3.2 POWER DISTRIBUTION LIMITS

3.2.4 Average Power Range Monitor (APRM) Gain and Setpoints

LCO 3.2.4

a. T shall be $\geq$ 1.0; or

b. Each required APRM setpoint specified in the COLR shall be made applicable; or

c. Each required APRM gain shall be adjusted such that the adjusted APRM readings result in a calculated T $\geq$ 1.0 when the APRM reading is substituted for Fraction of Rated Thermal Power (FRTP).

APPLICABILITY: THERMAL POWER $\geq$ 25% RTP.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Requirements of the LCO not met.	A.1	Satisfy the requirements of the LCO.	6 hours
B. Required Action and associated Completion Time not met.	B.1	Reduce THERMAL POWER to < 25% RTP.	4 hours

Table 3.3.3.1-1 (page 1 of 1)
Post Accident Monitoring Instrumentation

FUNCTION	REQUIRED CHANNELS	CONDITIONS REFERENCED FROM REQUIRED ACTION D.1
1. Reactor Steam Dome Pressure	2	E
2. Reactor Vessel Water Level-Wide Range	2	E
3. Reactor Vessel Water Level-Fuel Zone	2	E
4. Suppression Pool Water Level	2	E
5. Suppression Pool Sector Water Temperature	2(a)	E
6. Drywell Pressure	2	E
7. Primary Containment Pressure	2	E
8. Drywell Area Radiation	2	F
9. Primary Containment Area Radiation	2	F
10. Drywell H_2 Analyzer	2	E
11. Containment H_2 Analyzer	2	E
12. Penetration Flow Path, Automatic PCIV Position	2 per penetration flow path (b)(c)	E

(a) Monitoring each of two sectors.

(b) Not required for isolation valves whose associated penetration flow path is isolated.

(c) Only one position indication channel is required for penetration flow paths with only one control room indication channel.

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
C. As required by Required Action A.1 and referenced in Table 3.3.7.1-1.	C.1	Declare associated CRFA subsystem inoperable.	1 hour from discovery of loss of CRFA initiation capability in both trip systems
	AND		
	C.2	Place channel in trip.	12 hours
D. As required by Required Action A.1 and referenced in Table 3.3.7.1-1.	D.1	Declare associated CRFA subsystem inoperable.	1 hour from discovery of loss of CRFA initiation capability in both trip systems
	AND		
	D.2	Place channel in trip.	6 hours
E. Required Action and associated Completion Time of Condition B, C, or D not met.	E.1	Place the associated CRFA subsystem in ~~emergency the isolation~~ mode ~~of operation~~.	1 hour
	OR		
	E.2	Declare associated CRFA subsystem inoperable.	1 hour

Table 3.3.7.1-1 (page 1 of 1)
Control Room Fresh Air System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	CONDITIONS REFERENCED FROM REQUIRED ACTION A.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Reactor Vessel Water Level – Low Low, Level 2	1,2,3	2	B	SR 3.3.7.1.1 SR 3.3.7.1.2 SR 3.3.7.1.3 SR 3.3.7.1.4 SR 3.3.7.1.5	≥ -47 inches
2. Drywell Pressure – High	1,2,3	2	C	SR 3.3.7.1.1 SR 3.3.7.1.2 SR 3.3.7.1.3 SR 3.3.7.1.4 SR 3.3.7.1.5	≤ 1.88 psid
3. Control Room Local Intake Ventilation Radiation Monitors	1,2,3 (a),(b)	1	D	SR 3.3.7.1.1 SR 3.3.7.1.2 SR 3.3.7.1.4 SR 3.3.7.1.5	≤ 0.97×10^{-5} μCi/cc

(a) During operations with a potential for draining the reactor vessel.

(b) During CORE ALTERATIONS and during movement of irradiated fuel assemblies in the primary or secondary containment.

