REACTOR PROTECTION SYSTEM RESPONSE TIME

1.35 REACTOR PROTECTION SYSTEM RESPONSE TIME shall be the time interval from when the monitored parameter exceeds its trip setpoint at the channel sensor until de-energization of the scram pilot valve solenoids. The response time may be measured by any series of sequential, overlapping or total steps such that the entire response time is measured.

REPORTABLE EVENT

1.36 A REPORTABLE EVENT shall be any of those conditions specified in Section 50.73 to 10 CFR Part 50.

ROD DENSITY

1.37 ROD DENSITY shall be the number of control rod notches inserted as a fraction of the total number of control rod notches. All rods fully inserted is equivalent to 100% ROD DENSITY.

SECONDARY CONTAINMENT INTEGRITY

1.38 SECONDARY CONTAINMENT INTEGRITY shall exist when:

a. All Auxiliary Building and Enclosure Building penetrations required to be closed during accident conditions are either:

   1. Capable of being closed by an OPERABLE secondary containment automatic isolation system, or

   2. Closed by at least one manual valve, blind flange, rupture disc or deactivated automatic valve or damper, as applicable, secured in its closed position.

b. All Auxiliary Building and Enclosure Building equipment hatches and blowout panels are closed and sealed.

c. The standby gas treatment system is in compliance with the requirements of Specification 3.6.6.3.

d. The door in each access to the Auxiliary Building and Enclosure Building is closed, except for normal entry and exit.

e. The sealing mechanism associated with each Auxiliary Building and Enclosure Building penetration, e.g., welds, bellows or O-rings, is OPERABLE.

Insert

RECENTLY IRRADIATED

1.35a RECENTLY IRRADIATED fuel shall be any nuclear fuel assembly that has occupied part of a critical reactor core within the previous 12 days.

INSERT A

When handling RECENTLY IRRADIATED fuel in the primary or secondary containment and during operations with a potential for draining the reactor vessel.

INSERT B

suspend handling of RECENTLY IRRADIATED fuel in the primary or secondary containment and operations with a potential for draining the reactor vessel.

TABLE 3.3.2-1 (Continued)
ISOLATION ACTUATION INSTRUMENTATION
ACTION

ACTION 20 - Be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.

ACTION 21 - Close the affected system isolation valve(s) within one hour or:
a. In OPERATIONAL CONDITION 1, 2, or 3, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
b. In OPERATIONAL CONDITION *, suspend CORE ALTERATIONS, handling of irradiated fuel in the primary containment and operations with a potential for draining the reactor vessel.

Replace with insert "B"

ACTION 22 - Restore the manual initiation function to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

ACTION 23 - Be in at least STARTUP with the associated isolation valves closed within 6 hours or be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.

ACTION 24 - Be in at least STARTUP within 6 hours.

ACTION 25 - Establish SECONDARY CONTAINMENT INTEGRITY with the standby gas treatment system operating within one hour.

ACTION 26 - Restore the manual initiation function to OPERABLE status within 8 hours or close the affected system isolation valves within the next hour and declare the affected system inoperable.

ACTION 27 - Close the affected system isolation valves within one hour and declare the affected system inoperable.

ACTION 28 - Within one hour lock the affected system isolation valves closed, or verify, by remote indication, that the valve is closed and electrically disarmed, or isolate the penetration(s) and declare the affected system inoperable.

ACTION 29 - Close the affected system isolation valves within one hour and declare the affected system or component inoperable or:
a. In OPERATIONAL CONDITION 1, 2 or 3 be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
b. In OPERATIONAL CONDITION # suspend CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

ACTION 30 - Declare the affected SLCS pump inoperable.

ACTION 31 - Isolate the shutdown cooling common suction line within one hour if it is not needed for shutdown cooling or initiate action within one hour to establish SECONDARY CONTAINMENT INTEGRITY.

Replace with insert "A"

NOTES

* When handling irradiated fuel in the primary or secondary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

** The low condenser vacuum MSIV closure may be manually bypassed during reactor SHUTDOWN or for reactor STARTUP when condenser vacuum is below the trip setpoint to allow opening of the MSIVs. The manual bypass shall be removed when condenser vacuum exceeds the trip setpoint.

