TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL Unit	TOTAL ALLOWANCE (TA)	Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
13. Steam Generator Water Level - Low-Low					
a. Unit 1	25.0	22.08	2.0	>25.0% of narrow range instrument span	>23.1% of narrow range instrument span
b. Unit 2	35.4	22.2	2.0	>35.4% of narrow range instrument span	>33.4% of narrow range instrument span
14. Undervoltage - Reactor Coolant Pumps a. Unit 1	[7.7]	[0]	[0]	≥[4830] volts-each bus	≥[4753] volts-each bus
b. Unit 2	7.7	1.2	0	≥4830 volts-each bus	≥4753 volts - each bus
15. Underfrequency - Reactor Coolant Pumps a. Unit 1	[4.4]	[0]	[0]	≥[57.2] Hz	≥[57.1] Hz
b. Unit 2	4.4	0	0	≥57.2 Hz	≥57.06 Hz
16. Turbine Trip					
a. Low Trip System Pressure	N.A.	N.A.	N.A.	≥[59] psig	≥[46.6] 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.
18. Reactor Trip System Interlocks					
a. Intermediate Range Neutron Flux, P-6	N.A.	N.A.	N.A.	1×10^{-10} amps	$\geq 6 \times 10^{-11}$ amps

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EMERGENCY CORE COOLING SYSTEMS

3/4.5.1 ACCUMULATORS

COLD LEG INJECTION

LIMITING CONDITION FOR OPERATION

3.5.1 Each cold leg injection accumulator shall be OPERABLE with:

a. The discharge isolation valve open with power removed,

b. An indicated borated water level of between [39]% and [61]%

c. A boron concentration of between [1900] and [2200] ppm, and

d. An indicated cover-pressure of between 623 and 644 psig.

APPLICABILITY: MODES 1, 2, and 3*.

ACTION:

a. With one cold leg injection accumulator inoperable, except as a result of a closed isolation valve or the boron concentration outside the required values, restore the inoperable accumulator to OPERABLE status within 1 hour or be in at least HOT STANDBY within the next 6 hours and reduce pressurizer pressure to less than 1000 psig within the following 6 hours.

b. With one cold leg injection accumulator inoperable due to the isolation valve being closed, either immediately open the isolation valve or be in at least HOT STANDBY within 6 hours and reduce pressurizer pressure to less than 1000 psig within the following 6 hours.

c. With the boron concentration of one cold leg injection accumulator outside the required limit, restore the boron concentration to within the required limits within 72 hours or be in at least HOT STANDBY within the next 6 hours and reduce pressurizer pressure to less than 1000 psig within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.5.1.1 Each cold leg injection accumulator shall be demonstrated OPERABLE:

a. At least once per 12 hours by:

1) Verifying the indicated borated water volume and nitrogen cover-pressure in the tanks, and

*Pressurizer pressure above 1000 psig.

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3/4.7.8 PRIMARY PLANT VENTILATION SYSTEM - ESF FILTRATION UNITS

LIMITING CONDITION FOR OPERATION

3.7.8 Two independent ESF Filtration Trains shall be OPERABLE.

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

ACTION:

a. With one ESF Filtration Train inoperable, restore the inoperable ESF Filtration Train 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 the inability to reach and maintain a negative pressure in the negative pressure envelope of the Auxiliary, Safeguards, and Fuel Buildings greater than or equal to [0.05] inch water gauge, restore the PRIMARY PLANT VENTILATION SYSTEM to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. With the inability to reach and maintain a negative pressure in the negative pressure envelope of the Auxiliary, Safeguards, and Fuel Buildings greater than or equal to 0.01 inch water gauge, restore the PRIMARY PLANT VENTILATION SYSTEM'S ability to maintain a negative pressure of greater than or equal to 0.01 inch water gauge within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.8 Each ESF Filtration Train 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 that each ESF Filtration Train operates for at least 10 continuous hours with the heaters operating;

b. At least once per 18 months 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 each ESF Filtration Unit satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1.0% by using the test procedure guidance in Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52,

