

ADMINISTRATIVE CONTROLSPROMPT NOTIFICATION WITH WRITTEN FOLLOWUP (Continued)

- d. Reactivity anomalies involving disagreement with the predicted value of reactivity balance under steady state conditions during power operation greater than or equal to 1% delta k/k; a calculated reactivity balance indicating a SHUTDOWN MARGIN less conservative than specified in the technical specifications; short-term reactivity increases that correspond to a reactor period of less than 5 seconds or, if subcritical, an unplanned reactivity insertion of more than 0.5% delta k/k; or occurrence of any unplanned criticality.
- e. Failure or malfunction of one or more components which prevents or could prevent, by itself, the fulfillment of the functional requirements of system(s) used to cope with accidents analyzed in the SAR.
- f. Personnel error or procedural inadequacy which prevents or could prevent, by itself, the fulfillment of the functional requirements of systems required to cope with accidents analyzed in the SAR.
- g. Conditions arising from natural or man-made events that, as a direct result of the event, require unit shutdown, operation of safety systems, or other protective measures required by technical specifications.
- h. Errors discovered in the transient or accident analyses or in the methods used for such analyses as described in the safety analysis report or in the bases for the technical specifications that have or could have permitted reactor operation in a manner less conservative than assumed in the analyses.
- i. Performance of structures, systems, or components that requires remedial action or corrective measures to prevent operation in a manner less conservative than assumed in the accident analyses in the safety analysis report or technical specifications bases; or discovery during unit life of conditions not specifically considered in the safety analysis report or technical specifications that require remedial action or corrective measures to prevent the existence or development of an unsafe condition.
- j. Offsite releases of radioactive materials in liquid and gaseous effluents which exceed the limits of Specification 3.11.1.1 or 3.11.2.1.
- k. Exceeding the limits in Specification 3.11.¹~~X.4 or 3.11.2.6~~ for the storage of radioactive materials in the listed tanks. The written follow-up report shall include a schedule and a description of activities planned and/or taken to reduce the contents to within the specified limits.

TABLE 4.3.1.1-1

REACTOR PROTECTION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION ^(a)	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
1. Intermediate Range Monitors:				
a. Neutron Flux - High	S/U, S, ^(b) S	S/U ^(c) , W W	R R	2 3, 4, 5
b. Inoperative	NA	W	NA	2, 3, 4, 5
2. Average Power Range Monitor: ^(f)				
a. Neutron Flux - High, Setdown	S/U, S, ^(b) S	S/U ^(c) , W W	SA SA	2 3, 5
b. Flow Biased Simulated Thermal Power - High	S, D ^(h)	S/U ^(c) , W	W ^{(d)(e)} , SA, R ⁽ⁱ⁾	1
c. Neutron Flux - High	S	S/U ^(c) , W	W ^(d) , SA	1
d. Inoperative	NA	W	NA	1, 2, 3, 5
3. Reactor Vessel Steam Dome Pressure - High	S	M	R ^(g)	1, 2
4. Reactor Vessel Water Level - Low, Level 3	S	M	R ^(g)	1, 2
5. Reactor Vessel Water Level - High, Level 8	S	M	R ^(g)	1
6. Main Steam Line Isolation Valve - Closure	NA	M	R	1
7. Main Steam Line Radiation - High	S	M	R	1, 2
8. Drywell Pressure - High	S	M	R ^(g)	1, 2

2. (GGS-96) P.1.
(NO CHANGES THIS PAGE)

TABLE 4.3.1.4-1 (Continued)

REACTOR PROTECTION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
9. Scram Discharge Volume Water Level - High	S	M	R ^(g)	1, 2, 5
10. Turbine Stop Valve - Closure	S	M	R ^(g)	1
11. Turbine Control Valve Fast Closure Valve Trip System Oil Pressure - Low	S	M	R ^(g)	1
12. Reactor Mode Switch Shutdown Position	NA	R	NA	1, 2, 3, 4, 5
13. Manual Scram	NA	M	NA	1, 2, 3, 4, 5

- (a) Neutron detectors may be excluded from CHANNEL CALIBRATION.
- (b) The IRM and SRM channels shall be determined to overlap for at least 1/2 decade during each startup after entering OPERATIONAL CONDITION 2 and the IRM and APRM channels shall be determined to overlap for at least 1/2 decade during each controlled shutdown, if not performed within the previous 7 days.
- (c) Within 24 hours prior to startup, if not performed within the previous 7 days.
- (d) This calibration shall consist of the adjustment of the APRM channel to conform to the power values calculated by a heat balance during OPERATIONAL CONDITION 1 when THERMAL POWER > 25% of RATED THERMAL POWER. Adjust the APRM channel if the absolute difference is greater than 2% of RATED THERMAL POWER. Any APRM channel gain adjustment made in compliance with Specification 3.2.2 shall not be included in determining the absolute difference.
- (e) This calibration shall consist of the adjustment of the APRM flow biased channel to conform to a calibrated flow signal.
- (f) The LPRMs shall be calibrated at least once per 1000 effective full power hours (EFPH) using the TIP system.
- (g) Calibrate trip unit at least once per 31 days.
- (h) ~~Verify measured core flow to be greater than or equal to rated core flow.~~ *Verify Measured core flow to be less than or equal to established core flow at the existing flow control valve position.*
- (i) This calibration shall consist of verifying the 6 ± 1 second simulated thermal power time constant.

REACTOR COOLANT SYSTEMSURVEILLANCE REQUIREMENTS (Continued)

4.4.6.1.2 The reactor coolant system temperature and pressure shall be determined to be to the right of the criticality limit line of Figure 3.4.6.1-1 curves C and C' within 15 minutes prior to the withdrawal of control rods to bring the reactor to criticality and at least once per 30 minutes during system heatup.

4.4.6.1.3 The reactor vessel material specimens shall be removed and examined to determine reactor pressure vessel fluence as a function of time and THERMAL POWER as required by 10 CFR 50, Appendix H in accordance with the schedule in Table 4.4.6.1.3-1. The results of these fluence determinations shall be used to update the curves of Figure 3.4.6.1-1. The adjusted reference temperature resulting from neutron irradiation shall be calculated based on the greater of the following:

- a. Actual shift in the RT_{NDT} for materials in the capsules as defined by the CVN impact test. B322A27AE
- b. Predicted shift in RT_{NDT} for plate C2594-2 and weld 627260/B322A27AE (heat/lot) as determined by Regulatory Guide 1.99, "Effects of Residual Elements on Predicted Radiation Damage to Reactor Vessel Materials".

4.4.6.1.4 The reactor vessel flange and head flange temperature shall be verified to be greater than or equal to 70°F:

- a. In OPERATIONAL CONDITION 4 when reactor coolant system temperature is:
 1. $\leq 100^{\circ}\text{F}$, at least once per 12 hours.
 2. $\leq 80^{\circ}\text{F}$, at least once per 30 minutes.
- b. Within 30 minutes prior to and at least once per 30 minutes during tensioning of the reactor vessel head bolting studs.