*** Trip function commom to RPS Instrumentation.

\# During CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

With any control rod withdrawn. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.

TABLE 4.3.2.1-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS IN WHICH SURVEILLANCE REQUIRED
6. RHR SYSTEM ISOLATION (Continued)				
e. Drywell Pressure - High	S	Q(a)	R(c)	1, 2, 3
f. Manual Initiation	NA	Q(a)	NA	1, 2, 3

replace with insert "A"

*When handling irradiated fuel in the primary or secondary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

**The low condenser vacuum MSIV closure may be manually bypassed during reactor SHUTDOWN or for reactor STARTUP when condenser vacuum is below the trip setpoint to allow opening of the MSIVs. The manual bypass shall be removed when condenser vacuum exceeds the trip setpoint.

#During CORE ALTERATION and operations with a potential for draining the reactor vessel.

##With any control rod withdrawn. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.

(a) Manual initiation switches shall be tested at least once per 18 months during shutdown. All other circuitry associated with manual initiation shall receive a CHANNEL FUNCTIONAL TEST at least once per 92 days as part of circuitry required to be tested for automatic system isolation.

(b) Each train or logic channel shall be tested at least every other 92 days.

(c) Calibrate trip unit at least once per 92 days.

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TABLE 3.3.7.1-1

RADIATION MONITORING INSTRUMENTATION

INSTRUMENTATION	MINIMUM CHANNELS OPERABLE	APPLICABLE CONDITIONS	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
1. Component Cooling Water Radiation Monitor	1	At all times	$\leq 1 \times 10^5$ cpm/NA	10 to 10^6 cpm	70
2. Standby Service Water System Radiation Monitor	1/heat exchanger train	1, 2, 3, and*	$\leq 1 \times 10^5$ cpm/NA	10 to 10^6 cpm	70
3. Plant Service Water System Radiation Monitor	1	##	$\leq 1 \times 10^5$ cpm/NA	10 to 10^6 cpm	70
4. [DELETED]					
5. Carbon Bed Vault Radiation Monitor	1	1, 2	< 2 x full power background/NA	1 to 10^6 mR/hr	72
6. Control Room Ventilation Radiation Monitor	2/trip system(h)	[PCOL 93/11 R2] 1,2,3,~~5~~ and**	$\leq$4 mR/hr/ $\leq$5 mR/hr#	10^{-2} to 10^2 mR/hr	73
7. Containment and Drywell Ventilation Exhaust Radiation Monitor	2/trip system(h)	At all times	$\leq$2.0 mR/hr/ $\leq$4 mR/hr(b)#	10^{-2} to 10^2 mR/hr	74
8. Fuel Handling Area Ventilation Exhaust Radiation Monitor	2/trip system(h)	1,2,3,5 and**	< 2mR/hr/ $\leq$4 mR/hr(d)#	10^{-2} to 10^2 mR/hr	75
9. Fuel Handling Area Pool Sweep Exhaust Radiation Monitor	2/trip system(h)	(c)	< 18 mR/hr/ $\leq$35 mR/hr(d)#	10^{-2} to 10^2 mR/hr	75

[PCOL 93/11 R2]

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	1	(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

FOR TECH SPEC 3.3.7.1-1.10
SEE TSPS # 100

Replace with insert "A" [PCOL 93/11 R2]

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* With RHR heat exchangers in operation.

** When irradiated fuel is being handled in the primary or 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.

\#\# With ADHR heat exchangers in operation.

(a) Trips system with 2 channels upscale-Hi Hi Hi, or one channel upscale Hi Hi Hi and one channel downscale or 2 channels downscale.

(b) Isolates containment/drywell purge penetrations. [PCOL 93/11 R2]

(c) With irradiated fuel in spent fuel storage pool.

(d) Also isolates the Auxiliary Building and Fuel Handling Area Ventilation Systems.

(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.