Table 3.3.8.1-1 (page 1 of 1)
Loss of Power Instrumentation

FUNCTION	REQUIRED CHANNELS PER DIVISION	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Divisions 1 and 2 – 4.16 kV Emergency Bus Undervoltage			
a. Loss of Voltage – 4.16 kV basis	3	SR 3.3.8.1.1 SR 3.3.8.1.2 SR 3.3.8.1.3 SR 3.3.8.1.4	≥ 2850 V and ≤ 3 00 V
b. Loss of Voltage – Time Delay	3	SR 3.3.8.1.2 SR 3.3.8.1.3 SR 3.3.8.1.4	≥ 2.67 seconds and ≤ 3.33 seconds
c. Degraded Voltage – 4.16 kV basis	3	SR 3.3.8.1.1 SR 3.3.8.1.2 SR 3.3.8.1.3 SR 3.3.8.1.4	≥ 3605 V and ≤ 3875 V
d. Degraded Voltage – Time Delay, No LOCA	3	SR 3.3.8.1.2 SR 3.3.8.1.3 SR 3.3.8.1.4	≥ 53.4 seconds and ≤ 66.6 seconds
e. Degraded Voltage–Time Delay, LOCA	3	SR 3.3.8.1.2 SR 3.3.8.1.3 SR 3.3.8.1.4	≥ 2.67 seconds and ≤ 3.33 seconds
2. Division 3 – 4.16 kV Emergency Bus Undervoltage			
a. Loss of Voltage – 4.16 kV basis	2	SR 3.3.8.1.1 SR 3.3.8.1.3 SR 3.3.8.1.4	≥ 2831 V and ≤ 3259 V
b. Loss of Voltage – Time Delay	2	SR 3.3.8.1.3 SR 3.3.8.1.4	≥ 2.67 seconds and ≤ 3.33 seconds
c. Degraded Voltage – 4.16 kV basis	2	SR 3.3.8.1.1 SR 3.3.8.1.2 SR 3.3.8.1.3 SR 3.3.8.1.4	≥ 3702 V and ≤ 3852 V
d. Degraded Voltage – Time Delay, No LOCA	2	SR 3.3.8.1.2 SR 3.3.8.1.3 SR 3.3.8.1.4	≥ 53.4 ~~minutes~~seconds and ≤ 66.6 ~~minutes~~seconds
e. Degraded Voltage – Time Delay, LOCA	2	SR 3.3.8.1.2 SR 3.3.8.1.3 SR 3.3.8.1.4	≥ 2.67 seconds and ≤ 3.33 seconds

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.11.8	----------NOTE---------- Only required to be met in single loop operation during increases in THERMAL POWER or recirculation loop flow with the recirculation loop flow in the operating loop ≤ 50% of rated recirculation loop flow or THERMAL POWER ≤ 30% of RTP. ----------	
	Verify the difference between the bottom head coolant temperature and the RPV coolant temperature is ≤ 100°F.	Once within 15 minutes prior to an increase in THERMAL POWER or an increase in loop flow
SR 3.4.11.9	----------NOTE---------- Only required to be met in single loop operation during increases in THERMAL POWER or recirculation loop flow with the recirculation loop flow in the operating loop ≤ 50% of rated recirculation loop flow, or THERMAL POWER ≤ 30% of RTP, and the idle recirculation loop not isolated from the RPV. ----------	
	Verify the difference between the reactor coolant temperature in the recirculation loop not in operation and the RPV coolant temperature is ≤ 50°F.	Once within 15 minutes prior to an increase in THERMAL POWER or an increase in loop flow

