accordance with ANSI N510-1980.
- f. After each complete or partial replacement of a HEPA filter bank, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% in accordance with ANSI N510-1980 for a DOP test aerosol while operating the system at a flow rate of 1120 cfm $\pm 20\%$; and
- g. After each complete or partial replacement of a charcoal adsorber bank, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% in accordance with ANSI N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 1120 cfm $\pm 20\%$.

*ANSI N510-1980 shall be used in place of ANSI N510-1975 referenced in Regulatory Guide 1.52, Revision 2, March 1978.

PLANT SYSTEMS

3/4.7.8 CONTROL ROOM ENVELOPE PRESSURIZATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.8 Two independent Control Room Envelope Pressurization Systems shall be OPERABLE.* #

APPLICABILITY: MODES 1, 2, 3, 4, 5, and 6.
During fuel movement within containment or the spent fuel pool.

ACTION:

MODES 1, 2, 3, and 4:

- a. With one Control Room Envelope Pressurization System inoperable restore the system to OPERABLE status within 7 days or be in HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.
- b. With both Control Room Envelope Pressurization Systems inoperable, except as specified in ACTION c. or ACTION d., immediately suspend the movement of fuel assemblies within the spent fuel pool. Restore at least one inoperable system to OPERABLE status within 1 hour or be in HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.
- c. With both Control Room Envelope Pressurization Systems inoperable due to an inoperable Control Room boundary, immediately suspend the movement of fuel assemblies within the spent fuel pool. Restore the Control Room boundary to OPERABLE status within 24 hours or be in HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.
- d. With both Control Room Envelope Pressurization Systems inoperable during the performance of Surveillance Requirement 4.7.8.c and the system not being tested under administrative control, immediately suspend the movement of fuel assemblies within the spent fuel pool. Restore at least one inoperable system to OPERABLE status within 4 hours or be in HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.

MODES 5 and 6, and fuel movement within containment or the spent fuel pool:

- e. With one Control Room Envelope Pressurization System inoperable, restore the inoperable system to OPERABLE status within 7 days. After 7 days, immediately suspend CORE ALTERATIONS and the movement of fuel assemblies.
- f. With both Control Room Envelope Pressurization Systems inoperable, immediately suspend CORE ALTERATIONS and the movement of fuel assemblies.

* The requirements of Surveillance Requirements 4.7.8.c.2 and 4.7.8.c.3 do not apply during pressure testing of the Cable Spreading Room. This exception is valid until the first entry into MODE 4 following the completion of refueling operations associated with the seventh Refueling Outage.

The Control Room boundary may be opened intermittently under administrative control.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS

4.7.8 Each Control Room Envelope Pressurization System shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying that the storage air bottles are pressurized to greater than or equal to 2200 psig,
- b. At least once per 31 days on a STAGGERED TEST BASIS by verifying that each valve (manual, power operated or automatic) in the flow path not locked, sealed or otherwise secured in position, is in its correct position, and
- c. At least once each REFUELING INTERVAL or following a major alteration of the control room envelope pressure boundary by:
 1. Verifying that the control room envelope is isolated in response to a Control Building Isolation test signal,
 2. Verifying that after a 60 second time delay following a Control Building Isolation test signal, the control room envelope pressurizes to greater than or equal to 1/8 inch W.G. relative to adjacent areas and outside atmosphere, and
 3. Verifying that the positive pressure of Specification 4.7.8.c.2 is maintained for greater than or equal to 60 minutes.

PLANT SYSTEMS

3/4.7.9 AUXILIARY BUILDING FILTER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.9 Two independent Auxiliary Building Filter Systems shall be OPERABLE. |

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

ACTION:

With one Auxiliary Building Filter System inoperable, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. In addition, comply with the ACTION requirements of Specification 3.6.6.1.

SURVEILLANCE REQUIREMENTS

4.7.9 Each Auxiliar Building Filter System shall be demonstrated OPERABLE:

- a. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying a system flow rate of 30,000 cfm $\pm 10\%$ and that the system operates for at least 10 continuous hours with the heaters operating;
- b. At least once each REFUELING INTERVAL or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the system by:
 - 1) Verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978,* and the system flow rate is 30,000 cfm $\pm 10\%$;
 - 2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978,* shows the methyl

3/4.9 REFUELING OPERATIONS

3/4.9.1 BORON CONCENTRATION

LIMITING CONDITION FOR OPERATION

3.9.1.1 The boron concentration of all filled portions of the Reactor Coolant System and the refueling cavity shall be maintained sufficient to ensure that the more restrictive of the following reactivity conditions is met; either:

- a. A K_{eff} of 0.95 or less, or
- b. A boron concentration of greater than or equal to 2600 ppm.

Additionally, the CVCS valves of Specification 4.1.1.2.2 shall be closed and secured in position.