TABLE 4.4.6.1.3-1

REACTOR VESSEL MATERIAL SURVEILLANCE PROGRAM-WITHDRAWAL SCHEDULE

<u>CAPSULE NUMBER</u>	<u>VESSEL LOCATION</u>	<u>LEAD FACTOR</u>	<u>WITHDRAWAL TIME (EFPY)</u>
1. 131C8981G1-N01	3°	0.46	2 10
2. 131C8981G1-N02	177°	0.46	2 30
3. 131C8981G1-N03	183°	0.46	Spare

TABLE 3.7.8-1

AREA TEMPERATURE MONITORING

<u>AREA</u>	<u>TEMPERATURE LIMIT (°F)</u>	
	<u>EQUIPMENT NOT OPERATING</u>	<u>EQUIPMENT OPERATING</u>
a. <u>Containment</u>		
Inside Drywell	135	150
CRD Cavity	135	185
Outside Drywell	90 80	120 105
Steam Tunnel	125	125
b. <u>Auxiliary Building</u>		
General	104	104
ECCS Rooms	105	150
ESF Electrical Rooms	104	104
c. <u>Control Building</u>		
ESF Switchgear and Battery Rooms	104	104
Control Room	77	77
d. <u>Diesel Generator Rooms</u>	125	125
e. <u>SSW Pumphouse</u>	104*	104*

*For this area, the limit shall be the greater of 104°F or outside ambient temperature plus 20°F, not to exceed 122°F for greater than one hour.

PLANT SYSTEMS3/4.7.2 CONTROL ROOM EMERGENCY FILTRATION SYSTEMLIMITING CONDITION FOR OPERATION

3.7.2 Two independent control room emergency filtration system subsystems shall be OPERABLE.

APPLICABILITY: All OPERATIONAL CONDITIONS and *.

ACTION:

- a. In OPERATIONAL CONDITION 1, 2 or 3 with one control room emergency filtration subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- b. In OPERATIONAL CONDITION 4, 5 or *:
 1. With one control room emergency filtration subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 7 days or initiate and maintain operation of the OPERABLE subsystem in the isolation mode of operation.
 2. With both control room emergency filtration subsystems inoperable, suspend CORE ALTERATIONS, handling of irradiated fuel in the secondary containment and operations with a potential for draining the reactor vessel.
- c. The provisions of Specification 3.0.3 are not applicable in Operational Condition *.

SURVEILLANCE REQUIREMENTS

4.7.2 Each control room emergency filtration subsystem 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 the subsystem operates for at least 10 hours with the heaters OPERABLE.
- 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 subsystem by:

1. Verifying that with the subsystem operating at a flow rate of 4000 cfm \pm 10% and exhausting through the HEPA filters and charcoal adsorbers, the total bypass flow of the system to the facility vent is less than or equal to 1% when the subsystem is tested by admitting cold DOP at the system intake.

* When irradiated fuel is being handled in the secondary containment.

PLANT SYSTEMSSURVEILLANCE REQUIREMENTS (Continued)

1. X Verifying that the subsystem satisfies the in-place testing acceptance criteria and uses the test procedures of 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 4000 cfm \pm 10%.
 2. X 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.
 3. X Verifying a subsystem flow rate of 4000 cfm \pm 10% during subsystem operation when tested in accordance with ANSI N510-1975.
- 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.
- 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 7.2 inches Water Gauge while operating the subsystem at a flow rate of 4000 cfm \pm 10%.
 2. Verifying that on each of the below isolation mode actuation test signals, the subsystem automatically switches to the isolation mode of operation and the isolation valves close within 4 seconds:
 - a) High radiation in the outside air intake duct,
 - b) High chlorine concentration in the outside air intake duct,
 - c) High drywell pressure, and
 - d) Low reactor water level.
 3. Verifying that the heaters dissipate 20.7 ± 2.1 kW when tested in accordance with ANSI N510-1975.
- e. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99.95% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the system at a flow rate of 4000 cfm \pm 10%.
- f. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove 99.95% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1975 while operating the system at a flow rate of 4000 cfm \pm 10%.

CONTAINMENT SYSTEMS

3/4.6.5 DRYWELL POST-LOCA VACUUM BREAKERS

LIMITING CONDITION FOR OPERATION

3.6.5 All drywell post-LOCA vacuum breakers shall be OPERABLE and closed..

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

- a. With one drywell post-LOCA vacuum breaker inoperable for opening but known to be closed, restore the inoperable vacuum breaker to OPERABLE status within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- b. With one drywell post-LOCA vacuum breaker open, restore the open vacuum breaker to the closed position within 1 hour or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- c. With the position indicator of an OPERABLE drywell post-LOCA vacuum breaker inoperable, verify the vacuum breaker to be closed at least once per 24 hours by local indication. Otherwise declare the vacuum breaker inoperable. (See Note 1)

SURVEILLANCE REQUIREMENTS

4.6.5 Each drywell post-LOCA vacuum breaker shall be:

- a. Verified closed at least once per 7 days.
- b. Demonstrated OPERABLE:
 1. At least once per 31 days by:
 - a) Cycling the vacuum breaker and isolation valve(s) through at least one complete cycle of full travel.
 - b) Verifying the position indicator OPERABLE by observing expected valve movement during the cycling test. (See Note 1)
 2. At least once per 18 months by:
 - a) Verifying the pressure differential required to open the vacuum breaker, from the closed position, to be less than or equal to 1.0 psid, and (See Note 1)
 - b) Verifying the position indicator OPERABLE by performance of a CHANNEL CALIBRATION. (See Note 1)

CONTAINMENT SYSTEMSSURVEILLANCE REQUIREMENTS (Continued)

3. By verifying the OPERABILITY of the vacuum breaker isolation valve differential pressure actuation instrumentation with the opening setpoint 1.0 psid by performance of a:
 - a) CHANNEL CHECK at least once per 24 hours,
 - b) CHANNEL FUNCTIONAL TEST at least once per 31 days, and
 - c) CHANNEL CALIBRATION at least once per 18 months.

Note 1: Until restart after the first refueling outage, the following requirements shall apply:

3.6.5

- c. With the position indicator of an OPERABLE drywell post-LOCA isolation valve for a vacuum breaker inoperable, verify the isolation valve to be closed at least once per 24 hours by local indication. Otherwise declare the isolation valve inoperable.

4.6.5.b.1

- b. Verifying the position indicator for the vacuum breaker isolation valve OPERABLE by observing expected valve movement during the cycling test.

4.6.5.b.2

At least once per 18 months by:

- a) Verifying the pressure differential required to open the vacuum breaker, from the closed position, to be less than or equal to 1.0 psid, ~~by use of an equivalent test weight and lever arm on the vacuum breaker,~~ and
- b) Verifying the position indicator for the vacuum breaker isolation valve OPERABLE by performance of a CHANNEL CALIBRATION.