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.2	Verify all secondary containment equipment hatches are closed and sealed and loop seals filled.	31 days
SR 3.6.4.1.3	Verify each secondary containment access door is closed, except when the access opening is being used for entry and exit.	31 days
SR 3.6.4.1.4	Verify each standby gas treatment (SGT) subsystem will draw down the shield building annulus and auxiliary building to $\geq$ 0.5 and $\geq$ 0.25 inch of vacuum water gauge in $\leq$ 18.5 and $\leq$ 13.5 seconds, respectively.	18 months on a STAGGERED TEST BASIS
SR 3.6.4.1.5	Verify each fuel building ventilation subsystem will draw down the fuel building to $\geq$ 0.25 inch of vacuum water gauge in $\leq$ 12.5 seconds.	18 months on a STAGGERED TEST BASIS
SR 3.6.4.1.6	Verify each SGT subsystem can maintain $\geq$ 0.5 and $\geq$ 0.25 inch of vacuum water gauge in the shield building annulus and auxiliary building, respectively, for 1 hour.	18 months on a STAGGERED TEST BASIS
SR 3.6.4.1.7	Verify each fuel building ventilation subsystem can maintain $\geq$ 0.25 inch of vacuum water gauge in the fuel building for 1 hour.	18 months on a STAGGERED TEST BASIS

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
~~SR 3.6.4.2.1~~	~~NOTES~~ ~~1. Dampers and blind flanges in high radiation areas may be verified by use of administrative means.~~ ~~2. Not required to be met for SCIDs that are open under administrative controls.~~ ~~Verify each secondary containment isolation manual damper and blind flange that is required to be closed during accident conditions is closed.~~	~~31 days~~
SR 3.6.4.2.~~1~~2	Verify the isolation time of each required ~~power operated and each~~ automatic SCID is within limits.	92 days
SR 3.6.4.2.~~2~~3	Verify each required automatic SCID actuates to the isolation position on an actual or simulated automatic isolation signal.	18 months

3.6 CONTAINMENT SYSTEMS

3.6.4.5 Fuel Building

LCO 3.6.4.5 The fuel building shall be OPERABLE.

APPLICABILITY: During movement of irradiated fuel assemblies in the fuel building.

ACTIONS

NOTE

LCO 3.0.3 is not applicable.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Fuel building inoperable.	A.1 Suspend movement of irradiated fuel assemblies in the fuel building.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.5.1	Verify fuel building vacuum is $\geq$ 0.25 inch of vacuum water gauge.	24 hours
SR 3.6.4.5.2	Verify all fuel building equipment hatches ~~and shield blocks~~ covers are installed.	31 days
SR 3.6.4.5.3	Verify each fuel building access door is closed, except when the access opening is being used for entry and exit.	31 days

3.6 CONTAINMENT SYSTEMS

3.6.5.2 Drywell Air Lock

LCO 3.6.5.2 The drywell air lock shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

----------NOTES----------
1. Entry and exit is permissible to perform repairs of the affected air lock components.

2. Enter applicable Conditions and Required Actions of LCO 3.6.5.1, "Drywell," when air lock leakage results in exceeding overall drywell bypass leakage rate acceptance criteria.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One drywell air lock door inoperable.	----------NOTES---------- 1. Required Actions A.1, A.2, and A.3 are not applicable if both doors in the air lock are inoperable and Condition C is entered. 2. Entry and exit is permissible for 7 days under administrative controls. ---------- A.1 Verify the OPERABLE door is closed. AND	1 hour (continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.16	----------NOTE---------- This Surveillance shall not be performed in MODE 1, 2, or 3. However, credit may be taken for unplanned events that satisfy this SR. ---------- Verify, with a DG operating in test mode and connected to its bus, an actual or simulated ECCS initiation signal overrides the test mode by: a. Returning DG to ready-to-load operation; and b. Automatically energizing the emergency loads from offsite power.	18 months
SR 3.8.1.17	----------NOTE---------- ~~1.~~ This Surveillance shall not be performed in MODE 1, 2, or 3. However, credit may be taken for unplanned events that satisfy this SR. ---------- Verify sequence time is within ± 10% of design for each load sequencer timer.	18 months

(continued)