APPLICABILITY: MODE 6.*

ACTION:

- a. With the requirements of the above specification not satisfied, immediately suspend all operations involving CORE ALTERATIONS or positive reactivity changes and initiate and continue boration at greater than or equal to 33 gpm of a solution containing greater than or equal to 6600 ppm boron or its equivalent until K_{eff} is reduced to less than or equal to 0.95 or the boron concentration is restored to greater than or equal to 2600 ppm, whichever is the more restrictive.
- b. With any of the CVCS valves of Specification 4.1.1.2.2 not closed** and secured in position, immediately close and secure the valves.

SURVEILLANCE REQUIREMENTS

4.9.1.1.1 The more restrictive of the above two reactivity conditions shall be determined prior to:

- a. Removing or unbolting the reactor vessel head, and
- b. Withdrawal of any full-length control rod in excess of 3 feet from its fully inserted position within the reactor vessel.

4.9.1.1.2 The boron concentration of the Reactor Coolant System and the refueling cavity shall be determined by chemical analysis at least once per 72 hours.

4.9.1.1.3 The CVCS valves of Specification 4.1.1.2.2 shall be verified closed and locked at least once per 31 days.

*The reactor shall be maintained in MODE 6 whenever fuel is in the reactor vessel with the vessel head closure bolts less than fully tensioned or with the head removed.

**Except those opened under administrative control.

REFUELING OPERATIONS

BORON CONCENTRATION

LIMITING CONDITION FOR OPERATION

- 3.9.1.2 The soluble boron concentration of the Spent Fuel Pool shall be greater than or equal to 800 ppm. |

Applicability

Whenever fuel assemblies are in the spent fuel pool.

Action

- a. With the boron concentration less than 800 ppm, initiate action to bring the boron concentration in the fuel pool to at least 800 ppm within 72 hours, and
- b. With the boron concentration less than 800 ppm, suspend the movement of all fuel assemblies within the spent fuel pool and loads over the spent fuel racks.

SURVEILLANCE REQUIREMENTS

- 4.9.1.2 Verify that the boron concentration in the fuel pool is greater than or equal to 800 ppm every 7 days.

REFUELING OPERATIONS

3/4.9.2 INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.9.2 Two Source Range Neutron Flux Monitors shall be OPERABLE with continuous visual indication in the control room, and one with audible indication in the containment and control room.

APPLICABILITY: MODE 6.

ACTION:

- a. With one of the above required monitors inoperable immediately suspend all operations involving CORE ALTERATIONS or positive reactivity changes.
- b. With both of the above required monitors inoperable determine the boron concentration of the Reactor Coolant System within 4 hours and at least once per 12 hours thereafter.

SURVEILLANCE REQUIREMENTS

4.9.2 Each Source Range Neutron Flux Monitor shall be demonstrated OPERABLE by performance of:

- a. A CHANNEL CHECK and verification of audible counts at least once per 12 hours,
- b. A CHANNEL CALIBRATION at least once per 18 months.*

* Neutron detectors are excluded from CHANNEL CALIBRATION.

REFUELING OPERATIONS

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

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

- a. The equipment access hatch closed and held in place by a minimum of four bolts,
- b. The personnel access hatch shall be either:
 - 1. closed by one personnel access hatch door, or
 - 2. capable of being closed by an OPERABLE personnel access hatch door, under administrative control, and
- c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:
 - 1) Closed by an isolation valve, blind flange, or manual valve, or
 - 2) Be capable of being closed by an OPERABLE automatic containment purge and exhaust isolation valve.

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

ACTION:

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

SURVEILLANCE REQUIREMENTS

- 4.9.4.a Verify each required containment penetration is in the required status at least once per 7 days.
- 4.9.4.b. Verify each required containment purge and exhaust valve actuates to the isolation position per the applicable portions of Specification 4.6.3.2.

REFUELING OPERATIONS

3/4.9.9 CONTAINMENT PURGE AND EXHAUST ISOLATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.9 The Containment Purge and Exhaust Isolation System shall be OPERABLE.

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

ACTION:

- a. With the Containment Purge and Exhaust Isolation System inoperable, close each of the purge and exhaust penetrations providing direct access from the containment atmosphere to the outside atmosphere.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.9 The Containment Purge and Exhaust Isolation System shall be demonstrated OPERABLE at least once per 7 days during CORE ALTERATIONS by verifying that containment purge and exhaust isolation occurs on manual initiation and on a High Radiation test signal from each of the containment radiation monitoring instrumentation channels.

REFUELING OPERATIONS

3/4.9.10 WATER LEVEL - REACTOR VESSEL

LIMITING CONDITION FOR OPERATION

3.9.10 At least 23 feet of water shall be maintained over the top of the reactor vessel flange.

APPLICABILITY: During movement of fuel assemblies or control rods within the containment when either the fuel assemblies being moved or the fuel assemblies seated within the reactor vessel are irradiated while in MODE 6.

ACTION:

With the requirements of the above specification not satisfied, suspend all operations involving movement of fuel assemblies or control rods within the reactor vessel.

SURVEILLANCE REQUIREMENTS

4.9.10 The water level shall be determined to be at least its minimum required depth at least once per 24 hours.

REFUELING OPERATIONS

3/4.9.12 FUEL BUILDING EXHAUST FILTER SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.12 Two independent Fuel Building Exhaust Filter Systems shall be OPERABLE.# At least one Fuel Building Exhaust Filter System shall be in operation whenever any evolution involving movement of fuel within the storage pool or crane operations with loads over the storage pool is in progress.

