

TABLE 2.2-1 (Continued)
 REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA)	Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
11. Pressurizer Water Level - High	8.0	2.18 4.20	1.82 0.84	<92% of instrument span	<93.8% of instrument span ≤ 93.75%
12. Reactor Coolant Flow - Low	2.5	1.87	0.6	>90% of loop design flow*	>89.4% of loop design flow*
13. Steam Generator Water Level Low - Low	14.0 17.0	12.53 16.28	0.55 1.76	≥ 14.0% >21.6% of narrow range instrument span	≥ 12.6% >20.5% of narrow range instrument span
14. Undervoltage - Reactor Coolant Pumps	15.0	1.39	0	>10,200 volts	>9,822 volts
15. Underfrequency - Reactor Coolant Pumps	2.9	0	0	>55.5 Hz	>55.3 Hz
16. Turbine Trip					
a. Low Fluid Oil Pressure	N.A.	N.A.	N.A.	>500 psig	>450 psig
b. Turbine Stop Valve Closure	N.A.	N.A.	N.A.	>1% open	>1% open
17. Safety Injection Input from ESF	N.A.	N.A.	N.A.	N.A.	N.A.

*Loop design flow = 95,700 gpm

TABLE 4.3-1 (Continued)

TABLE NOTATIONS (Continued)

- (12) Verify the RTD bypass loops flow rate.
- (13) The TRIP ACTUATING DEVICE OPERATIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip circuits for the Manual Reactor Trip Function. The test shall also verify the OPERABILITY of the Bypass Breaker trip circuit(s).
- (14) Local manual shunt trip prior to placing breaker in service. ~~For plants that do not actuate the shunt trip attachment of the bypass breakers on a manual reactor trip); Remote manual undervoltage trip when breaker placed in service.~~
- (15) Automatic undervoltage trip.
- (16) Each channel shall be tested at least every 92 days on a STAGGERED TEST BASIS.
- (17) These channels also provide inputs to ESFAS. Comply with the applicable MODES and surveillance frequencies of Specification 4.3.2.1 for any portion of the channel required to be OPERABLE by Specification 3.3.2.

TABLE 3.3-4

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA) Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE	
1. Safety Injection (Reactor Trip, Feedwater Isolation, Start Diesel Generators, Phase "A" Isolation, Containment Ventilation Isolation, and Emergency Feedwater, Service Water to Secondary Component Cooling Water Isolation, CBA Emergency Fan/Filter Actuation, and Latching Relay).					
a. Manual Initiation	N.A.	N.A.	N.A.	N.A.	
b. Automatic Actuation Logic	N.A.	N.A.	N.A.	N.A.	
c. Containment Pressure--Hi-1	4.2	0.71	1.67	< 4.3 psig	< 5.3 psig
d. Pressurizer Pressure--Low	13.1 15.0	10.71 12.91	1.69 0.99	> 1875 psig 1865	> 1855 psig 1852
e. Steam Line Pressure--Low	13.1	10.71	1.63	≥ 585 psig	≥ 568 psig*
2. Containment Spray					
a. Manual Initiation	N.A.	N.A.	N.A.	N.A.	N.A.
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	N.A.
c. Containment Pressure--Hi-3	3.0	0.71	1.67	< 18.0 psig	< 18.7 psig

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA) Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
7. Emergency Feedwater				
a. Manual Initiation				
(1) Motor driven pump	N.A.	N.A.	N.A.	N.A.
(2) Turbine driven pump	N.A.	N.A.	N.A.	N.A.
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.
c. Steam Generator Water Level--Low-Low Start Motor-Driven Pump and Start Turbine-Driven Pump	14.5 17.0	12.53 15.28	0.55 1.76	14.0 > 21.6% of narrow range instrument span.
d. Safety Injection Start Motor-Driven Pump and Turbine-Driven Pump	See Item 1. above for all Safety Injection Trip Setpoints and Allowable Values.			
e. Loss-of-Offsite Power Start Motor-Driven Pump and Turbine-Driven Pump	See Item 9. for Loss-of-Offsite Power Setpoints and Allowable Values.			
8. Automatic Switchover to Containment Sump				
a. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.
b. RWST Level--Low-Low Coincident With Safety Injection	2.75	1.0	1.8	>122,525 gals. >121,609 gals.
	See Item 1. above for all Safety Injection Trip Setpoints and Allowable Values.			