3.8 ELECTRICAL POWER SYSTEMS

3.8.2 AC Sources—Shutdown

LCO 3.8.2 The following AC electrical power sources shall be OPERABLE:

a. One qualified circuit between the offsite transmission network and the onsite Class 1E AC electrical power distribution subsystem(s) required by LCO 3.8.10, "Distribution Systems—Shutdown"; ~~and~~

b. One diesel generator (DG) capable of supplying one division of the Division I or II onsite Class 1E AC electrical power distribution subsystem(s) required by LCO 3.8.10; and

c. One qualified circuit, other than the circuit in LCO 3.8.2.a, between the offsite transmission and the Division III onsite Class 1E electrical power distribution subsystem, or the Division III DG capable of supplying the Division III onsite Class 1E AC electrical power distribution subsystem, when the Division III onsite Class 1E electrical power distribution subsystem is required by LCO 3.8.10.

APPLICABILITY: MODES 4 and 5,
During movement of irradiated fuel assemblies in the primary containment or fuel building.

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
C. One or more Division I or II DC electrical power distribution subsystems inoperable.	C.1	Restore Division I and II DC electrical power distribution subsystems to OPERABLE status.	2 hours AND 16 hours from discovery of failure to meet LCO
D. Required Action and associated Completion Time of Condition A, B, or C not met.	D.1 AND D.2	Be in MODE 3. Be in MODE 4.	12 hours 36 hours
E. One or more Division III AC~~, or DC, or AC vital bus~~ electrical power distribution subsystems inoperable.	E.1	Declare High Pressure Core Spray System and Standby Service Water System pump 2C inoperable.	Immediately
F. Two or more divisions with inoperable distribution subsystems that result in a loss of function.	F.1	Enter LCO 3.0.3.	Immediately

5.5 Programs and Manuals

5.5.11 Technical Specifications (TS) Bases Control Program (continued)

c. The Bases Control Program shall contain provisions to ensure that the Bases are maintained consistent with the USAR.

d. Proposed changes that do not meet the criteria of either Specification 5.5.11.b.1 or Specification 5.5.11.b.2 above shall be reviewed and approved by the NRC prior to implementation. Changes to the Bases implemented without prior NRC approval shall be provided to the NRC on a frequency consistent with 10 CFR 50.71(e).

~~5.5.12 Biofouling Prevention and Detection~~

~~A program, which will include the procedures to prevent biofouling of safety-related equipment, to assure detection of Corbicula in the intake embayment and the clarifier influent, and to monitor and survey safety-related equipment to detect biofouling. Changes to this program will be submitted to and approved by the NRC (both the Region and NRR) prior to implementation.~~

5.7 High Radiation Area

5.7.2 (continued)

the immediate work areas and the maximum allowable stay times for individuals in those areas. In lieu of the stay time specification of the RWP, direct or remote (such as closed circuit TV cameras) continuous surveillance may be made by personnel qualified in radiation protection procedures to provide positive exposure control over the activities being performed within the area.

5.7.3 In addition to the requirements of Specification 5.7.1, for individual high radiation areas with radiation levels of $\geq$ 1000 mrem/hr, accessible to personnel, that are located within large areas such as reactor containment, where no enclosure exists for purposes of locking, or that ~~cannot be~~ is not continuously guarded, and where no enclosure can be reasonably constructed around the individual area, that individual area shall be barricaded and conspicuously posted, and a flashing light shall be activated as a warning device.

License Amendment Request 95-10
October 26, 1995
Enclosure 4

TECHNICAL SPECIFICATIONS BASES
MARK-UPS

B 3.3 INSTRUMENTATION

B 3.3.7.1 Control Room Fresh Air (CRFA) System Instrumentation

BASES

BACKGROUND

The CRFA System is designed to provide a radiologically controlled environment to ensure the habitability of the control room for the safety of control room operators under all plant conditions. Two independent CRFA subsystems are each capable of fulfilling the stated safety function. The instrumentation and controls for the CRFA System automatically initiate action to isolate or pressurize the main control room (MCR) to minimize the consequences of radioactive material in the control room environment.