APPLICABILITY: Whenever irradiated fuel with less than 60 days decay is in the storage pool.

ACTION:

- a. With one Fuel Building Exhaust Filter System inoperable, fuel movement within the storage pool or crane operation with loads over the storage pool may proceed provided the OPERABLE Fuel Building Exhaust Filter System is capable of being powered from an OPERABLE emergency power source and is in operation and discharging through at least one train of HEPA filters and charcoal adsorbers.
- b. With no Fuel Building Exhaust Filter System OPERABLE, suspend all operations involving movement of fuel within the storage pool or crane operation with loads over the storage pool until at least one Fuel Building Exhaust Filter System is restored to OPERABLE status.
- c. The provisions of Specifications 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.12.1 The above required Fuel Building Exhaust Filter Systems shall be demonstrated OPERABLE:

- a. Within 31 days prior to moving fuel within or loads over the storage pool when irradiated fuel with less than 60 days decay is present by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers, and verifying a system flow rate of 20,700 cfm $\pm 10\%$ and that the system operates for at least 10 continuous hours with the heaters operating;
- b. At least once each REFUELING INTERVAL or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the system by:

The Fuel Building boundary may be opened intermittently under administrative control.

REFUELING OPERATIONS

SURVEILLANCE REQUIREMENTS (Continued)

- 2) Verifying that the system maintains the spent fuel storage pool area at a negative pressure of greater than or equal to 1/4 inch Water Gauge relative to the outside atmosphere during system operation, and
- 3) Verifying that the heaters dissipate 150 ± 15 kW when tested in accordance with ANSI N510-1980.
- e. After each complete or partial replacement of a HEPA filter bank, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% in accordance with ANSI N510-1980 for a DOP test aerosol while operating the system at a flow rate of 20,700 cfm $\pm 10\%$; and
- f. After each complete or partial replacement of a charcoal adsorber bank, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% in accordance with ANSI N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 20,700 cfm $\pm 10\%$.

4.9.12.2 The Fuel Building Exhaust Filter System shall be verified to be operating at least once per 12 hours during either fuel movement within the fuel storage pool or crane operations with loads over the fuel storage pool whenever irradiated fuel with less than 60 days decay is in the storage pool.

*ANSI N510-1980 shall be used in place of ANSI N510-1975 referenced in Regulatory Guide 1.52, Revision 2, March 1978.

PLANT SYSTEMS

BASES

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM (Continued)

LIMITING CONDITION FOR OPERATION

Two independent control room emergency air filtration systems are required to be operable to ensure that at least one is available in the event the other system is disabled.

A control room emergency air filtration system is OPERABLE when the associated:

- a. Fan is OPERABLE;
- b. HEPA filters and charcoal adsorbers are not excessively restricting flow and are capable of performing their filtration functions; and
- c. moisture separator, heater, ductwork, valves, and dampers are OPERABLE, and air circulation can be maintained.

The integrity of the control room habitability boundary (i.e., walls, floors, ceilings, ductwork, and access doors) must be maintained such that the control building habitability zone can be maintained at its design positive pressure if required to be aligned in the filtration pressurization mode. However, the LCO is modified by a footnote allowing the control room boundary to be opened intermittently under administrative controls. For entry and exit through doors the administrative control of the opening is performed by the person(s) entering or exiting the area. For other openings, these controls consist of stationing a dedicated individual at the opening who is in constant communication with the control room. This individual will have a method to rapidly close the opening when a need for control room isolation is indicated.

APPLICABILITY

MODES 1, 2, 3, 4, 5, and 6.

During fuel movement within containment or the spent fuel pool.

ACTIONS

MODES 1, 2, 3, and 4

- a. With one control room emergency air filtration system inoperable, action must be taken to restore the inoperable system to an OPERABLE status within 7 days. In this condition, the remaining control room emergency air filtration system is adequate to perform the control room protection function. However, the overall reliability is reduced because a single failure in the OPERABLE train could result in a loss of the control room emergency air filtration system function. The 7-day completion time is based on the low probability of a DBA occurring during this time period, and the ability of the remaining train to provide the required capability.

If the inoperable train cannot be restored to an OPERABLE status within 7 days, the unit must be placed in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. These completion times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

PLANT SYSTEMS

BASES

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM (Continued)

ACTIONS (Continued)

- b. With both control room emergency air filtration systems inoperable, except due to an inoperable control room boundary, the movement of fuel assemblies within the spent fuel pool must be immediately suspended. At least one control room emergency air filtration system must be restored to OPERABLE status within 1 hour, or the unit must be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. These completion times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.
- c. With both control room emergency air filtration systems inoperable due to an inoperable control room boundary, the movement of fuel assemblies within the spent fuel pool must be immediately suspended. The control room boundary must be restored to OPERABLE status within 24 hours, or the unit must be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

If the control room boundary is inoperable in MODES 1, 2, 3, and 4, the control room emergency air filtration systems cannot perform their intended functions. Actions must be taken to restore an OPERABLE control room boundary within 24 hours. During the period that the control room boundary is inoperable, appropriate compensatory measures (consistent with the intent of GDC 19) should be utilized to protect control room operators from potential hazards such as radioactive contamination, toxic chemicals, smoke, temperature and relative humidity, and physical security. Preplanned measures should be available to address these concerns for intentional and unintentional entry into this condition. The 24 hour allowed outage time is reasonable based on the low probability of a DBA occurring during this time period, and the use of compensatory measures. The 24 hour allowed outage time is a typically reasonable time to diagnose, plan, and possibly repair, and test most problems with the control room boundary.