TABLE 3.3-7

SEISMIC MONITORING INSTRUMENTATION

<u>INSTRUMENTS AND SENSOR LOCATIONS</u>	<u>MEASUREMENT RANGE</u>	<u>MINIMUM INSTRUMENTS OPERABLE</u>
1. Triaxial Time-History Accelerographs*		
a. 1-SM-XT-6700 Free Field Control Room East Air Intake, elevation 11' 6"	± 1g	1**
b. 1-SM-XT-6701 Containment Foundation, elevation -26' 0"	± 1g	1**
c. 1-SM-XT-6710 Containment Operating Floor, elevation 25' 0"	± 1g	1**
2. Triaxial Peak Accelerographs		
a. 1-SM-XR-6702 Accumulator Tank SI-TK-9C, elevation -6' 0"	0-20 Hz	1
b. 1-SM-XR-6703 Safety Injection Piping, elevation -24' 0"	0-20 Hz	1
c. 1-SM-XR-6704 PCCW Piping, Primary Auxiliary Building, elevation 47' 0"	0-20 Hz	1
3. Triaxial Seismic Switch #		
1-SM-XS-6709 Containment Foundation, elevation 27' 0" -26' 0"	0.025g to 0.25g	1**
4. Triaxial Response-Spectrum Recorders		
a. 1-SM-XR-6705 Containment Foundation, elevation -26' 0"	1-30 Hz	1**
b. 1-SM-XR-6706 Containment Foundation next to SI-TK-9C, elevation -26' 0"	1-30 Hz	1
c. 1-SM-XR-6707 Primary Auxiliary Building, elevation 25' 0"	1-30 Hz	1
d. 1-SM-XR-6708 Service Water Pump House, elevation 4' 0"	1-30 Hz	1

*Trigger mechanism in accelerograph unit activates recorders in control room when it senses a ground motion of 0.01g.

**With reactor control room indication

#Switch setpoint is 0.13g for horizontal and vertical axis.

TABLE 4.3-4

SEISMIC MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENTS AND SENSOR LOCATIONS</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>ANALOG CHANNEL OPERATIONAL TEST</u>
1. Triaxial Time-History Accelerographs*			
a. 1-SM-XT-6700 Free Field Control Room East Air Intake, elevation 11' 6"	M	R	SA
b. 1-SM-XT-6701 Containment Foundation, elevation -26' 0"	M	R	N.A.
c. 1-SM-XT-6710 Containment Operating Floor, elevation 25' 0"	M	R	N.A.
2. Triaxial Peak Accelerographs			
a. 1-SM-XR-6702 Accumulator Tank SI-TK-9C, elevation -6' 0"	N.A.	R	N.A.
b. 1-SM-XR-6703 Safety Injection Piping, elevation -24' 0"	N.A.	R	N.A.
c. 1-SM-XR-6704 PCCW Piping, Primary Auxiliary Building, elevation 47' 0"	N.A.	R	N.A.
3. Triaxial Seismic Switch			
1-SM-XS-6709 Containment Foundation,** elevation -26' 0"	M	R	N.A.
4. Triaxial Response-Spectrum Recorders			
a. 1-SM-XR-6705 Containment Foundation,** elevation -26' 0"	M#	R	N.A.
b. 1-SM-XR-6706 Containment Foundation next to SI-TK-9C, elevation -26' 0"	N.A.	R	N.A.
c. 1-SM-XR-6707 Primary Auxiliary Building, elevation 25' 0"	N.A.	R	N.A.
d. 1-SM-XR-6708 Service Water Pump House, elevation 4' 0"	N.A.	R	N.A.

*Each accelerograph has a triaxial trigger to activate the recorder.

**With reactor control room indications.

#CHANNEL CHECK to consist of turning the test/reset switch and verify all lamps illuminate on 1-SM-XR-6705.

TABLE 3.3-10

ACCIDENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>MINIMUM CHANNELS OPERABLE</u>
1. Containment Pressure		
a. Normal Range	2	1
b. Extended Range	2	1
2. Reactor Coolant Outlet Temperature - T_{HOT} (Wide Range) Temperature	4	2
3. Reactor Coolant Inlet Temperature - T _{COLD} (Wide Range)	4	2
4. Reactor Coolant Pressure - Wide Range	2	1
5. Pressurizer Water Level	2	1
6. Steam Generator Pressure	2/steam generator	1/steam generator
7. Steam Generator Water Level - Narrow Range	1/steam generator	1/steam generator
8. Steam Generator Water Level - Wide Range	1/steam generator	1/steam generator
9. Refueling Water Storage Tank Water Level	2	1
10. Reactor Coolant System Subcooling Margin Monitor	2	1
11. Containment Building Water Level	2	1
12. Core Exit Thermocouples	4/core quadrant	2/core quadrant
13. Containment Post-LOCA Area Monitor	2	1

TABLE 3.3-13 (Continued)

TABLE NOTATIONS

- * At all times.
- ** During GASEOUS RADWASTE TREATMENT SYSTEM operation.
- *** When the gland seal exhaustor is in operation.
- # Noble Gas Monitor for this release point is based on the main condenser air evacuation monitor.