In the event of a Reactor Vessel Water Level—Low Low, Level 2, Drywell Pressure—High, or Control Room Local Intake Ventilation Radiation Monitor signal, the CRFA System is automatically started in the ~~isolation~~ emergency mode. The MCR air is then recirculated through the charcoal filter, and sufficient outside air is drawn in through the normal intake to keep the MCR slightly pressurized with respect to adjacent areas.

The CRFA System instrumentation has two trip systems: one trip system initiates one CRFA subsystem, while the second trip system initiates the other CRFA subsystem (Ref. 1). Each trip system receives input from the Functions listed above. The Functions are arranged as follows for each trip system. The Reactor Vessel Water Level—Low Low, Level 2 and Drywell Pressure—High are arranged together in a one-out-of-two taken twice logic. The Control Room Local Intake Ventilation Radiation Monitors are arranged in a ~~two~~ one-out-of-~~one two~~ logic. The channels include electronic equipment (e.g., trip units) that compares measured input signals with pre-established setpoints. When the setpoint is exceeded, the channel output relay actuates, which then outputs a CRFA System initiation signal to the initiation logic.

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY

The ability of the CRFA System to maintain the habitability of the MCR is explicitly assumed for certain accidents as discussed in the USAR safety analyses (Refs. 2 and 3). CRFA System operation ensures that the radiation exposure of control room personnel, through the duration of any one of

(continued)

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY

2. Drywell Pressure—High (continued)

Drywell Pressure—High signals are initiated from four pressure transmitters that sense drywell pressure. Four channels of Drywell Pressure—High Function are available (two channels per trip system) and are required to be OPERABLE to ensure that no single instrument failure can preclude CRFA System initiation.

The Drywell Pressure—High Allowable Value was chosen to be the same as the Secondary Containment Isolation Drywell Pressure—High Allowable Value (LCO 3.3.6.2).

The Drywell Pressure—High Function is required to be OPERABLE in MODES 1, 2, and 3 to ensure that control room personnel are protected during a LOCA. In MODES 4 and 5, the Drywell Pressure—High Function is not required since there is insufficient energy in the reactor to pressurize the drywell to the Drywell Pressure—High setpoint.

3. Control Room Local Intake Ventilation Radiation Monitors

The Control Room Local Intake Ventilation Radiation Monitors measure radiation levels exterior to the inlet ducting of the MCR. A high radiation level may pose a threat to MCR personnel; thus, a detector indicating this condition automatically signals initiation of the CRFA System.

The Control Room Local Intake Ventilation Radiation Monitors Function consists of two independent monitors. Two channels of Control Room Local Intake Ventilation Radiation Monitors are available and are required to be OPERABLE to ensure that no single instrument failure can preclude CRFA System initiation. The Allowable Value was selected to ensure protection of the control room personnel.

The Control Room Local Intake Ventilation Radiation Monitors Function is required to be OPERABLE in MODES 1, 2, and 3, and during CORE ALTERATIONS, operations with a potential for draining the reactor vessel (OPDRVs), and movement of irradiated fuel in the primary or secondary containment to ensure that control room personnel are protected during a LOCA, fuel handling event, or a vessel draindown event. During MODES 4 and 5, when these specified conditions are not in progress (e.g., CORE ALTERATIONS), the probability of a LOCA or fuel damage is low; thus, the Function is not required.