MODES 5 AND 6, and fuel movement within containment or the spent fuel pool

- d. With one control room emergency air filtration system inoperable, action must be taken to restore the inoperable system to an OPERABLE status within 7 days. After 7 days, either initiate and maintain operation of the remaining OPERABLE control room emergency air filtration system in the recirculation mode or suspend CORE ALTERATIONS and the movement of fuel assemblies. Initiating and maintaining operation of the OPERABLE train in the recirculation mode ensures: (i) operability of the train will not be compromised by a failure of the automatic actuation logic; and (ii) active failures will be readily detected.
- e. With both control room emergency air filtration systems inoperable, or with the train required by ACTION 'd' not capable of being powered by an OPERABLE emergency power source, actions must be taken to suspend all operations involving CORE ALTERATIONS and the movement of fuel assemblies. This action places the unit in a condition that minimizes risk. This action does not preclude the movement of fuel to a safe position.

PLANT SYSTEMS

BASES

One Time Exception to Surveillance Requirements

The capability of maintaining a positive Control Room envelope pressure equal to or greater than 1/8 inch water gauge relative to adjacent areas as required by Technical Specification Surveillance Requirement 4.7.7.e.2 will be suspended during pressure testing of the Cable Spreading Room (CSR). The CSR pressure test is being performed in support of the corrective actions identified in Millstone Unit No. 3 Licensee Event Report (LER) 99-002-00, "Inadvertent Carbon Dioxide Fire Suppression System Actuation In The Cable Spreading Room," dated February 16, 1999. This LER documents an inadvertent CO₂ actuation in the CSR on January 15, 1999.

The purpose of the CSR pressure test is to identify leakage pathways from the CSR to adjacent areas. Once identified, these leakage pathways will be repaired and tested in order to ensure that in the event of a fire in the CSR requiring actuation of the CO₂ Suppression System, CO₂ concentrations outside the CSR will not preclude the Unit from being safely shut down from the Remote Shutdown Panel if an evacuation of the Control Room is required. This exception to Technical Specifications will allow pressure testing of the CSR to be performed in any MODE of operation. It is intended that the CSR pressure test be performed as required to verify the adequacy of repairs performed to reduce leakage. The exception will expire upon the first entry into MODE 4 following the completion of refueling operations associated with the seventh Refueling Outage.

A dedicated operator will be stationed in the Control Room, in constant communication with a dedicated operator at the temporary fan during pressure testing of the CSR. This will allow rapid depressurization of the CSR in the event a Control Building Isolation signal is received.

SURVEILLANCE REQUIREMENTS

4.7.7.a

The control room environment should be checked periodically to ensure that the control room temperature control system is functioning properly. Verifying that the control room air temperature is less than or equal to 95°F at least once per 12 hours is sufficient. It is not necessary to cycle the control room ventilation chillers. The control room is manned during operations covered by the technical specifications. Typically, temperature aberrations will be readily apparent.

4.7.7.b

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 the trains once every 31 days on a STAGGERED TEST BASIS provides an adequate check of this system. This surveillance requirement verifies a system flow rate of 1,120 cfm \pm 20%. Additionally, the system is required to operate for at least 10 continuous hours with the heaters energized. These operations are sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters due to the humidity in the ambient air.

PLANT SYSTEMS

BASES

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM (Continued)

SURVEILLANCE REQUIREMENTS (Continued)

The laboratory analysis is required to be performed within 31 days after removal of the sample. ANSI N510-1980 is used in lieu of ANSI N510-1975 referenced in Revision 2 of Regulatory Guide 1.52.

The maximum surveillance interval is 900 hours, per Surveillance Requirement 4.0.2. The 720 hours of operation requirement originates from Nuclear Regulatory Guide 1.52, Table 2, Note C. This testing ensures that the charcoal adsorbency capacity has not degraded below acceptable limits as well as providing trending data.

4.7.7.e.1

This surveillance verifies that the pressure drop across the combined HEPA filters and charcoal adsorbers banks at less than 6.75 inches water gauge when the system is operated at a flow rate of 1,120 cfm \pm 20%. The frequency is at least once per REFUELING INTERVAL.

4.7.7.e.2

This surveillance verifies that the system maintains the control room at a positive pressure of greater than or equal to 1/8 inch water gauge at less than or equal to a pressurization flow of 230 cfm relative to adjacent areas and outside atmosphere during positive pressure system operation. The frequency is at least once per REFUELING INTERVAL.