TABLE 3.3.3-2

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
A. DIVISION 1 TRIP SYSTEM		
1. RHR-A (LPCI MODE) AND LPCS SYSTEM		
a. Reactor Vessel Water Level - Low Low Low, Level 1	> -150.3 inches*	> -152.5 inches
b. Drywell Pressure - High	< 1.89 psig	< 1.94 psig
c. LPCI Pump A Start Time Delay Relay	< 5 seconds	< 5 seconds
d. Manual Initiation	NA	NA
2. AUTOMATIC DEPRESSURIZATION SYSTEM TRIP SYSTEM "A"		
a. Reactor Vessel Water Level - Low Low Low, Level 1	> -150.3 inches*	> -152.5 inches
b. Drywell Pressure - High	< 1.89 psig	< 1.94 psig
c. ADS Timer	< 115 seconds	< 117 seconds
d. Reactor Vessel Water Level-Low, Level 3	> 11.4 inches*	> 10.8 inches
e. LPCS Pump Discharge Pressure-High	> 145 psig, increasing	> 140 psig, increasing
f. LPCI Pump A Discharge Pressure-High	> 125 psig, increasing	> 122 psig, increasing
g. Manual Initiation	NA	NA
B. DIVISION 2 TRIP SYSTEM		
1. RHR B AND C (LPCI MODE)		
a. Reactor Vessel Water Level - Low Low Low, Level 1	> -150.3 inches*	> -152.5 inches
b. Drywell Pressure - High	< 1.89 psig	< 1.94 psig
c. LPCI Pump B Start Time Delay Relay	< 5 seconds	< 5 seconds
d. Manual Initiation	NA	NA
2. AUTOMATIC DEPRESSURIZATION SYSTEM TRIP SYSTEM "B"		
a. Reactor Vessel Water Level - Low Low Low, Level 1	> -150.3 inches*	> -152.5 inches
b. Drywell Pressure - High	< 1.89 psig	< 1.94 psig
c. ADS Timer	< 115 seconds	< 117 seconds
d. Reactor Vessel Water Level-Low, Level 3	> 11.4 inches*	> 10.8 inches
e. LPCI Pump B and C Discharge Pressure-High	> 125 psig, increasing	> 122 psig, increasing
f. Manual Initiation	NA	NA
C. DIVISION 3 TRIP SYSTEM		
1. HPCS SYSTEM		
a. Reactor Vessel Water Level - Low Low, Level 2	> -41.6 inches*	< -43.8 inches
b. Drywell Pressure - High	< 1.89 psig	< 1.94 psig
c. Reactor Vessel Water Level - High, Level 8	< 53.5 inches*	< 55.7 inches
d. Condensate Storage Tank Level - Low	> 0 inches	> -3 inches
e. Suppression Pool Water Level - High	< 5.9 inches	< 6.5 inches
f. Manual Initiation	NA	NA

7.(GGNS-219a)

INSTRUMENTATIONTABLE 3.3.4.2-1END-OF-CYCLE RECIRCULATION PUMP TRIP SYSTEM INSTRUMENTATION

<u>TRIP FUNCTION</u>	<u>MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM^(a)</u>
1. Turbine Stop Valve - Closure	2 ^(b)
2. Turbine Control Valve - Fast Closure	2 ^(b)

(a) A trip system may be placed in an inoperable status for up to 2 hours for required surveillance provided that the other trip system is OPERABLE.

(b) This function shall be automatically bypassed when turbine first stage pressure is less than 30% of the value of turbine first stage pressure, in psia, at valves wide open (VWO) steam flow, equivalent to THERMAL POWER less than 40% of RATED THERMAL POWER.

** Initial setpoint. Final setpoint to be determined during startup test program. Any required change to this setpoint shall be submitted to the Commission within 90 days of test completion.

ELECTRICAL POWER SYSTEMS
SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Each of the above required independent circuits between the offsite transmission network and the onsite Class 1E distribution system shall be:

- a. Determined OPERABLE at least once per 7 days by verifying correct breaker alignments and indicated power availability, and
- b. Demonstrated OPERABLE at least once per 18 months during shutdown by transferring, manually and automatically, unit power supply from the normal circuit to the alternate circuit.

4.8.1.1.2 Each of the above required diesel generators shall be demonstrated OPERABLE:

- a. In accordance with the frequency specified in Table 4.8.1.1.2-1 on a STAGGERED TEST BASIS by:

1. Verifying the fuel level in the day tank.
2. Verifying the fuel level in the fuel storage tank.
3. Verifying the fuel transfer pump starts and transfers fuel from the storage system to the day tank.
4. Verifying the diesel starts from ambient condition and accelerates to at least 441 rpm for diesel generators 11 and 12 and 882 rpm for diesel generator 13 in less than or equal to 10 seconds. The generator voltage and frequency shall be 4160 ± 416 volts and 60 ± 1.2 Hz within 10 seconds after the start signal. The diesel generator shall be started for this test by using one of the following signals:
 - a) Manual.
 - b) Simulated loss of offsite power by itself.
 - c) Simulated loss of offsite power in conjunction with an ESF actuation test signal.
 - d) An ESF actuation test signal by itself.
5. Verifying the diesel generator is synchronized, loaded to greater than or equal to 3500 kW for diesel generators 11 and 12 and 1650 kW for diesel generator 13 in less than or equal to 60 seconds, and operates with these loads for at least 60 minutes.
6. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.
7. Verifying the pressure in all diesel generator air start receivers to be greater than or equal to:
 - a) 160 psig for diesel generator 11 and 12, and
 - b) 175 psig for diesel generator 13.

- b. At least once per 31 days and after each operation of the diesel where the period of operation was greater than or equal to 1 hour by checking for and removing accumulated water from the day fuel tanks.

ELECTRICAL POWER SYSTEMSSURVEILLANCE REQUIREMENTS (Continued)

- c. At least once per 92 days and from new oil prior to addition to the storage tanks by verifying that a sample obtained in accordance with ASTM-D270-1975 has a water and sediment content of less than or equal to .05 volume percent and a kinematic viscosity @ 40°C of greater than or equal to 1.9 but less than or equal to 4.1 when tested in accordance with ASTM-D975-77, and an impurity level of less than 2 mg. of insolubles per 100 ml. when tested in accordance with ASTM-D2274-70, except that the test of new fuel for impurity level shall be performed within 7 days after addition of the new fuel to the storage tank.
- d. At least once per 18 months, during shutdown, by:
1. Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service.
 2. Verifying the diesel generator capability to reject a load of greater than or equal to 1735 kW for diesel generator 11, greater than or equal to 890 kW for diesel generator 12, and greater than or equal to 2780 kW for diesel generator 13 while maintaining less than or equal to 75% of the difference between nominal speed and the overspeed trip setpoint, or 15% above nominal, whichever is less.
 3. Verifying the diesel generator capability to reject a load of 7000 kW for diesel generators 11 and 12 and 3300 kW for diesel generator 13 without tripping. The generator voltage shall not exceed 5000 volts during and following the load rejection.
 4. Simulating a loss of offsite power by itself, and:
 - a) For Divisions 1 and 2:
 - 1) Verifying deenergization of the emergency busses and load shedding from the emergency busses.
 - 2) Verifying the diesel generator starts on the auto-start signal, energizes the emergency busses with permanently connected loads within ~~35~~ seconds, energizes the auto-connected shutdown loads through the load sequencer and operates for greater than or equal to 5 minutes while its generator is loaded with the shutdown loads. After energization, the steady state voltage and frequency of the emergency busses shall be maintained at 4160 ± 416 volts and 60 ± 1.2 Hz during this test.
 - b) For Division 3:
 - 1) Verifying de-energization of the emergency bus.
 - 2) Verifying the diesel generator starts on the auto-start signal, energizes the emergency bus with the loads within ~~35~~ seconds and operates for greater than or equal to 5 minutes while its generator is loaded with the shutdown loads. After energization, the steady state voltage and frequency of the emergency bus shall be maintained at 4160 ± 416 volts and 60 ± 1.2 Hz during this test.