(continued)

BASES

ACTIONS (continued)

D.1 and D.2

Because of the diversity of sensors available to provide initiation signals and the redundancy of the CRFA System design, an allowable out of service time of 6 hours is provided to permit restoration of any inoperable channel to OPERABLE status. However, this out of service time is only acceptable provided the associated Function is still maintaining CRFA System initiation capability. A Function is considered to be maintaining CRFA System initiation capability when sufficient channels are OPERABLE or in trip, such that one trip system will generate an initiation signal from the given Function on a valid signal. This would require one trip system to have two channels, each OPERABLE or in trip. In this situation (loss of CRFA System initiation capability), the 6 hour allowance of Required Action D.2 is not appropriate. If the Function is not maintaining CRFA System initiation capability, both CRFA subsystems must be declared inoperable within 1 hour of discovery of loss of CRFA System initiation capability in both trip systems. If the inoperable channel cannot be restored to OPERABLE status within the allowable out of service time, the channel must be placed in the tripped condition, per Required Action D.2. Placing the inoperable channel in trip performs the intended function of the channel (starts the associated CRFA subsystem in the isolation mode). Alternately, if it is not desired to place the channel in trip (e.g., as in the case where it is not desired to start the subsystem), Condition E must be entered and its Required Actions taken.

The 6 hour Completion Time is based on the consideration that this Function provides the primary signal to start the CRFA System, thus ensuring that the design basis of the CRFA System is met.

E.1 and E.2

With any Required Action and associated Completion Time not met, the associated CRFA subsystem must be placed in the ~~isolation~~ emergency mode of operation (Required Action D.1) to ensure that control room personnel will be protected in the event of a Design Basis Accident. The method used to place the

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.4.11.8 and SR 3.4.11.9 (continued)

Plant specific test data has determined that the bottom head is not subject to temperature stratification with natural circulation at power levels as low as ~~36%~~30% of RTP ~~or~~and with any single loop flow rate greater than 50% of rated loop flow.~~when the recirculation pump is on high speed operation.~~ Therefore, SR 3.4.11.8 and SR 3.4.11.9 have been modified by a Note that requires the Surveillance to be met only when THERMAL POWER or loop flow is being increased when the above conditions are not met. The Note for SR 3.4.11.9 further limits the requirement for this Surveillance to exclude comparison of the idle loop temperature if the idle loop is isolated from the RPV since the water in the loop can not be introduced into the remainder of the reactor coolant system.

REFERENCES

1. 10 CFR 50, Appendix G.

2. ASME, Boiler and Pressure Vessel Code, Section III, Appendix G.

3. ASTM E 185-82, "Standard Practice for Conducting Surveillance Tests For Light-Water Cooled Nuclear Power Reactor Vessels," July 1982.

4. 10 CFR 50, Appendix H.

5. Regulatory Guide 1.99, Revision 2, May 1988.

6. ASME, Boiler and Pressure Vessel Code, Section XI, Appendix E.

7. NEDO-21778-A, "Transient Pressure Rises Affecting Fracture Toughness Requirements For BWRs," December 1978.

8. USAR, Section 15.4.4.

BASES

ACTIONS

B.1 and B.2 (continued)

experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE REQUIREMENTS

SR 3.6.4.1.1

This SR ensures that the shield building annulus, auxiliary building, and fuel building boundary is sufficiently leak tight to preclude exfiltration under expected wind conditions. The 24 hour Frequency of this SR was developed based on operating experience related to secondary containment vacuum variations during the applicable MODES and the low probability of a DBA occurring between surveillances.

Furthermore, the 24 hour Frequency is considered adequate in view of other indications available in the control room, including alarms, to alert the operator to an abnormal secondary containment vacuum condition.

SR 3.6.4.1.2 and SR 3.6.4.1.3

Verifying that secondary containment equipment hatches and access doors are closed ensures that the infiltration of outside air of such a magnitude as to prevent maintaining the desired negative pressure does not occur. Verifying that all such openings are closed provides adequate assurance that exfiltration from the secondary containment will not occur. In this application the term "sealed" has no connotation of leak tightness. Maintaining secondary containment OPERABILITY requires verifying each door in the access opening is closed, except when the access opening is being used for entry and exit. Verifying the main plant exhaust duct drain loop seal and the turbine building/auxiliary building exhaust duct drain loop seals are full of water also prevents infiltration of outside air and exfiltration from the secondary containment. The 31 day Frequency for these SRs has been shown to be adequate based on operating experience, and is considered adequate in view of the other controls on secondary containment access openings.