The intent of this surveillance is to verify the ability of the control room emergency air filtration system to maintain a positive pressure while running in the filtered pressurization mode.

PLANT SYSTEMS

BASES

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM (Continued)

SURVEILLANCE REQUIREMENTS (Continued)

During the first hour, the control room pressurization system creates and maintains the positive pressure in the control room. This capability is verified by Surveillance Requirement 4.7.8.C, independent of Surveillance Requirement 4.7.7.e.2. A CBI signal will automatically align an operating filtration system into the recirculation mode of operation due to the isolation of the air supply line to the filter.

After the first hour of an event with the potential for a radiological release, the control room emergency ventilation system will be aligned in either the recirculation mode (isolated from the outside environment) or filtered pressurization mode (outside air is diverted through the filters to the control room envelope to maintain a positive pressure). The mode of service for the control room emergency air filtration system will be based on the radiological conditions that exist outside the control room. Alignment to the filtered pressurization mode requires manual operator action to open the air supply line.

4.7.7.e.3

This surveillance verifies that the heaters can dissipate 9.4 ± 1 kW at 480V when tested in accordance with ANSI N510-1980. The frequency is at least once per REFUELING INTERVAL. The heater kW measured must be corrected to its nameplate rating. Variations in system voltage can lead to measurements of kW which cannot be compared to the nameplate rating because the output kW is proportional to the square of the voltage.

4.7.7.f

Following the complete or partial replacement of a HEPA filter bank, the operability of the cleanup system should be confirmed. This is accomplished by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criterion of less than 0.05% in accordance with ANSI N510-1980 for a DOP test aerosol while operating the system at a flow rate of $1,120 \text{ cfm} \pm 20\%$.

PLANT SYSTEMS

BASES

3/4.7.8 CONTROL ROOM ENVELOPE PRESSURIZATION SYSTEM (Continued)

APPLICABLE SAFETY ANALYSIS

The OPERABILITY of the control room envelope pressurization system ensures that: (1) breathable air is supplied to the control room, instrumentation rack room, and computer room, and (2) a positive pressure is created and maintained within the control room envelope during control building isolation for the first hour following any event with the potential for radioactive releases. Each system is capable of providing an adequate air supply to the control room for one hour following an initiation of a control building isolation signal. After one hour, operation of the control room emergency ventilation system would be initiated.

LIMITING CONDITION FOR OPERATION

Two independent control room envelope pressurization systems are required to be operable to ensure that at least one is available in the event the other system is disabled.

A control room envelope pressurization system is OPERABLE when the associated:

- a. air storage bottles are OPERABLE; and
- b. piping and valves are OPERABLE.

The integrity of the control room habitability boundary (i.e., walls, floors, ceilings, ductwork, and access doors) must be maintained. However, the LCO is modified by a footnote allowing the control room boundary to be opened intermittently under administrative controls. For entry and exit through doors the administrative control of the opening is performed by the person(s) entering or exiting the area. For other openings, these controls consist of stationing a dedicated individual at the opening who is in constant communication with the control room. This individual will have a method to rapidly close the opening when a need for control room isolation is indicated.

APPLICABILITY

MODES 1, 2, 3, 4, 5, and 6.
During fuel movement within containment or the spent fuel pool.

ACTIONS

MODES 1, 2, 3, and 4

- a. With one control room envelope pressurization system inoperable, action must be taken either to restore the inoperable system to an OPERABLE status within 7 days, or place the unit in HOT STANDBY within six hours and COLD SHUTDOWN within the next 30 hours.

The remaining control room envelope pressurization system is adequate to perform the control room protection function. However, the overall reliability is reduced because a single failure in the OPERABLE train could result in a loss of the control room envelope pressurization system. The 7-day completion time is based on the low probability of a design basis accident occurring during this time period and the ability of the remaining train to provide the required capability.

PLANT SYSTEMS

BASES

3/4.7.8 CONTROL ROOM ENVELOPE PRESSURIZATION SYSTEM (Continued)

ACTIONS (Continued)

The completion times for the unit to be placed in HOT STANDBY and COLD SHUTDOWN are reasonable. They are based on operating experience, and they permit the unit to be placed in the required conditions from full power conditions in an orderly manner and without challenging unit systems.

- b. With both control room envelope pressurization systems inoperable, except due to an inoperable control room boundary or during performance of Surveillance Requirement 4.7.8.c, the movement of fuel assemblies within the spent fuel pool must be immediately suspended. At least one control room envelope pressurization system must be restored to OPERABLE status within 1 hour, or the unit must be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. These completion times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.
- c. With both control room envelope pressurization systems inoperable due to an inoperable control room boundary, the movement of fuel assemblies within the spent fuel pool must be immediately suspended. The control room boundary must be restored to OPERABLE status within 24 hours, or the unit must be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

If the control room boundary is inoperable in MODES 1, 2, 3, and 4, the control room envelope pressurization systems cannot perform their intended functions. Actions must be taken to restore an OPERABLE control room boundary within 24 hours. During the period that the control room boundary is inoperable, appropriate compensatory measures (consistent with the intent of GDC 19) should be utilized to protect control room operators from potential hazards such as radioactive contamination, toxic chemicals, smoke, temperature and relative humidity, and physical security. Preplanned measures should be available to address these concerns for intentional and unintentional entry into this condition. The 24 hour allowed outage time is reasonable based on the low probability of a DBA occurring during this time period, and the use of compensatory measures. The 24 hour allowed outage time is a typically reasonable time to diagnose, plan, and possibly repair, and test most problems with the control room boundary.