ACTION STATEMENTS

- ACTION 32 - With the number of channels OPERABLE less than the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided the flow rate is estimated at least once per 4 hours.
- ACTION 33- With the number of channels OPERABLE less than the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided grab samples are taken at least once per 12 hours and these samples are analyzed for radioactivity within 24 hours. For RI-6504, RM-6503 may be used as an alternate.
- ACTION 34 - With the number of channels OPERABLE less than the Minimum Channels OPERABLE requirement, operation of this RADIOACTIVE GAS WASTE SYSTEM may continue provided grab samples are collected at least once per 4 hours and analyzed within the following 4 hours.
- ACTION 35 - With the number of channels OPERABLE less than the Minimum Channels OPERABLE requirement, effluent releases via the affected pathway may continue provided samples are continuously collected with auxiliary sampling equipment as required in the ODCM.

REACTOR COOLANT SYSTEM

REACTOR COOLANT LOOPS AND COOLANT CIRCULATION

HOT STANDBY

SURVEILLANCE REQUIREMENTS

4.4.1.2.1 At least the above required reactor coolant pumps, if not in operation, shall be determined OPERABLE once per 7 days by verifying correct breaker alignments and indicated power availability.

4.4.1.2.2 The required steam generators shall be determined OPERABLE by verifying secondary side water level to be greater than or equal to ~~21.6%~~ at least once per 12 hours. 14.0%

4.4.1.2.3 The required reactor coolant loops shall be verified in operation and circulating reactor coolant at least once per 12 hours.

REACTOR COOLANT SYSTEM

REACTOR COOLANT LOOPS AND COOLANT CIRCULATION

HOT SHUTDOWN

SURVEILLANCE REQUIREMENTS

4.4.1.3.1 The required reactor coolant pump(s), if in operation, shall be determined OPERABLE once per 7 days by verifying correct breaker alignments and indicated power availability.

4.4.1.3.2 The required steam generator(s) shall be determined OPERABLE by verifying secondary-side water level to be greater than or equal to ~~21.0%~~ at least once per 12 hours. 14.0%

4.4.1.3.3 At least one reactor coolant or RHR loop shall be verified in operation and circulating reactor coolant at least once per 12 hours.

REACTOR COOLANT SYSTEM

REACTOR COOLANT LOOPS AND COOLANT CIRCULATION

COLD SHUTDOWN - LOOPS FILLED

LIMITING CONDITION FOR OPERATION

3.4.1.4.1 At least one residual heat removal (RHR) loop shall be OPERABLE and in operation*, and either:

- a. One additional RHR loop shall be OPERABLE**, or
- b. The secondary-side water level of at least two steam generators shall be greater than 21.6%
74.0%

APPLICABILITY: MODE 5 with reactor coolant loops filled***.

ACTION:

- a. With one of the RHR loops inoperable and with less than the required steam generator water level, immediately initiate corrective action to return the inoperable RHR loop to OPERABLE status or restore the required steam generator water level as soon as possible.
- b. With no RHR loop in operation, suspend all operations involving a reduction in boron concentration of the Reactor Coolant System and immediately initiate corrective action to return the required RHR loop to operation.

SURVEILLANCE REQUIREMENTS

4.4.1.4.1.1 The secondary side water level of at least two steam generators when required shall be determined to be within limits at least once per 12 hours.

4.4.1.4.1.2 At least one RHR loop shall be determined to be in operation and circulating reactor coolant at least once per 12 hours.

*The RHR pump may be deenergized for up to 1 hour provided: (1) no operations are permitted that would cause dilution of the Reactor Coolant System boron concentration and (2) core outlet temperature is maintained at 10°F below saturation temperature.

**One RHR loop may be inoperable for up to 2 hours for surveillance testing provided the other RHR loop is OPERABLE and in operation.

***A reactor coolant pump shall not be started unless the secondary water temperature of each steam generator is less than 50°F above each of the Reactor Coolant System cold-leg temperatures.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT AIR LOCKS

LIMITING CONDITION FOR OPERATION

3.6.1.3 Each containment air lock shall be OPERABLE with:

- a. Both doors closed except when the air lock is being used for normal transit entry and exit through the containment, then at least one air lock door shall be closed, and
- b. An overall air lock leakage rate of less than or equal to $0.05 L_a$ at P_a , 49.6 psig.