ELECTRICAL POWER SYSTEMSSURVEILLANCE REQUIREMENTS (Continued)

5. Verifying that on an ECCS actuation test signal, without loss of offsite power, the diesel generator starts on the auto-start signal and operates on standby for greater than or equal to 5 minutes. The generator voltage and frequency shall be 4160 ± 416 volts and 60 ± 1.2 Hz within ~~X~~ seconds after the auto-start signal; the steady state generator voltage and frequency shall be maintained within these limits during this test.
6. Verifying that on a simulated loss of the diesel generator, with offsite power not available, the loads are shed from the emergency busses and that subsequent loading of the diesel generator is in accordance with design requirements.
7. Simulating a loss of offsite power in conjunction with an ECCS actuation test signal, and:
 - a) For Divisions 1 and 2:
 - 1) Verifying deenergization of the emergency busses and load shedding from the emergency busses.
 - 2) Verifying the diesel generator starts on the auto-start signal, energizes the emergency busses with permanently connected loads within ~~X~~ seconds, energizes the auto-connected shutdown loads through the load sequencer and operates for greater than or equal to 5 minutes while its generator is loaded with the emergency loads. After energization, the steady state voltage and frequency of the emergency busses shall be maintained at 4160 ± 416 volts and 60 ± 1.2 Hz during this test.
 - b) For Division 3:
 - 1) Verifying de-energization of the emergency bus.
 - 2) Verifying the diesel generator starts on the auto-start signal, energizes the emergency bus with the permanently connected loads within ~~X~~ seconds and the autoconnected emergency loads within 20 seconds and operates for greater than or equal to 5 minutes while its generator is loaded with the emergency loads. After energization, the steady state voltage and frequency of the emergency bus shall be maintained at 4160 ± 416 volts and 60 ± 1.2 Hz during this test.
8. Verifying that all automatic diesel generator trips are automatically bypassed upon an ECCS actuation signal except:
 - a) For Divisions 1 and 2, engine overspeed, generator differential current, low lube oil pressure, and generator ground overcurrent.
 - b) For Division 3, engine overspeed and generator differential current.

ELECTRICAL POWER SYSTEMSSURVEILLANCE REQUIREMENTS (Continued)

10. Verifying the diesel generator operates for at least 24 hours. During the first 2 hours of this test, the diesel generator shall be loaded to greater than or equal to 7700 kW for diesel generators 11 and 12 and 3630 kW for diesel generator 13 and during the remaining 22 hours of this test, the diesel generator shall be loaded to 7000 kW for diesel generators 11 and 12 and 3300 kW for diesel generator 13. The generator voltage and frequency shall be 4160 ± 416 volts and 60 ± 1.2 Hz within ~~X~~ seconds after the start signal; the steady state generator voltage and frequency shall be maintained within these limits during this test. Within 5 minutes after completing this 24-hour test, perform Surveillance Requirement 4.8.1.1.2.d.4.a).2) and b).2)*.
10. Verifying that the auto-connected loads to each diesel generator do not exceed the continuous rating of 7000 kW for diesel generators 11 and 12 and 3300 kW for diesel generator 13.
11. Verifying the diesel generator's capability to:
- a) Synchronize with the offsite power source while the generator is loaded with its emergency loads upon a simulated restoration of offsite power,
 - b) Transfer its loads to the offsite power source, and
 - c) Be restored to its standby status.
12. Verifying that with the diesel generator operating in a test mode and connected to its bus that a simulated ECCS actuation signal:
- a) For Divisions 1 and 2, overrides the test mode by returning the diesel generator to standby operation.
 - b) For Division 3, overrides the test mode by bypassing the diesel generator automatic trips per Surveillance Requirement 4.8.1.1.2.d.8.b).
13. Verifying that with all diesel generator air start receivers pressurized to less than or equal to 256 psig and the compressors secured, the diesel generator starts at least 5 times from ambient conditions and accelerates to at least 441 rpm for diesel generators 11 and 12 and 882 rpm for diesel generator 13 in less than or equal to ~~X~~ seconds.

* If Surveillance Requirement 4.8.1.1.2.d.4.a)2) or b)2) are not satisfactorily completed, it is not necessary to repeat the preceding 24 hour test. Instead, the diesel generator may be operated at rated load for one hour or until operating temperatures have stabilized.

ELECTRICAL POWER SYSTEMSSURVEILLANCE REQUIREMENTS (Continued)

14. Verifying that the fuel transfer pump transfers fuel from each fuel storage tank to the day tank of each diesel via the installed lines.
15. Verifying that the automatic load sequence timer is OPERABLE with the interval between each load block within $\pm 10\%$ of its design interval for diesel generators 11 and 12.
16. Verifying that the following diesel generator lockout features prevent diesel generator starting and/or trip the diesel generator only when required:
 - a) Generator loss of excitation.
 - b) Generator reverse power.
 - c) High jacket water temperature.
 - d) Generator overcurrent with voltage restraint.
 - e) Bus underfrequency (11 and 12 only).
 - f) Generator bearing temperature high (11 and 12 only).
 - g) Low turbo charger oil pressure (11 and 12 only).
 - h) High vibration (11 and 12 only).
 - i) High lube oil temperature (11 and 12 only).
 - j) Low lube oil pressure.
 - k) High crankcase pressure.
- e. At least once per 10 years or after any modifications which could affect diesel generator interdependence by starting all three diesel generators simultaneously, during shutdown, and verifying that the three diesel generators accelerate to at least 441 rpm for diesel generators 11 and 12 and 882 rpm for diesel generator 13 in less than or equal to ~~X~~ ¹⁰ seconds.
- f. At least once per 10 years by:
 1. Draining each fuel oil storage tank, removing the accumulated sediment and cleaning the tank using a sodium hypochlorite or equivalent solution, and
 2. Performing a pressure test of those portions of the diesel fuel oil system designed to Section III, subsection ND of the ASME Code in accordance with ASME Code Section 11, Article IWD-5000.

4.8.1.1.3 Reports - All diesel generator failures, valid or non-valid, shall be reported to the Commission pursuant to Specification 6.9.1. Reports of diesel generator failures shall include the information recommended in Regulatory Position C.3.b of Regulatory Guide 1.108, Revision 1, August 1977. If the number of failures in the last 100 valid tests, on a per nuclear unit basis, is greater than or equal to 7, the report shall be supplemented to include the additional information recommended in Regulatory Position C.3.b of Regulatory Guide 1.108, Revision 1, August 1977.