- d. With both control room envelope pressurization systems inoperable during the performance of Surveillance Requirement 4.7.8.c and the system not being tested under administrative control, the movement of fuel assemblies within the spent fuel pool must be immediately suspended. At least one control room envelope pressurization system must be restored to OPERABLE status within 4 hours, or the unit must be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. The administrative controls for the system not being tested consist of a dedicated operator, in constant communication with the control room, who can rapidly restore this system to OPERABLE status. Allowing both control room envelope pressurization systems to be inoperable for 4 hours under administrative control is acceptable since the system not being tested is inoperable only because it is isolated. Therefore, the system can be rapidly restored if needed. The other completion times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

PLANT SYSTEMS

BASES

3/4.7.8 CONTROL ROOM ENVELOPE PRESSURIZATION SYSTEM (Continued)

ACTIONS (Continued)

MODES 5 and 6, and fuel movement within containment or the spent fuel pool

- e. With one control room envelope pressurization system inoperable, action must be taken to restore the inoperable system to an OPERABLE status within 7 days. After 7 days, immediately suspend CORE ALTERATIONS and the movement of fuel assemblies. This action places the unit in a condition that minimizes potential radiological exposure to Control Room personnel. This action does not preclude the movement of fuel to a safe position.

The remaining control room envelope pressurization system is adequate to perform the control room protection function. However, the overall reliability is reduced because a single failure in the OPERABLE train could result in a loss of the control room envelope pressurization system. The 7-day completion time is based on the low probability of a design basis accident occurring during this time period and the ability of the remaining train to provide the required capability.

Stud tensioning may continue in MODE 6 and a MODE change to MODE 5 is permitted with a control room envelope pressurization system inoperable (Reference 1).

- f. With both control room envelope pressurization systems inoperable, immediately suspend CORE ALTERATIONS and the movement of fuel assemblies. This action places the unit in a condition that minimizes potential radiological exposure to Control Room personnel. This action does not preclude the movement of fuel to a safe position.

One Time Exception to Surveillance Requirements

The capability of maintaining a positive Control Room envelope pressure equal to or greater than 1/8 inch water gauge relative to the outside atmosphere as required by Technical Specification Surveillance Requirements 4.7.8.c.2 and 4.7.8.c.3 will be suspended during pressure testing of the Cable Spreading Room (CSR). The CSR test is being performed in support of the corrective actions identified in Millstone Unit No. 3 Licensee Event Report (LER) 99-002-00, "Inadvertent Carbon Dioxide Fire Suppression System Actuation In The Cable Spreading Room," dated February 16, 1999. This LER documents an inadvertent CO₂ actuation in the CSR on January 15, 1999.

The purpose of the CSR pressure test is to identify leakage pathways from the CSR to adjacent areas. Once identified, these leakage pathways will be repaired and tested in order to ensure that in the event of a fire in the CSR requiring actuation of the CO₂ Suppression System, CO₂ concentrations outside the CSR will not preclude the Unit from being safely shut down from the Remote Shutdown Panel if an evacuation of the Control Room is required. This exception to Technical Specifications will allow pressure testing of the CSR to be performed in any MODE of operation. It is intended that the CSR pressure test be performed as required to verify the adequacy of repairs performed to reduce leakage. The exception will expire upon the first entry into MODE 4 following the completion of refueling operations associated with the seventh Refueling Outage.

A dedicated operator will be stationed in the Control Room, in constant communication with a dedicated operator at the temporary fan during pressure testing of the CSR. This will allow rapid depressurization of the CSR in the event a Control Building Isolation signal is received.

PLANT SYSTEMS

BASES

3/4.7.8 CONTROL ROOM ENVELOPE PRESSURIZATION SYSTEM (Continued)

SURVEILLANCE REQUIREMENTS (Continued)

4.7.8.c

The performance of the control room envelope pressurization system should be checked periodically. The frequency is at least once per REFUELING INTERVAL and following any major alteration of the control room envelope pressure boundary.

A major alteration is a change to the control room envelope pressure boundary that: (1) results in a breach greater than analyzed for acceptable pressurization and requires nonroutine work evolutions to restore the boundary. A nonroutine work evolution is one which makes it difficult to determine As-Found and As-Left conditions. Examples of routine work evolution include: (1) opening and closing a door, and (2) repairing cable and pipe penetrations because the repairs are conducted in accordance with procedures and are verified via inspections. For these two examples, there is a high level of assurance that the boundary is restored to the As-Found condition.