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SURVEILLANCE REQUIREMENTS (Continued)

Revision 2, March 1978*, and verifying the flow rate is 15,000 cfm ± 10% per ESF Filtration Unit when tested in accordance with ANSI N510-1980; and

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*, for a methyl iodide penetration of less than 1.0%;

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*, for a methyl iodide penetration of less than 1.0%;

d. At least once per 18 months by:

1) Verifying that the total pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 8.5 inches Water Gauge while operating each ESF Filtration Unit at a flow rate of 15,000 cfm ± 10%,

2) Verifying that each ESF Filtration Unit starts on a Safety Injection test signal,

3) Verifying that the heaters dissipate 100 ± 5 kW when tested in accordance with ANSI N510-1980, and

4) Verifying that the train maintains the negative pressure envelope of the Auxiliary, Safeguards, and Fuel Buildings at a negative pressure of greater than or equal to [0.05] inch water gauge relative to the outside atmosphere;

e. After each complete or partial replacement of a HEPA filter bank, by verifying that the associated ESF Filtration Unit satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1.0% in accordance with ANSI N510-1980 for a DOP test aerosol while operating the associated ESF Filtration Unit at a flow rate of 15,000 cfm ± 10%; and

f. After each complete or partial replacement of a charcoal adsorber bank, by verifying that the associated ESF Filtration Unit satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1.0% in accordance with ANSI N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating the associated ESF Filtration Unit system at a flow rate of 15,000 cfm ± 10%.

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*ANSI N510-1980 and ANSI N509-1980 shall be used in place of ANSI N510-1975 and ANSI N509-1976, respectively.

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TABLE 3.7-3

AREA TEMPERATURE MONITORING

AREA	MAXIMUM TEMPERATURE LIMIT (°F) Normal Conditions	Abnormal Conditions
1. Electrical and Control Building		
Normal Areas	104	131
Control Room Main Level (El. 830'-0")	80	104
Control Room Technical Support Area (El. 840'-6")	104	104
UPS/Battery Rooms	104	113
Chiller Equipment Areas	122	131
2. Fuel Building		
Normal Areas	104	131
Spent Fuel Pool Cooling Pump Rooms	122	131
3. Safeguards Buildings		
Normal Areas	104	131
AFW, RHR, SI, Containment Spray Pump Rooms	122	131
RHR Valve and Valve Isolation Tank Rooms	122	131
RHR/CT Heat Exchanger Rooms	122	131
Diesel Generator Area	122	131
Diesel Generator Equipment Rooms	130	131
Day Tank Room	122	131
4. Auxiliary Building		
Normal Areas	104	131
CCW, CCP Pump Rooms	122	131
CCW Heat Exchanger Area	122	131
CVCS Valve and Valve Operating Rooms	122	131
Auxiliary Steam Drain Tank Equipment Room	122	131
Waste Gas Tank Valve Operating Room	122	131
5. Service Water Intake Structure	127	131
6. Containment Buildings		
General Areas	120	129
~~CRDM Platform~~	~~140~~	~~149~~
Reactor Cavity Exhaust	150	190 ~~175~~
~~R.C. Pipe Penetrations~~	~~200~~	~~209~~
CRDM Shroud Exhaust	163	172

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3/4.5 EMERGENCY CORE COOLING SYSTEMS

BASES

3/4.5.1 ACCUMULATORS

The OPERABILITY of each Reactor Coolant System (RCS) accumulator ensures that a sufficient volume of borated water will be immediately forced into the reactor core through each of the cold legs in the event the RCS pressure falls below the pressure of the accumulators. This initial surge of water into the core provides the initial cooling mechanism during large RCS pipe ruptures.