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

ACTION:

- a. With one containment air lock door inoperable:
 1. Maintain at least the OPERABLE air lock door closed* and either restore the inoperable air lock door to OPERABLE status within 24 hours or lock the OPERABLE air lock door closed,
 2. Operation may then continue until performance of the next required overall air lock leakage test provided that the OPERABLE air lock door is verified to be locked closed at least once per 31 days,
 3. Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours, and
- b. With the containment air lock inoperable, except as the result of an inoperable air lock door, maintain at least one air lock door closed; restore the inoperable air lock to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
4. The provisions of Specification 3.0.4 are not applicable.

*Except during entry to repair an inoperable inner door, for a cumulative time not to exceed 1 hour per year.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

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

- a. Each 36-inch containment shutdown purge supply and exhaust isolation valve shall be closed and locked closed, and
- b. The 8-inch containment purge supply and exhaust isolation valve(s) shall be sealed closed except when open for purge system operation for pressure control; for ALARA, respirable, and air quality considerations to facilitate personnel entry; and for surveillance tests that require the valve(s) to be open.

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

ACTION:

- a. With a 36-inch containment purge supply or exhaust isolation valve open or not locked closed, close and lock closed that valve or isolate the penetration(s) within 4 hours, otherwise be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With one or more of the 8-inch containment purge supply or exhaust isolation valves open for reasons other than given in Specification 3.6.1.7.b above, close the open 8-inch valve(s) or isolate the penetration(s) within 4 hours, otherwise be in at least HOT STANDBY within the next 6 hours, and in COLD SHUTDOWN within the following 30 hours.
- c. With one or more containment purge supply or exhaust isolation valves having a measured leakage rate in excess of the limits of Specifications 4.6.1.7.2 or 4.6.1.7.3, restore the inoperable valve(s) to OPERABLE status or isolate the affected penetration(s) so that the measured leakage rate does not exceed the limits of Specifications 4.6.1.7.2 or 4.6.1.7.3 within 24 hours and close the purge supply if the affected penetration is the exhaust penetration, otherwise be in at least HOT STANDBY within the next 6 hours, and in COLD SHUTDOWN within the following 30 hours.

*The 8-inch containment purge supply and exhaust isolation valves may not be opened while in MODE 1 or MODE 2 until installations of the narrow-range containment pressure instrument channels and alarms are completed.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT VENTILATION SYSTEM

SURVEILLANCE REQUIREMENTS

4.6.1.7.1 Each 36-inch containment purge supply and exhaust isolation valve shall be verified to be locked closed at least once per 31 days. ~~***~~

4.6.1.7.2 At least once per 6 months on a STAGGERED TEST BASIS, the inboard and outboard isolation valves with resilient material seals in each sealed closed 36-inch containment purge supply and exhaust penetration shall be demonstrated OPERABLE by verifying that the measured leakage rate is less than or equal to $0.05 L_a$ when pressurized to P_a .

4.6.1.7.3 At least once per 92 days each 8-inch containment purge supply and exhaust isolation valve with resilient material seals shall be demonstrated OPERABLE by verifying that the measured leakage rate is less than or equal to $0.01 L_a$ when pressurized to P_a .

4.6.1.7.4 Each 8-inch containment purge supply and exhaust isolation valve shall be verified to be sealed closed or open in accordance with Specification 3.6.1.7.b at least once per 31 days.

*Containment entry and verification that the inside 36-inch containment purge and exhaust isolation valves are locked closed is not required until a containment entry is made if no containment entry has been made since the last time the inside 36-inch containment purge and exhaust isolation valves were verified closed.

PLANT SYSTEMS

TURBINE CYCLE

AUXILIARY FEEDWATER SYSTEM

SURVEILLANCE REQUIREMENTS

4.7.1.2.1a. (Continued)

- 2) Verifying that the steam turbine-driven pump develops a discharge pressure of greater than or equal to 1460 psig at a flow of greater than or equal to 270 gpm when the secondary steam supply pressure is greater than 500 psig. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3;
- 3) Verifying that the startup feedwater pump develops a discharge pressure of greater than or equal to 1375 psig at a flow of greater than or equal to 425 gpm;
- 4) Verifying that each non-automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in its correct position;
- 5) Verifying that each automatic valve in the flow path is in the fully open position whenever the Auxiliary Feedwater System is placed in automatic control or when above 10% RATE¹ THERMAL POWER; and
- 6) Verifying that valves FW-156 and FW-163 are OPERABLE for alignment of the startup feedwater pump to the emergency feedwater header.