This surveillance requires at least once per REFUELING INTERVAL or following a major alteration of the control room envelope pressure boundary by:

- Verifying the control room envelope is isolated in response to a Control Building Isolation Test signal,
- Verifying, after a 60 second time delay following a Control Building Isolation Test signal, the control room envelope pressurizes to greater than or equal to 0.125 inch water gauge relative to adjacent areas and outside atmosphere; and
- Verifying the positive pressure of Technical Specification 4.7.8.c.2 is maintained for greater than or equal to 60 minutes.

Changes in conditions outside the control room envelope cause pressure spikes which are reflected on the differential pressure indicator, 3HVC-PDI 113.

Pressure spikes or fluctuations which result in the differential pressure momentarily dropped below the 0.125 inch water gauge acceptance criteria are acceptable providing the following conditions are met:

1. Differential pressure remains positive at all times.
2. Differential pressure is only transitorily below the acceptance criteria.
3. Differential pressure returns to a value above the acceptance criteria.

PLANT SYSTEMS

BASES

3/4.7.9 AUXILIARY BUILDING FILTER SYSTEM

The OPERABILITY of the Auxiliary Building Filter System, and associated filters and fans, ensures that radioactive materials leaking from the equipment within the charging pump, component cooling water pump and heat exchanger areas following a LOCA are filtered prior to reaching the environment. Operation of the system with the heaters operating for at least 10 continuous hours in a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. The operation of this system and the resultant effect on offsite dosage calculations was assumed in the safety analyses. ANSI N510-1980 will be used as a procedural guide for surveillance testing. Laboratory testing of methyl iodide penetration shall be performed in accordance with ASTM D3803-89 and Millstone Unit 3 specific parameters. The heater kW measured must be corrected to its nameplate rating. Variations in system voltage can lead to measurements of kW which cannot be compared to the nameplate rating because the output kW is proportional to the square of the voltage.

The Charging Pump/Reactor Plant Component Cooling Water Pump Ventilation System is required to be available to support the Auxiliary Building Filter System and the Supplementary Leak Collection and Release System (SLCRS). The Charging Pump/Reactor Plant Component Cooling Water Pump Ventilation System consists of two redundant trains, each capable of providing 100% of the required flow. Each train has a two position, "Off" and "Auto," remote control switch. With the remote control switches for each train in the "Auto" position, the system is capable of automatically transferring operation to the redundant train in the event of a low flow condition in the operating train. The associated fans do not receive any safety related automatic start signals (e.g. Safety Injection Signal).

Placing the remote control switch for a Charging Pump/Reactor Plant Component Cooling Water Pump Ventilation Train in the "Off" position to start the redundant train or to perform post maintenance testing to verify availability of the redundant train will not affect the availability of that train, provided appropriate administrative controls have been established to ensure the remote control switch is immediately returned to the "Auto" position after the completion of the specified activities or in response to plant conditions. These administrative controls include the use of an approved procedure and a designated individual at the control switch for the respective Charging Pump/Reactor Plant Component Cooling Water Pump Ventilation Train who can rapidly respond to instructions from procedures, or control room personnel, based on plant conditions.

3/4.7.10 SNUBBERS

All snubbers are required OPERABLE to ensure that the structural integrity of the Reactor Coolant System and all other safety-related systems is maintained during and following a seismic or other event initiating dynamic loads. For the purpose of declaring the affected system OPERABLE with the inoperable snubber(s), an engineering evaluation may be performed, in accordance with Section 50.59 of 10 CFR Part 50.

PLANT SYSTEMS

BASES

3/4.7.10 SNUBBERS (Continued)

Snubbers are classified and grouped by design and manufacturer but not by size. Snubbers of the same manufacturer but having different internal mechanisms are classified as different types. For example, mechanical snubbers utilizing the same design features of the 2-kip, 10-kip and 100-kip capacity manufactured by Company "A" are of the same type. The same design mechanical snubbers manufactured by Company "B" for the purposes of this Technical Specification would be of a different type, as would hydraulic snubbers from either manufacturer.

A list of individual snubbers with detailed information of snubber location and size and of system affected shall be available at the plant in accordance with Section 50.71(c) of 10 CFR Part 50. The accessibility of each snubber shall be determined and approved by the Plant Operations Review Committee. The determination shall be based upon the existing radiation levels and the expected time to perform a visual inspection in each snubber location as well as other factors associated with accessibility during plant operations (e.g.,

3/4.9 REFUELING OPERATIONS

BASES

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

The requirements on containment building penetration closure and OPERABILITY ensure that a release of radioactive material within containment will be restricted from leakage to the environment. The OPERABILITY and closure restrictions are sufficient to restrict radioactive material release from a fuel element rupture based upon the lack of containment pressurization potential while in the REFUELING MODE.

Both containment personnel access hatch doors can be open during CORE ALTERATIONS and the movement of irradiated fuel assemblies inside containment provided at least one personnel access hatch door is under administrative control such that the door can be closed within 10 minutes. This will allow hoses and cables to be run through the personnel access hatch, provided they can be rapidly removed to allow the door to be closed within the required time period. In addition, a designated individual must be continuously available for door closure.