The limits on accumulator volume, boron concentration and pressure ensure that the assumptions used for accumulator injection in the safety analysis are met. The required indicated accumulator volumes and pressures include a [5] percent measurement uncertainty. The indicated accumulator volumes of [39]% and [61]% are based on the analytical limits of [6119] gallons and [6597] gallons, respectively, plus a [1]% tank tolerance.

The accumulator power operated isolation valves are considered to be "operating bypasses" in the context of IEEE Std. 279-1971, which requires that bypasses of a protective function be removed automatically whenever permissive conditions are not met. In addition, as these accumulator isolation valves fail to meet single failure criteria, removal of power to the valves is required by BTP ICSB 18. This is accomplished via key-lock control board cut-off switches.

The limits for operation with an accumulator inoperable for any reason except an isolation valve closed minimizes the time exposure of the plant to a LOCA event occurring concurrent with failure of an additional accumulator which may result in unacceptable peak cladding temperatures. If a closed isolation valve cannot be immediately opened, the full capability of one accumulator is not available and prompt action is required to place the reactor in a mode where this capability is not required.

3/4.5.2 and 3/4.5.3 ECCS SUBSYSTEMS

The OPERABILITY of two independent ECCS subsystems ensures that sufficient emergency core cooling capability will be available in the event of a LOCA assuming the loss of one subsystem through any single failure consideration. Either subsystem operating in conjunction with the accumulators is capable of supplying sufficient core cooling to limit the peak cladding temperatures within acceptable limits for all postulated break sizes ranging from the double ended break of the largest RCS cold leg pipe downward. In addition, each ECCS subsystem provides long-term core cooling capability in the recirculation mode during the accident recovery period.

With the RCS temperature below 350°F, one OPERABLE ECCS subsystem is acceptable without single failure consideration on the basis of the stable reactivity condition of the reactor and the limited core cooling requirements.

The limitation for a maximum of two charging pumps to be OPERABLE and the requirement to verify one charging pump and all safety injection pumps

3/4.6 CONTAINMENT SYSTEMS

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BASES

3/4.6.1 PRIMARY CONTAINMENT

3/4.6.1.1 CONTAINMENT INTEGRITY

Primary CONTAINMENT INTEGRITY ensures that the release of radioactive materials from the containment atmosphere will be restricted to those leakage paths and associated leak rates assumed in the safety analyses. This restriction, in conjunction with the leakage rate limitation, will limit the EXCLUSION AREA BOUNDARY radiation doses to within the dose guideline values of 10 CFR 100 during accident conditions.

3/4.6.1.2 CONTAINMENT LEAKAGE

The limitations on containment leakage rates ensure that the total containment leakage volume will not exceed the value assumed in the safety analyses at the peak accident pressure, P_a. As an added conservatism, the measured overall integrated leakage rate is further limited to less than or equal to 0.75 L_a or 0.75 L_t, as applicable, during performance of the periodic test to account for possible degradation of the containment leakage barriers between leakage tests.

For specific system configurations, credit may be taken for a 30-day water seal that will be maintained to prevent containment atmosphere leakage through the penetrations to the environment. The following is a list of the containment isolation valves that meet this system configuration and the Maximum Allowed Leakage Rate (MALR) required to maintain the water seal for 30 days.

Valve No.	MALR (cc/hr)
1-8809A	[77]
1-8809B	[77]
1-8840	[2577]
CT-142	[4734]
CT-145	[4734]
HV-4776	[4734]
HV-4777	[4734]

2-8809A	75
2-8809B	73
2-8840	2382

The surveillance testing for measuring leakage rates is consistent with the requirements of 10 CFR 50 Appendix J.

3/4.6.1.3 CONTAINMENT AIR LOCKS

The limitations on closure and leak rate for the containment air locks are required to meet the restrictions on CONTAINMENT INTEGRITY and containment leak rate. Surveillance testing of the air lock seals provides assurance that the overall air lock leakage will not become excessive due to seal damage during the intervals between air lock leakage tests.