TABLE 3.3.2-3

ISOLATION SYSTEM INSTRUMENTATION RESPONSE TIMETRIP FUNCTIONRESPONSE TIME (Seconds)#1. PRIMARY CONTAINMENT ISOLATION

- | | | |
|----|--|------------------------------|
| a. | Reactor Vessel Water Level - Low Low, Level 2 | $\leq 13^{(a)}$ |
| b. | Drywell Pressure - High | $\leq 13^{(a)}$ |
| c. | Containment and Drywell Ventilation Exhaust Radiation - High | $\leq 1.0^*/\leq 13^{(a)**}$ |
| d. | Manual Initiation | NA |

2. MAIN STEAM LINE ISOLATION

- | | | |
|----|---|------------------------------|
| a. | Reactor Vessel Water Level - Low Low Low, Level 1 | $\leq 1.0^*/\leq 13^{(a)**}$ |
| b. | Main Steam Line Radiation - High ^(b) | $\leq 1.0^*/\leq 13^{(a)**}$ |
| c. | Main Steam Line Pressure - Low | $\leq 1.0^*/\leq 13^{(a)**}$ |
| d. | Main Steam Line Flow - High | $\leq 0.5^*/\leq 13^{(a)**}$ |
| e. | Condenser Vacuum - Low | NA |
| f. | Main Steam Line Tunnel Temperature - High | NA |
| g. | Main Steam Line Tunnel Δ Temp. - High | NA |
| h. | Manual Initiation | NA |

3. SECONDARY CONTAINMENT ISOLATION

- | | | |
|----|---|-----------------|
| a. | Reactor Vessel Water Level - Low Low, Level 2 | $\leq 13^{(a)}$ |
| b. | Drywell Pressure - High | $\leq 13^{(a)}$ |
| c. | Fuel Handling Area Ventilation Exhaust Radiation - High High ^(b) | $\leq 13^{(a)}$ |
| d. | Fuel Handling Area Pool Sweep Exhaust Radiation - High High ^(b) | $\leq 13^{(a)}$ |
| e. | Manual Initiation | NA |

4. REACTOR WATER CLEANUP SYSTEM ISOLATION

- | | | |
|----|---|-----------------|
| a. | Δ Flow - High | NA |
| b. | Δ Flow Timer | NA |
| c. | Equipment Area Temperature - High | NA |
| d. | Equipment Area Δ Temp. - High | NA |
| e. | Reactor Vessel Water Level - Low Low, Level 2 | $\leq 13^{(a)}$ |
| f. | Main Steam Line Tunnel Ambient Temperature - High | NA |
| g. | Main Steam Line Tunnel Δ Temp. - High | NA |
| h. | SLCS Initiation | NA |
| i. | Manual Initiation | NA |

INSTRUMENTATION

TABLE 3.3.2-3 (Continued)

ISOLATION SYSTEM INSTRUMENTATION RESPONSE TIME

<u>TRIP FUNCTION</u>	<u>RESPONSE TIME (Seconds)#</u>
5. <u>REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION</u>	
a. RCIC Steam Line Flow - High	< 13 (a)###
b. RCIC Steam Supply Pressure - Low	< 13 (a)
c. RCIC Turbine Exhaust Diaphragm Pressure - High	NA
d. RCIC Equipment Room Ambient Temperature - High	NA
e. RCIC Equipment Room Δ Temp. - High	NA
f. Main Steam Line Tunnel Ambient Temp. - High	NA
g. Main Steam Line Tunnel Δ Temp. - High	NA
h. Main Steam Line Tunnel Temperature Timer	NA
i. RHR Equipment Room Ambient Temperature - High	NA
j. RHR Equipment Room Δ Temp. - High	NA
k. RHR/RCIC Steam Line Flow - High	NA
l. Manual Initiation	NA
6. <u>RHR SYSTEM ISOLATION</u>	
a. RHR Equipment Room Ambient Temperature - High	NA
b. RHR Equipment Room Δ Temp. - High	NA
c. Reactor Vessel Water Level - Low, Level 3	< 13 (a)
d. Reactor Vessel (RHR Cut-in Permissive) Pressure - High	NA
e. Drywell Pressure - High	NA
f. Manual Initiation	NA

(a) The isolation system instrumentation response time shall be measured and recorded as a part of the ISOLATION SYSTEM RESPONSE TIME. Isolation system instrumentation response time specified includes the delay for diesel generator starting assumed in the accident analysis.

(b) Radiation detectors are exempt from response time testing. Response time shall be measured from detector output or the input of the first electronic component in the channel.

*Isolation system instrumentation response time for MSIVs only. No diesel generator delays assumed.

**Isolation system instrumentation response time for associated valves except MSIVs.

#Isolation system instrumentation response time specified for the Trip Function actuating each valve group shall be added to isolation time shown in Tables 3.6.4-1 and 3.6.5.2-1 for valves in each valve group to obtain ISOLATION SYSTEM RESPONSE TIME for each valve.

~~##Without 45 second time delay.~~

###Without 13 second time delay.

TABLE 3.3.7.1-1 (Continued)
RADIATION MONITORING INSTRUMENTATION

INSTRUMENTATION	MINIMUM CHANNELS OPERABLE	APPLICABLE CONDITIONS	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
10. Area Monitors					
a. Fuel Handling Area Monitors					
1) New Fuel Storage Vault	1	(e)	≤ 2.5 mR/hr/NA	10^{-2} to 10^3 mR/hr	72
2) Spent Fuel Storage Pool	1	(f)	≤ 2.5 mR/hr/NA	10^{-2} to 10^3 mR/hr	72
3) Dryer Storage Area		(g)	≤ 2.5 mR/hr/NA	10^{-2} to 10^3 mR/hr	72
b. Control Room Radiation Monitor	1	At all times	≤ 0.5 mR/hr/NA	10^{-2} to 10^3 mR/hr	72

* With RHR heat exchangers in operation.

** When irradiated fuel is being handled in the secondary containment.

Initial setpoint. Final Setpoint to be determined during startup test program. Any required change to this setpoint shall be submitted to Commission within 90 days after test completion.

- (a) Trips system with 2 channels upscale-high high, or one channel upscale and one channel inoperative, or 2 channels inoperative.
- (b) Isolates containment/drywell purge penetrations.
- (c) With irradiated fuel in spent fuel storage pool.
- (d) Also isolates the secondary containment penetrations.
- (e) With fuel in the new fuel storage vault.
- (f) With fuel in the spent fuel storage pool.
- (g) With fuel in the Dryer Storage Area.