3/4.9.5 COMMUNICATIONS

The requirement for communications capability ensures that refueling station personnel can be promptly informed of significant changes in the facility status or core reactivity conditions during CORE ALTERATIONS.

REFUELING OPERATIONS

BASES

3/4.9.10 and 3/4.9.11 WATER LEVEL - REACTOR VESSEL and STORAGE POOL

The restrictions on minimum water level ensure that sufficient water depth is available to remove 99% of the assumed 10% iodine gas activity released from the rupture of an irradiated fuel assembly. The minimum water depth is consistent with the assumptions of the safety analysis.

3/4.9.12 FUEL BUILDING EXHAUST FILTER SYSTEM

The limitations on the Fuel Building Exhaust Filter System ensure that all radioactive iodine released from an irradiated fuel assembly and storage pool water will be filtered through the HEPA filters and charcoal adsorber prior to discharge to the atmosphere. Operation of the system with the heaters operating for at least 10 continuous hours in a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. The OPERABILITY of this system and the resulting iodine removal capacity are consistent with the assumptions of the safety analyses. ANSI N510-1980 will be used as a procedural guide for surveillance testing. Laboratory testing of methyl iodide penetration shall be performed in accordance with ASTM D3803-89 and Millstone Unit 3 specific parameters. The heater kW measured must be corrected to its nameplate rating. Variations in system voltage can lead to measurements of kW which cannot be compared to the nameplate rating because the output kW is proportional to the square of the voltage. The filtration system removes radioiodine following a fuel handling or heavy load drop accident. Noble gases would not be removed by the system. Other radionuclides would be scrubbed by the storage pool water. Iodine-131 has the longest half-life: ~8 days. After 60 days decay time, there is essentially negligible iodine and filtration is unnecessary.

The LCO is modified by a footnote allowing the Fuel Building boundary to be opened intermittently under administrative controls. For entry and exit through doors the administrative control of the opening is performed by the person(s) entering or exiting the area. For other openings, these controls consist of stationing a dedicated individual at the opening who is in constant communication with the control room. This individual will have a method to rapidly close the opening when a need for Fuel Building isolation is indicated.

3/4.9.13 SPENT FUEL POOL - REACTIVITY

During normal spent fuel pool operation, the spent fuel racks are capable of maintaining K_{eff} at less than or equal to 0.95 in an unborated water environment.

Maintaining K_{eff} at less than or equal to 0.95 is accomplished in Region 1 3-OUT-OF-4 storage racks by the combination of geometry of the rack spacing, the use of fixed neutron absorbers in the racks, a maximum nominal 5 weight percent fuel enrichment, and the use of blocking devices in certain fuel storage locations, as specified by the interface requirements shown in Figure 3.9-2.

Maintaining K_{eff} at less than or equal to 0.95 is accomplished in Region 1 4-OUT-OF-4 storage racks by the combination of geometry of the rack spacing, the use of fixed neutron absorbers in the racks, and the limits on fuel enrichment/fuel burnup specified in Figure 3.9-1.

Maintaining K_{eff} at less than or equal to 0.95 is accomplished in Region 2 storage racks by the combination of geometry of the rack spacing, the use of fixed neutron absorbers in the racks, and the limits on fuel enrichment/fuel burnup specified in Figure 3.9-3.

REFUELING OPERATIONS

BASES

3/4.9.13 SPENT FUEL POOL - REACTIVITY (continued)

Maintaining K_{eff} at less than or equal to 0.95 is accomplished in Region 3 storage racks by the combination of geometry of the rack spacing, and the limits on fuel enrichment/fuel burnup and fuel decay time specified in Figure 3.9-4. Fixed neutron absorbers are not credited in the Region 3 fuel storage racks.

The limitations described by Figures 3.9-1, 3.9-2, 3.9-3 and 3.9-4 ensure that the reactivity of the fuel assemblies stored in the spent fuel pool are conservatively within the assumptions of the safety analysis.

Administrative controls have been developed and instituted to verify that the fuel enrichment, fuel burnup, fuel decay times, and fuel interface restrictions specified in Figures 3.9-1, 3.9-2, 3.9-3 and 3.9-4 are complied with.

3/4.9.14 SPENT FUEL POOL - STORAGE PATTERN

The limitations of this specification ensure that the reactivity conditions of the Region 1 3-OUT-OF-4 storage racks and spent fuel pool k_{eff} will remain less than or equal to 0.95.

The Cell Blocking Devices in the 4th location of the Region 1 3-OUT-OF-4 storage racks are designed to prevent inadvertent placement and/or storage of fuel assemblies in the blocked locations. The blocked location remains empty to provide the flux trap to maintain reactivity control for fuel assemblies in adjacent and diagonal locations of the STORAGE PATTERN.

STORAGE PATTERN for the Region 1 storage racks will be established and expanded from the walls of the spent fuel pool per Figure 3.9-2 to ensure definition and control of the Region 1 3-OUT-OF-4 Boundary to other Storage Regions and minimize the number of boundaries where a fuel misplacement incident can occur.