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.4.1.4 and SR 3.6.4.1.6

The SGT System exhausts the shield building annulus and auxiliary building atmosphere to the environment through appropriate treatment equipment. To ensure that all fission products are treated, SR 3.6.4.1.4 verifies that the SGT System will rapidly establish and maintain a pressure in the shield building annulus and auxiliary building that is less than the lowest postulated pressure external to the secondary containment boundary. This is confirmed by demonstrating that one SGT subsystem will draw down the shield building annulus and auxiliary building to $\geq$ 0.5 and $\geq$ 0.25 inches of vacuum water gauge in $\leq$ 18.5 and $\leq$ 13.5 seconds, respectively. This cannot be accomplished if the secondary containment boundary is not intact. SR 3.6.4.1.6 demonstrates that each SGT subsystem can maintain $\geq$ 0.5 and $\geq$ 0.25 inches of vacuum water gauge for 1 hour. The 1 hour test period allows shield building annulus and auxiliary building to be in thermal equilibrium at steady state conditions. Therefore, these two tests are used to ensure the integrity of this portion of the secondary containment boundary. Since these SRs are secondary containment tests, they need not be performed with each SGT subsystem. The SGT subsystems are tested on a STAGGERED TEST BASIS, however, to ensure that in addition to the requirements of LCO 3.6.4.3, either SGT subsystem will perform this test. Operating experience has shown these components usually pass the Surveillance when performed at the 18 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

SR 3.6.4.1.5 and SR 3.6.4.1.7

The Fuel Building Ventilation System exhausts the fuel building atmosphere to the environment through appropriate treatment equipment. To ensure that all fission products are treated, SR 3.6.4.1.5 verifies that the Fuel Building Ventilation System will rapidly establish and maintain a pressure in the fuel building that is less than the lowest postulated pressure external to the secondary containment boundary. This is confirmed by demonstrating that one fuel building ventilation subsystem will draw down the fuel building to $\geq$ 0.25 inches of vacuum water gauge in $\leq$ 12.5 seconds. This cannot be accomplished if the

(continued)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.6.4.1.5 and SR 3.6.4.1.7 (continued)

secondary containment boundary is not intact. SR 3.6.4.1.7 demonstrates that each SGT subsystem can maintain ≥ 0.25 inches of vacuum water gauge for 1 hour. The 1 hour test period allows the fuel building to be in thermal equilibrium at steady state conditions. Therefore, these two tests are used to ensure the integrity of this portion of the secondary containment boundary. Since these SRs are secondary containment tests, they need not be performed with each SGT subsystem. The SGT subsystems are tested on a STAGGERED TEST BASIS, however, to ensure that in addition to the requirements of LCO 3.6.4.2, either SGT subsystem will perform this test. The 18 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown these components usually pass the Surveillance when performed at the 18 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

REFERENCES

1. USAR, Section 15.6.5.

2. USAR, Section 15.7.4.

BASES

ACTIONS

C.1 and C.2 (continued)

reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

D.1, D.2, and D.3

If any Required Action and associated Completion Time cannot be met, the plant must be placed in a condition in which the LCO does not apply. When applicable, movement of irradiated fuel assemblies in the fuel building must be immediately suspended. Suspension of this activity shall not preclude completion of movement of a component to a safe position.

Required Action D.1 has been modified by a Note stating that LCO 3.0.3 is not applicable. If moving irradiated fuel assemblies while in MODE 4 or 5, LCO 3.0.3 would not specify any action. If moving irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, in either case, inability to suspend movement of irradiated fuel assemblies would not be a sufficient reason to require a reactor shutdown.