TABLE 4.3.7.1-1

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENTATION</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>CHANNEL CALIBRATION</u>	<u>OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED</u>
1. Component Cooling Water Radiation Monitor	S	M	R	At all times
2. Standby Service Water System Radiation Monitor	S	M	R	1, 2, 3, and*
3. Offgas Pre-treatment Radiation Monitor	S	M	R	1, 2
4. Offgas Post-treatment Radiation Monitor	S	M	R	1, 2
5. Carbon Bed Vault Radiation Monitor	S	M	R	1, 2
6. Control Room Ventilation Radiation Monitor	S	M(a)	R	1, 2, 3, 5 and**
7. Containment and Drywell Ventilation Exhaust Radiation Monitor	S	M	R	At all times
8. Fuel Handling Area Ventilation Radiation Monitor	S	M	R	1, 2, 3, 5 and**
9. Fuel Handling Area Pool Sweep Exhaust Radiation Monitor	S	M	R	(b)
10. Area Monitors				
a. Fuel Handling Area Monitors				(c)
1) New Fuel Storage Vault	S	M	R	(d)
2) Spent Fuel Storage Pool	S	M	R	At all times
b. Control Room Radiation Monitor	S	M	R	(e)
3) Dryer Storage Area	S	M	R	

* With RHR heat exchangers in operation.

** When irradiated fuel is being handled in the secondary containment.

(a) The CHANNEL FUNCTIONAL TEST shall demonstrate that control room annunciation occurs if any of the following conditions exist.

1. Instrument indicates measured levels above the alarm/trip setpoint.
2. Circuit failure.
3. Instrument indicates a downscale failure.
4. Instrument controls not in Operate mode.

(b) With irradiated fuel in the spent fuel storage pool.

(c) With fuel in the new fuel storage vault.

(d) With fuel in the spent fuel storage pool.

(e) With fuel in the dryer storage area.

CONTAINMENT SYSTEMSSURVEILLANCE REQUIREMENTS (Continued)

~~C. By measuring the leakage rate:~~

- ~~1. As a part of the overall integrated leakage rate test required by Specification 3.6.1.2, or~~
- ~~2. By measuring the leakage rate of the system outside of the containment isolation valves at P₁ 11.5 psig, on the schedule required by Specification 4.6.1.2 and including the measured leakage as a part of the leakage determined in accordance with Specification 4.6.1.2.~~

ELECTRICAL POWER SYSTEMSSURVEILLANCE REQUIREMENTS (Continued)

9. Verifying the diesel generator operates for at least 24 hours. During the first 2 hours of this test, the diesel generator shall be loaded to greater than or equal to 7700 kW for diesel generators 11 and 12 and 3630 kW for diesel generator 13 and during the remaining 22 hours of this test, the diesel generator shall be loaded to 7000 kW for diesel generators 11 and 12 and 3300 kW for diesel generator 13. The generator voltage and frequency shall be 4160 ± 416 volts and 60 ± 1.2 Hz within 13 seconds after the start signal; the steady state generator voltage and frequency shall be maintained within these limits during this test. Within 5 minutes after completing this 24-hour test, perform Surveillance Requirement 4.8.1.1.2.d. ~~a~~.2) and b).2)*.
10. Verifying that the auto-connected loads to each diesel generator do not exceed the continuous rating of 7000 kW for diesel generators 11 and 12 and 3300 kW for diesel generator 13.
11. Verifying the diesel generator's capability to:
 - a) Synchronize with the offsite power source while the generator is loaded with its emergency loads upon a simulated restoration of offsite power,
 - b) Transfer its loads to the offsite power source, and
 - c) Be restored to its standby status.
12. Verifying that with the diesel generator operating in a test mode and connected to its bus that a simulated ECCS actuation signal:
 - a) For Divisions 1 and 2, overrides the test mode by returning the diesel generator to standby operation.
 - b) For Division 3, overrides the test mode by bypassing the diesel generator automatic trips per Surveillance Requirement 4.8.1.1.2.d.8.b).
13. Verifying that with all diesel generator air start receivers pressurized to less than or equal to 256 psig and the compressors secured, the diesel generator starts at least 5 times from ambient conditions and accelerates to at least 441 rpm for diesel generators 11 and 12 and 882 rpm for diesel generator 13 in less than or equal to 13 seconds.

* If Surveillance Requirement 4.8.1.1.2.d.4.a)2) or b)2) are not satisfactorily completed, it is not necessary to repeat the preceding 24 hour test. Instead, the diesel generator may be operated at rated load for one hour or until operating temperatures have stabilized.

14. (GGNS-351)

DELETED

ELECTRICAL POWER SYSTEMS
SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Each of the above required independent circuits between the offsite transmission network and the onsite Class 1E distribution system shall be:

- a. Determined OPERABLE at least once per 7 days by verifying correct breaker alignments and indicated power availability, and
- b. Demonstrated OPERABLE at least once per 18 months during shutdown by transferring, manually and automatically, unit power supply from the normal circuit to the alternate circuit.

4.8.1.1.2 Each of the above required diesel generators shall be demonstrated OPERABLE:

- a. In accordance with the frequency specified in Table 4.8.1.1.2-1 on a STAGGERED TEST BASIS by:
 1. Verifying the fuel level in the day tank.
 2. Verifying the fuel level in the fuel storage tank.
 3. Verifying the fuel transfer pump starts and transfers fuel from the storage system to the day tank.
 4. Verifying the diesel starts from ambient condition and accelerates to at least 441 rpm for diesel generators 11 and 12 and 882 rpm for diesel generator 13 in less than or equal to 10 seconds. The generator voltage and frequency shall be 4160 ± 416 volts and 60 ± 1.2 Hz within 13 seconds after the start signal. The diesel generator shall be started for this test by using one of the following signals:
 - a) Manual.
 - b) Simulated loss of offsite power by itself.
 - c) Simulated loss of offsite power in conjunction with an ESF actuation test signal.
 - d) An ESF actuation test signal by itself.
 5. Verifying the diesel generator is synchronized, loaded to greater than or equal to 3500 kW for diesel generators 11 and 12 and 1650 kW for diesel generator 13 in less than or equal to 60 seconds, and operates with these loads for at least 60 minutes.
 6. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.
 7. Verifying the pressure in all diesel generator air start receivers to be greater than or equal to:
 - a) 160 psig for diesel generator 11 and 12, and
 - b) 175 psig for diesel generator 13.
- b. At least once per 31 days and after each operation of the diesel where the period of operation was greater than or equal to 1 hour by checking for and removing accumulated water from the day fuel tanks.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- c. At least once per 92 days and from new oil prior to addition to the storage tanks by verifying that a sample obtained in accordance with ASTM-D270-1975 has a water and sediment content of less than or equal to .05 volume percent and a kinematic viscosity @ 40°C of greater than or equal to 1.9 but less than or equal to 4.1 when tested in accordance with ASTM-D975-77, and an impurity level of less than 2 mg. of insolubles per 100 ml. when tested in accordance with ASTM-D2274-70, except that the test of new fuel for impurity level shall be performed within 7 days after addition of the new fuel to the storage tank.

- d. At least once per 18 months, during shutdown, by:

1. Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service.

2. Verifying the diesel generator capability to reject a load of *the load from the LPCS pump motor with the pump operating at rated flow of 7115 gpm* greater than or equal to ~~2735 kW~~ for diesel generator 11, greater than or equal to ~~2900 kW~~ for diesel generator 12, and greater than or equal to ~~2780 kW~~ for diesel generator 13 while maintaining less than or equal to 75% of the difference between nominal speed and the overspeed trip setpoint, or 15% above nominal, whichever is less. *the load from the HPCS pump motor with the pump operating at rated flow of 7115 gpm*
- Verifying the diesel generator capability to reject a load of 7000 kW for diesel generators 11 and 12 and 3300 kW for diesel generator 13 without tripping. The generator voltage shall not exceed 5000 volts during and following the load rejection.

the load from a single LPCI pump motor with the pump operating at rated flow of 7450 gpm.