b. At least once per 18 months during shutdown by:

- 1) Verifying that each automatic valve in the flow path actuates to its correct position upon receipt of an Emergency Feedwater System Actuation test signal;
- 2) Verifying that each emergency feedwater pump starts ^(P)as designed automatically upon receipt of an Emergency Feedwater Actuation System test signal;
- 3) Verifying that with all manual actions, including power source and valve alignment, the startup feedwater pump starts within the required elapsed time; and
- 4) Verifying that each emergency feedwater control valve closes on receipt of a high flow test signal.

~~¹For the steam turbine-driven pump, when the secondary steam supply pressure is greater than 500 psig.~~

ELECTRICAL POWER SYSTEMS

ELECTRICAL EQUIPMENT PROTECTIVE DEVICES

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES AND PROTECTIVE DEVICES FOR CLASS 1E POWER SOURCES CONNECTED TO NON-CLASS 1E CIRCUITS

LIMITING CONDITION FOR OPERATION

3.8.4.2 Each containment penetration conductor overcurrent protective device and each protective device for Class 1E power sources connected to non-Class 1E circuits shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, 4, 5,* and 6.*

ACTION:

- a. With one or more of the containment penetration conductor overcurrent protective device(s) inoperable:
 - 1) Restore the protective device(s) to OPERABLE status or deenergize the circuit(s) by tripping the associated circuit breaker or racking out or removing the inoperable protective device within 72 hours, declare the affected system or component inoperable, and verify the circuit breaker to be tripped or the inoperable protective device to be racked out or removed at least once per 7 days thereafter; or
 - 2) Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With one or more of the Class 1E power source protective device(s) inoperable, restore the protective device(s) to OPERABLE status or deenergize the circuit(s) by tripping the circuit breaker or racking out or removing the inoperable protective device within 72 hours, declare the affected component inoperable, and verify the circuit breaker to be tripped or the inoperable protective device to be racked out or removed at least once per 7 days thereafter.

SURVEILLANCE REQUIREMENTS

4.8.4.2 Each containment penetration conductor overcurrent and Class 1E power source protective device shall be demonstrated OPERABLE:

- a. At least once per 18 months:
 - 1) By verifying that the medium voltage 13.8-kV and 4.16-kV circuit breakers are OPERABLE by selecting, on a rotating basis, at least one of the circuit breakers, and performing the following:

*Only for Class 1E power source protective devices.

*Only for protective devices for Class 1E power sources connected to non-Class 1E loads.

REFUELING OPERATIONS

FUEL STORAGE BUILDING EMERGENCY AIR CLEANING SYSTEM

SURVEILLANCE REQUIREMENTS

4.9.12b (Continued)

- 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 16,450 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,* meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978,* by showing a methyl iodide penetration of less than 1.0% when tested at a temperature of 30°C and at a relative humidity of 95% in accordance with ASTM-D-3803; and
 - 3) Verifying a system flow rate of 16,450 cfm \pm 10% during system operation when tested in accordance with ANSI N510-1980.
- c. 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,* meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978,* by showing a methyl iodide penetration of less than 1.0% when tested at a temperature of 30°C and at a relative humidity of 95% in accordance with ASTM-D-3803.
- d. At least once per 18 months by:
- 1) Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the system at a flow rate of 16,450 cfm \pm 10%;
 - 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,

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

RADIOACTIVE EFFLUENTS

GASEOUS EFFLUENTS

DOSE - IODINE-131, IODINE-133, TRITIUM, AND RADIOACTIVE MATERIAL IN PARTICULATE FORM

LIMITING CONDITION FOR OPERATION

3.11.2.3 The dose to a MEMBER OF THE PUBLIC from Iodine-131, Iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days in gaseous effluents released, from each unit, to areas at and beyond the SITE BOUNDARY (see Figure 5.1-1) shall be limited to the following:

- a. During any calendar quarter: Less than or equal to 7.5 mrems to any organ, and
- b. During any calendar year: Less than or equal to 15 mrems to any organ.

APPLICABILITY: At all times.