SURVEILLANCE REQUIREMENTS

~~SR 3.6.4.2.1~~

~~This SR verifies each secondary containment isolation manual damper and blind flange that is required to be closed during accident conditions is closed. The SR helps to ensure that post accident leakage of radioactive fluids or gases outside of the secondary containment boundary is within design limits. This SR does not require any testing or damper manipulation. Rather, it involves verification that those SCIDs in secondary containment that are capable of being mispositioned are in the correct position.~~

~~Since these SCIDs are readily accessible to personnel during normal unit operation and verification of their position is relatively easy, the 31 day Frequency was chosen to provide added assurance that the SCIDs are in the correct positions.~~

(continued)

BASES

SURVEILLANCE REQUIREMENTS

~~SR 3.6.4.2.1 (continued)~~

~~Two Notes have been added to this SR. The first Note applies to dampers and blind flanges located in high radiation areas and allows them to be verified by use of administrative means. Allowing verification by administrative means is considered acceptable, since access to these areas is typically restricted during MODES 1, 2, and 3 for ALARA reasons. Therefore, the probability of misalignment of these SCIDs, once they have been verified to be in the proper position, is low.~~

~~A second Note has been included to clarify that SCIDs that are open under administrative controls are not required to meet the SR during the time the SCIDs are open.~~

SR 3.6.4.2.~~1~~1

Verifying the isolation time of each required ~~power operated and each~~ automatic SCID is within limits is required to demonstrate OPERABILITY. The isolation time test ensures that the SCIDs will isolate in a time period less than or equal to that assumed in the safety analyses. The Frequency of this SR is 92 days.

SR 3.6.4.2.~~3~~2

Verifying that each required automatic SCID closes on a secondary containment isolation signal is required to prevent leakage of radioactive material from secondary containment following a DBA or other accidents. This SR ensures that each automatic SCID will actuate to the isolation position on a secondary containment isolation signal. The LOGIC SYSTEM FUNCTIONAL TEST in SR 3.3.6.2.5 overlaps this SR to provide complete testing of the safety function. The 18 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant
outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power. Operating experience has shown these components usually pass the Surveillance when performed at the 18 month Frequency. Therefore, the Frequency was concluded to be acceptable from a reliability standpoint.

(continued)

BASES (continued)

APPLICABILITY

In plant operating MODES 1,2, and 3, OPERABILITY of the fuel building is addressed in LCO 3.6.4.1, "Secondary Containment - Operating." Regardless of the plant operating MODE, anytime irradiated fuel is being handled there is the potential for a FHA and the fuel building OPERABILITY is required to mitigate the consequences.

ACTIONS

A.1

With the fuel building inoperable the plant must be brought to a condition in which the LCO does not apply since it is incapable of performing its required accident mitigation function. To achieve this, irradiated fuel handling must be suspended immediately. Suspension shall not preclude completion of fuel movement to a safe position.

SURVEILLANCE REQUIREMENTS

SR 3.6.4.5.1

This SR ensures that the fuel building boundary is sufficiently leak tight to preclude exfiltration under expected wind conditions. The 24 hour Frequency of this SR was developed based on operating experience related to fuel building vacuum variations during the applicable MODES and the low probability of a FHA occurring between surveillances.

Furthermore, the 24 hour Frequency is considered adequate in view of other indications available in the control room, including alarms, to alert the operator to an abnormal fuel building vacuum condition.

SR 3.6.4.5.2 and SR 3.6.4.5.3

Verifying that fuel building equipment hatches covers are installed and access doors are closed ensures that the infiltration of outside air of such a magnitude as to prevent maintaining the desired negative pressure does not occur. Verifying that all such openings are closed provides adequate assurance that exfiltration from the fuel building will not occur. Maintaining fuel building OPERABILITY requires verifying each door in the access opening is closed, except when the access opening is being used for entry and exit.

(continued)