4. Simulating a loss of offsite power by itself, and:

- a) For Divisions 1 and 2:

- 1) Verifying deenergization of the emergency busses and load shedding from the emergency busses. —
- 2) Verifying the diesel generator starts on the auto-start signal, energizes the emergency busses with permanently connected loads within 13 seconds, energizes the auto-connected shutdown loads through the load sequencer and operates for greater than or equal to 5 minutes while its generator is loaded with the shutdown loads. After energization, the steady state voltage and frequency of the emergency busses shall be maintained at 4160 ± 416 volts and 60 ± 1.2 Hz during this test.

- b) For Division 3:

- 1) Verifying de-energization of the emergency bus.
- 2) Verifying the diesel generator starts on the auto-start signal, energizes the emergency bus with the loads within 13 seconds and operates for greater than or equal to 5 minutes while its generator is loaded with the shutdown loads. After energization, the steady state voltage and frequency of the emergency bus shall be maintained at 4160 ± 416 volts and 60 ± 1.2 Hz during this test.

TABLE 4.3.7.12-1 (Continued)

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
6. OFFGAS PRE-TREATMENT MONITOR					
a. Noble Gas Activity Monitor	D	M [#]	R(3) ^{##}	Q(2)	***
7. OFFGAS POST-TREATMENT MONITOR					
a. Noble Gas Activity Monitor Providing Alarm and Auto- matic Termination of Release	D	M	R(3) ^{##}	Q(1)	**

TABLE 4.3.7.11-1

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
1. GROSS RADIOACTIVITY MONITORS PROVIDING ALARM AND AUTOMATIC TERMINATION OF RELEASE				
a. Liquid Radwaste Effluent Line	D	P	R(2)	Q(1)
3. FLOW RATE MEASUREMENT DEVICES (A)				
a. Liquid Radwaste Effluent Line	D(3)	N.A.	R	Q
b. Discharge Canal	D(3)	N.A.	R	Q

CONTAINMENT SYSTEMSBASES3/4.6.1.5 FEEDWATER LEAKAGE CONTROL SYSTEM

The feedwater leakage control system consists of two independent subsystems designed to eliminate through-line leakage in the feedwater piping by pressurizing the feedwater lines to a higher pressure than the containment and drywell pressure. This ensures that no release of radioactivity through the feedwater line isolation valves will occur following a loss of all offsite power coincident with the postulated design basis loss-of-coolant accident.

3/4.6.1.6 CONTAINMENT STRUCTURAL INTEGRITY

This limitation ensures that the structural integrity of the containment will be maintained comparable to the original design standards for the life of the unit. Structural integrity is required to ensure that the containment will withstand the maximum pressure of 11.5 psig in the event of a LOCA. A visual inspection in conjunction with Type A leakage tests is sufficient to demonstrate this capability.

3/4.6.1.7 CONTAINMENT INTERNAL PRESSURE

The limitations on containment-to-Auxiliary Building and Enclosure Building differential pressure ensure that the containment peak pressure of 11.5 psig does not exceed the design pressure of 15.0 psig during LOCA conditions or that the external pressure differential does not exceed the design maximum external pressure differential of 3.0 psid. The limit of -2.0 to 0.0 psid for initial containment-to-Auxiliary Building and Enclosure Building differential pressure will limit the containment pressure to 11.5 psid which is less than the design pressure and is consistent with the safety analysis.

3/4.6.1.8 CONTAINMENT AVERAGE AIR TEMPERATURE

The limitation on containment average air temperature ensures that the containment peak air temperature does not exceed the design temperature of 185°F during LOCA conditions and is consistent with the safety analysis.

3/4.6.1.9 CONTAINMENT PURGE SYSTEM

The continuous use of the containment purge lines during all operational conditions is restricted to the 6-inch purge supply and exhaust isolation valves; whereas, continuous containment purge using the 20-inch purge system is limited to only OPERATIONAL CONDITIONS 4 and 5. Intermittent use of the 20-inch purge system during OPERATIONAL CONDITIONS 1, 2 and 3 is allowed only to reduce airborne activity levels and shall not exceed 1000 hours of use per 365 days.

The design of the 6-inch purge supply and exhaust isolation valves meets the requirements of Branch Technical Position CSB 6-4, "Containment Purging During Normal Plant Operations."

REFUELING OPERATIONS3/4.9.2 INSTRUMENTATIONLIMITING CONDITION FOR OPERATION

3.9.2 At least 2 source range monitor* (SRM) channels shall be OPERABLE and inserted to the normal operating level with:

- a. Continuous visual indication in the control room,
- b. One of the required SRM detectors located in the quadrant where CORE ALTERATIONS are being performed and the other required SRM detector located in an adjacent quadrant, and
- c. Prior to and during the time any control rod is withdrawn[#] or shutdown margin demonstrations are in progress, either:
 1. The "shorting links" removed from the RPS circuitry, or
 2. The rod pattern control system OPERABLE per Specification 3.1.4.2.

APPLICABILITY: OPERATIONAL CONDITION 5.

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving CORE ALTERATIONS** and insert all insertable control rods.

SURVEILLANCE REQUIREMENTS

4.9.2 Each of the above required SRM channels shall be demonstrated OPERABLE by:

- a. At least once per 12 hours:
 1. Performance of a CHANNEL CHECK,
 2. Verifying the detectors are inserted to the normal operating level, and
 3. During CORE ALTERATIONS, verifying that the detector of an OPERABLE SRM channel is located in the core quadrant where CORE ALTERATIONS are being performed and another is located in an adjacent quadrant.

* The use of special movable detectors during CORE ALTERATIONS in place of the normal SRM nuclear detectors is permissible as long as these special detectors are connected to the normal SRM circuits.

** Except movement of IRM, SRM or special movable detectors.

Not required for control rods removed per Specification 3.9.10.1 and 3.9.10.2.

3/4.5 EMERGENCY CORE COOLING SYSTEMS

20. (GGNS - 547)

3/4.5.1 ECCS - OPERATING

LIMITING CONDITION FOR OPERATION

3.5.1 ECCS divisions 1, 2 and 3 shall be OPERABLE with:

- a. ECCS division 1 consisting of:
 - 1. The OPERABLE low pressure core spray (LPCS) system with a flow path capable of taking suction from the suppression pool and transferring the water through the spray sparger to the reactor vessel.
 - 2. The OPERABLE low pressure coolant injection (LPCI) subsystem "A" of the RHR system with a flow path capable of taking suction from the suppression pool and transferring the water to the reactor vessel.
 - 3. At least 7 OPERABLE ADS valves.
- b. ECCS division 2 consisting of:
 - 1. The OPERABLE low pressure coolant injection (LPCI) subsystems "B" and "C" of the RHR system, each with a flow path capable of taking suction from the suppression pool and transferring the water to the reactor vessel.
 - 2. At least 7 OPERABLE ADS valves.
- c. ECCS division 3 consisting of the OPERABLE high pressure core spray (HPCS) system with a flow path capable of taking suction from the suppression pool and transferring the water through the spray sparger to the reactor vessel.