ACTION:

- a. With the calculated dose from the release of Iodine-131, Iodine-133, tritium, and radionuclides in particulate form with half-lives greater than 8 days, in gaseous effluents exceeding any of the above limits, prepare and submit ~~to~~ the Commission within 30 days, pursuant to Specification 6.8.2, a Special Report that identifies the cause(s) for exceeding the limit(s) and defines the corrective actions that have been taken to reduce the release, and the proposed corrective actions to be taken to assure that subsequent releases will be in compliance with the above limits.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.3 Cumulative dose contributions for the current calendar quarter and current calendar year for Iodine-131, Iodine-133, tritium and radionuclides in particulate form with half-lives greater than 8 days shall be determined in accordance with the methodology and parameters in the ODCM at least once per 31 days.

6.0 ADMINISTRATIVE CONTROLS

6.1 RESPONSIBILITY

6.1.1 The Station Manager shall be responsible for overall station operation and shall delegate in writing the succession to this responsibility during his absence.

6.1.2 The Shift Superintendent (or during his absence from the control room, a designated individual) shall be responsible for the control room command function. A management directive to this effect, signed by the Vice President, Nuclear Production shall be reissued to all station personnel on an annual basis.

6.2 ORGANIZATION

6.2.1 OFFSITE AND ONSITE ORGANIZATIONS

Onsite and offsite organizations shall be established for unit operation and corporate management, respectively. The onsite and offsite organizations shall include the positions for activities affecting the safety of the nuclear power power plant.

- a. Lines of authority, responsibility, and communication shall be established and defined for the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented and updated, as appropriate, in the form of organization charts, functional descriptions for departmental responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements shall be documented in the FSAR and updated in accordance with the requirements of 10 CFR 50.71.
- b. The Station Manager shall be responsible for overall unit safe operation and shall have control over those onsite activities necessary for safe operation and maintenance of the plant.
- c. The Vice President - Nuclear Production shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining, and providing technical support to the plant to ensure nuclear safety.
- d. The individuals who train the operating staff and those who carry out health physics and quality assurance functions may report to the appropriate onsite manager; however, they shall have sufficient organizational freedom to ensure their independence from operating pressures.

ADMINISTRATIVE CONTROLS

RESPONSIBILITIES

6.4.1.7 (Continued)

and the Station Manager however, the Station Manager shall have responsibility for resolution of such disagreements pursuant to Specification 6.1.1.

RECORDS

6.4.1.8 The SORC shall maintain written minutes of each SORC meeting that, at a minimum, document the results of all SORC activities performed under the responsibility provisions of these Technical Specifications. Copies shall be provided to the Vice President-Nuclear Production and the NSARC.

6.4.2 NUCLEAR SAFETY AUDIT REVIEW COMMITTEE (NSARC)

FUNCTION

6.4.2.1 The NSARC shall function to provide independent review and audit of designated activities in the areas of:

- a. Nuclear power plant operations,
- b. Nuclear engineering,
- c. Chemistry and radiochemistry,
- d. Metallurgy,
- e. Instrumentation and control,
- f. Radiological safety,
- g. Mechanical and electrical engineering, and
- h. Quality assurance practices.

The NSARC shall report to and advise the NHY President ~~and Chief Executive Officer~~ on those areas of responsibility specified in Specifications 6.4.2.7 and 6.4.2.8.

COMPOSITION

6.4.2.2 The NSARC shall be composed of at least five (5) individuals. The Chairman, Vice Chairman and members, including designated alternates, shall be appointed in writing by the NHY President ~~and Chief Executive Officer~~. Collectively, the individuals appointed to the NSARC should be competent to conduct reviews identified by Specification 6.4.1.1. Each member shall meet the qualifications of ANSI 3.1-1978, Section 4.7.

ALTERNATES

6.4.2.3 All alternate members shall be appointed in writing by the NHY President ~~and Chief Executive Officer~~ to serve on a temporary basis; however, no more than a minority shall participate as voting members in NSARC activities at any one time.

CONSULTANTS

6.4.2.4 Consultants shall be utilized as determined by the NSARC to provide expert advice to the NSARC.

ADMINISTRATIVE CONTROLS

AUDITS

6.4.2.8 (Continued)

provided the combined time interval for any three consecutive intervals shall not exceed 3.25 times the specified interval. These audits shall encompass:

- a. The conformance of station operation to provisions contained within the Technical Specifications and applicable license conditions at least once per 12 months;
- b. The performance, training, and qualifications of the entire station staff at least once per 12 months;
- c. The results of actions taken to correct deficiencies occurring in station equipment, structures, systems, or method of operation that affect nuclear safety, at least once per 6 months;
- d. The performance of activities required by the Operational Quality Assurance Program to meet the criteria of Appendix B, 10 CFR Part 50, at least once per 24 months;
- e. The fire protection programmatic controls including the implementing procedures at least once per 24 months by qualified licensee QA personnel;
- f. The fire protection equipment and program implementation at least once per 12 months utilizing either a qualified offsite licensee fire protection engineer or an outside independent fire protection consultant. An outside independent fire protection consultant shall be used at least every third year;
- g. The Radiological Environmental Monitoring Program and the results thereof at least once per 12 months;
- h. The OFFSITE DOSE CALCULATION MANUAL and implementing procedures at least once per 24 months;
- i. The PROCESS CONTROL PROGRAM and implementing procedures for processing and packaging of radioactive wastes at least once per 24 months;
- j. The performance of activities required by the Quality Assurance Program for effluent and environmental monitoring at least once per 12 months;
- k. The Emergency Plan and implementing procedures at least once per 12 months;
- l. The Security Plan and implementing procedures at least once per 12 months; and
- m. Any other area of station operation considered appropriate by the NSARC or the NHY President and Chief Executive Officer.

ADMINISTRATIVE CONTROLS

RECORDS

6.4.2.9 Records of NSARC activities shall be prepared and distributed as indicated below:

- a. Minutes of each NSARC meeting shall be prepared and forwarded to the NHY President and Chief Executive Officer within 14 days following each meeting;
- b. Reports of reviews encompassed by Specification 6.4.2.7 shall be included in the minutes where applicable or forwarded under separate cover to the NHY President and Chief Executive Officer within 14 days following completion of the review; and
- c. Audit reports encompassed by Specification 6.4.2.8 shall be forwarded to the NHY President and Chief Executive Officer and to the management positions responsible for the areas audited within 30 days after completion of the audit by the auditing organization.

6.5 REPORTABLE EVENT ACTION

The following actions shall be taken for REPORTABLE EVENTS:

- a. The Commission shall be notified and a report submitted pursuant to the requirements of Section 50.73 to 10 CFR Part 50, and
- b. Each REPORTABLE EVENT shall be reviewed by the SORC and the results of this review shall be submitted to the NSARC and the Vice President-Nuclear Production.

6.6 SAFETY LIMIT VIOLATION

The following actions shall be taken in the event a Safety Limit is violated:

- a. The NRC Operations Center shall be notified by telephone as soon as possible and in all cases within 1 hour. The Vice President-Nuclear Production and the NSARC shall be notified within 24 hours;
- b. A Safety Limit Violation Report shall be prepared. The report shall be reviewed by the SORC. This report shall describe: (1) applicable circumstances preceding the violation, (2) effects of the violation upon facility components, systems, or structures, and (3) corrective action taken to prevent recurrence;
- c. The Safety Limit Violation Report shall be submitted to the Commission, the NSARC, and the Vice President-Nuclear Production within 14 days of the violation; and
- d. Operation of the station shall not be resumed until authorized by the Commission.

ADMINISTRATIVE CONTROLS

PROCEDURES AND PROGRAMS

6.7.4d. (Continued)

- 1) Training of personnel, and
- 2) Procedures for monitoring.

e. Post-Accident Sampling

A program that will ensure the capability to obtain and analyze reactor coolant, radioactive iodines and particulates in plant gaseous effluents, and containment atmosphere samples under accident conditions. The program shall include the following:

- 1) Training of personnel,
- 2) Procedures for sampling and analysis, and
- 3) Provisions for maintenance of sampling and analysis equipment.

f. Accident Monitoring Instrumentation*

A program which will ensure the capability to monitor plant variables and systems operating status during and following an accident. This program shall include those instruments provided to indicate system operating status and furnish information regarding the release of radioactive materials (Category 2 and 3 instrumentation as defined in Regulatory Guide 1.97, Revision 2^x) and provide the following:

- 1) Preventive maintenance and periodic surveillance of instrumentation,
- 2) Pre-planned operating procedures and backup instrumentation to be used if one or more monitoring instruments become inoperable, and
- 3) Administrative procedures for returning inoperable instruments to OPERABLE status as soon as practicable.

6.8 REPORTING REQUIREMENTS

ROUTINE REPORTS

6.8.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following reports shall be submitted to the Regional Administrator of the Regional Office of the NRC unless otherwise noted.

STARTUP REPORT

6.8.1.1 A summary report of station startup and power escalation testing shall be submitted following: (1) receipt of an Operating License, (2) amendment to the license involving a planned increase in power level, (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier, and (4) modifications that may have significantly altered the nuclear, thermal, or hydraulic performance of the station.

*Implementation of this specification shall take effect when plant goes above 5% power for the first time.

** SEABROOK has taken exception to the categorization of instrumentation provided in Regulatory Guide 1.97, Revision 2. The Seabrook exceptions are provided in FSAR Table 7.5-1, which has been reviewed by the NRC Staff in SER Supplement No 5.

ADMINISTRATIVE CONTROLS

SEMIANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT

6.8.1.4 (Continued)

to show conformance with 40 CFR Part 190, "Environmental Radiation Protection Standards for Nuclear Power Operation." Acceptable methods for calculating the dose contribution from liquid and gaseous effluents are given in Regulatory Guide 1.109, Rev. 1, October 1977.

The Semiannual Radioactive Effluent Release Reports shall include a list and description of unplanned releases from the site to UNRESTRICTED AREAS of radioactive materials in gaseous and liquid effluents made during the reporting period.

The Semiannual Radioactive Effluent Release Reports shall include any changes made during the reporting period to the PROCESS CONTROL PROGRAM and the ODCM, pursuant to Specifications 6.12 and 6.13, respectively, as well as any major change to Liquid, Gaseous, or Solid Radwaste Treatment Systems pursuant to Specification 6.14. It shall also include a listing of new locations for dose calculations and/or environmental monitoring identified by the Land Use Census pursuant to Specification 3.12.2.

The Semiannual Radioactive Effluent Release Reports shall also include the following: an explanation as to why the inoperability of liquid or gaseous effluent monitoring instrumentation was not corrected within the time specified in Specification 3.3.3.10 or 3.3.3.11, respectively; and description of the events leading to liquid holdup tanks or gas storage tanks exceeding the limits of Specification 3.11.1.4 or 3.11.2.6, respectively.

MONTHLY OPERATING REPORTS

6.8.1.5 Routine reports of operating statistics and shutdown experience shall be submitted on a monthly basis to the Director, Office of Resource Management, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, with a copy to the Regional Administrator of the Regional Office of the NRC, no later than the 15th of each month following the calendar month covered by the report.

RADIAL PEAKING FACTOR LIMIT REPORT

ATTN: DOCUMENT CONTROL DESK

6.8.1.6 The F_{xy} limits for RATED THERMAL POWER (F_{xy}^{RTP}) shall be provided to the NRC Regional Administrator with a copy to Director of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, for all core planes containing Bank "D" control rods and all unrodded core planes and the plot of predicted ($F_{q, Rel}^{T, P}$) vs Axial Core Height with the limit envelope at least 60 days prior to each cycle initial criticality unless otherwise approved by the Commission by letter. In addition, in the event that the limit should change requiring a new substantial or an amended submittal to the Radial Peaking Factor Limit Report, it will be submitted 60 days prior to the date the limit would become effective unless otherwise approved by the Commission by letter. Any information needed to support F_{xy}^{RTP} will be by request from the NRC and need not be included in this report.

SEABROOK - UNIT 1

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[U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, D.C. 20555, ATTN: DOCUMENT CONTROL DESK]

ADMINISTRATIVE CONTROLS

SPECIAL REPORTS

6.8.2 Special reports shall be submitted to the ^{U.S. Nuclear Regulatory Commission, Washington, D.C.} ~~Regional Office of the NRC~~ within the time period specified for each report. 20555

ATTN: DOCUMENT CONTROL DEK

6.9 RECORD RETENTION

6.9.1 In addition to the applicable record retention requirements of Title 10, Code of Federal Regulations, the following records shall be retained for at least the minimum period indicated.

6.9.2 The following records shall be retained for at least 5 years:

- a. Records and logs of station operation covering time interval at each power level;
- b. Records and logs of principal maintenance activities, inspections, repair, and replacement of principal items of equipment related to nuclear safety;
- c. All REPORTABLE EVENTS;
- d. Records of surveillance activities, inspections, and calibrations required by these Technical Specifications;
- e. Records of changes made to the procedures required by Specification 6.7.1;
- f. Records of radioactive shipments;
- g. Records of sealed source and fission detector leak tests and results; and
- h. Records of annual physical inventory of all sealed source material of record.

6.9.3 The following records shall be retained for the duration of the station Operating License:

- a. Records and drawing changes reflecting station design modifications made to systems and equipment described in the Final Safety Analysis Report;
- b. Records of new and irradiated fuel inventory, fuel transfers, and assembly burnup histories;
- c. Records of radiation exposure for all individuals entering radiation control areas;
- d. Records of gaseous and liquid radioactive material released to the environs;
- e. Records of transient or operational cycles for those station components identified in Table 5.7-1;