APPLICABILITY: OPERATIONAL CONDITION 1, 2* # and 3*.

ACTION:

- a. For ECCS division 1, provided that ECCS divisions 2 and 3 are OPERABLE:
 - 1. With the LPCS system inoperable, restore the inoperable LPCS system to OPERABLE status within 7 days.
 - 2. With LPCI subsystem "A" inoperable, restore the inoperable LPCI subsystem "A" to OPERABLE status within 7 days.
 - 3. With the LPCS system inoperable and LPCI subsystem "A" inoperable, restore at least the inoperable LPCI subsystem "A" or the inoperable LPCS system to OPERABLE status within 72 hours.
 - 4. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

*The ADS is not required to be OPERABLE when reactor steam dome pressure is less than or equal to 135 psig.

#See Special Test Exception ~~3.10.6~~ **3.10.5.**

PLANT SYSTEMS

No CHANGES THIS PAGE

3/4.7.4 SNUBBERSLIMITING CONDITION FOR OPERATION

3.7.4 All snubbers listed in Tables 3.7.4-1 and 3.7.4-2 shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3 and OPERATIONAL CONDITIONS 4 and 5 for snubbers located on systems required OPERABLE in those OPERATIONAL CONDITIONS.

ACTION:

With one or more snubbers inoperable, within 72 hours replace or restore the inoperable snubber(s) to OPERABLE status and perform an engineering evaluation per Specification 4.7.4.c on the supported component or declare the supported system inoperable and follow the appropriate ACTION statement for that system.

SURVEILLANCE REQUIREMENTS

4.7.4 Each snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program and the requirements of Specification 4.0.5.

a. Visual Inspections

The first inservice visual inspection of snubbers shall be performed after 4 months but within 10 months of commencing POWER OPERATION and shall include all snubbers listed in Tables 3.7.4-1 and 3.7.4-2. If less than two snubbers are found inoperable during the first inservice visual inspection, the second inservice visual inspection shall be performed 12 months $\pm 25\%$ from the date of the first inspection. Otherwise, subsequent visual inspections shall be performed in accordance with the following schedule:

<u>No. Inoperable Snubbers per Inspection Period</u>	<u>Subsequent Visual Inspection Period*#</u>
0	18 months $\pm 25\%$
1	12 months $\pm 25\%$
2	6 months $\pm 25\%$
3,4	124 days $\pm 25\%$
5,6,7	62 days $\pm 25\%$
8 or more	31 days $\pm 25\%$

The snubbers may be categorized into two groups: Those accessible and those inaccessible during reactor operation. Each group may be inspected independently in accordance with the above schedule.

*The inspection interval shall not be lengthened more than one step at a time.
#The provisions of Specification 4.0.2 are not applicable.

PLANT SYSTEMSSURVEILLANCE REQUIREMENTSb. Visual Inspection Acceptance Criteria

Visual inspections shall verify (1) that there are no visible indications of damage or impaired OPERABILITY, (2) that attachments to the foundation or supporting structure are secure, and (3) in those locations where snubber movement can be manually induced without disconnecting the snubber, that the snubber has freedom of movement and is not frozen up. Snubbers which appear inoperable as a result of these visual inspections may be determined OPERABLE for the purpose of establishing the next visual inspection interval, providing that (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers that may be generically susceptible, and (2) the affected snubber is functionally tested in the as found condition and determined OPERABLE per Surveillance Requirements 4.7.4.d or 4.7.4.e, as applicable. However, when a fluid part of a hydraulic snubber is found to be uncovered, the snubber shall be declared inoperable and cannot be determined OPERABLE by functional testing for the purpose of establishing the next visual inspection interval. All snubbers connected to an inoperable common hydraulic fluid reservoir shall be counted as inoperable snubbers.

c. Functional Tests

During the first refueling shutdown and at least once per 18 months thereafter during shutdown, a representative sample of at least:

1. 10% of the total of the hydraulic snubbers listed in Table 3.7.4-1 shall be functionally tested either in place or in a bench test. For each snubber that does not meet the functional test acceptance criteria of Surveillance Requirement 4.7.4.d, an additional 10% of the hydraulic snubbers shall be functionally tested.
2. That number of mechanical snubbers which follows the expression $35 (1 + \frac{c}{2})$, where $c = 2$, the allowable number of snubbers not meeting the acceptance criteria, shall be functionally tested either in-place or in a bench test. For each number of snubbers above c which does not meet the functional test acceptance criteria of Specifications 4.7.4.e, an additional sample selected according to the expression $35 (1 + \frac{c}{2}) (\frac{2}{c+1})^2 (a - c)$ shall be functionally tested, where a is the total number of snubbers found inoperable during the functional testing of the representative sample.

Functional testing shall continue according to the expression $b [35 (1 + \frac{c}{2}) (\frac{2}{c+1})^2]$ where b is the number of snubbers found inoperable in the previous re-sample, until no additional inoperable snubbers are found within a sample or until all snubbers in Table 3.7.4-2 have been functionally tested.

ADMINISTRATIVE CONTROLSAUDITS

6.5.2.8 Audits of unit activities shall be performed under the cognizance of the SRC. These audits shall encompass:

MANAGER, QA (MRA), WITH A COPY OF THE REPORTS SENT TO THE SRC.

- a. The conformance of unit operation to provisions contained within the Appendix A Technical Specifications and applicable license conditions at least once per 12 months.
- b. The ~~performance~~ training and qualifications of the entire unit staff at least once per 12 months: (PERFORMANCE SHALL BE EVALUATED AT LEAST ONCE PER 12 MONTHS BY APPROPRIATE MANAGEMENT PERSONNEL.)
- c. The results of actions taken to correct deficiencies occurring in unit 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 50, at least once per 24 months.
- e. The Emergency Plan and implementing procedures at least once per 24 months.
- f. The Security Plan and implementing procedures at least once per 24 months.
- g. Any other area of unit operation considered appropriate by the SRC or the Senior Vice President - Nuclear.
- h. The Fire Protection Program and implementing procedures at least once per 24 months.
- i. An independent fire protection and loss prevention inspection and audit shall be performed at least once per 12 months utilizing either qualified offsite licensee personnel or an outside fire protection firm.
- j. An inspection and audit of the fire protection and loss prevention program shall be performed by an outside qualified fire consultant at intervals no greater than 36 months.
- k. The radiological environmental monitoring program and the results thereof at least once per 12 months.
- l. The OFFSITE DOSE CALCULATION MANUAL and implementing procedures at least once per 24 months.
- m. The PROCESS CONTROL PROGRAM and implementing procedures for solidification of radioactive wastes at least once per 24 months.
- n. The performance of activities required by the Quality Assurance Program to meet the criteria of Regulatory Guide 4.15, February 1979, at least once per 12 months.