(h) Two upscale Hi Hi, one upscale Hi Hi and one downscale, or two downscale signals from the same trip system actuate the trip system and initiate isolation of the associated isolation valves. A channel may be placed in an inoperable status for up to 6 hours for required surveillance without placing the trip system in the tripped condition, provided at least one other OPERABLE channel in the same trip system is monitoring that parameter.

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TABLE 3.3.7.1-1 (Continued)

RADIATION MONITORING INSTRUMENTATION

ACTION

ACTION 70 - With the required monitor inoperable, obtain and analyze at least one grab sample of the monitored parameter at least once per 24 hours.

ACTION 71 - [DELETED]

ACTION 72- With the required monitor inoperable, perform area surveys of the monitored area with portable monitoring instrumentation at least once per 24 hours.

ACTION 73 - a. With one of the required monitors in a trip system inoperable, place the inoperable channel in the downscale tripped condition within 6 hours; restore the inoperable channel to OPERABLE status within 7 days, or, within the next 6 hours, initiate and maintain operation of at least one control room emergency filtration system in the isolation mode of operation.

b. With both of the required monitors in a trip system inoperable, initiate and maintain operation of at least one control room emergency filtration system in the isolation mode of operation within one hour. [PCOL 93/11R2]

ACTION 74 - a. With one of the required monitors in a trip system inoperable, place the inoperable channel in the downscale tripped condition within 24 hours.

b. With two of the required monitors in a trip system inoperable, isolate the containment and drywell purge and vent penetrations within 12 hours.

ACTION 75 - a. With one of the required monitors in a trip system inoperable, place the inoperable channel in the downscale tripped condition within 24 hours.

b. With two of the required monitors in a trip system inoperable, establish SECONDARY CONTAINMENT INTEGRITY with at least one standby gas treatment subsystem operating within 12 hours.

TABLE 4.3.7.1-1
RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

	INSTRUMENTATION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
1.	Component Cooling Water Radiation Monitor	S	M	A	At all times
2.	Standby Service Water System Radiation Monitor	S	M	A	1, 2, 3, and*
3.	Plant Service Water System Radiation Monitor	S	M	A	#
4.	[DELETED]				
5.	Carbon Bed Vault Radiation Monitor	S	M	A	1, 2 [PCOL 93/11R2]
6.	Control Room Ventilation Radiation Monitor	S	Q(e)	A	1, 2, 3, 5 and**
7.	Containment and Drywell Ventilation Exhaust Radiation Monitor	S	Q	A	At all times
8.	Fuel Handling Area Ventilation Radiation Monitor	S	Q	A	1, 2, 3, 5 and**
9.	Fuel Handling Area Pool Sweep Exhaust Radiation Monitor	S	Q	A	(b) [PCOL 93/11R2]
10.	Area Monitors				
	a. Fuel Handling Area Monitors				
	1) New Fuel Storage Vault	S	M	R	(c)
	2) Spent Fuel Storage Pool	S	M	R	(d)
	3) Dryer Storage Area	S	M	R	(e)
	b. Control Room Radiation Monitor	S	M	R	At all times

* With RHR heat exchangers in operation.

** When irradiated fuel is being handled in the primary or secondary containment. replace with insert "A" [PCOL 93/11R2]

(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. [PCOL 93/11R2]

(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.

With ADHR heat exchangers in operation.

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CONTAINMENT SYSTEMS

3/4.6.6 SECONDARY CONTAINMENT

SECONDARY CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.6.1 SECONDARY CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3 and *.

ACTION:

Without SECONDARY CONTAINMENT INTEGRITY:

a. In OPERATIONAL CONDITION 1, 2 or 3, restore SECONDARY CONTAINMENT INTEGRITY within 4 hours 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 *, suspend handling of irradiated fuel in the primary or secondary containment, CORE ALTERATIONS and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

Replace with insert "B"

SURVEILLANCE REQUIREMENTS

4.6.6.1 SECONDARY CONTAINMENT INTEGRITY shall be demonstrated by:

a. Verifying at least once per 31 days that:

1. All Auxiliary Building and Enclosure Building equipment hatches and blowout panels are closed and sealed.

2. The door in each access to the Auxiliary Building and Enclosure Building is closed, except for routine entry and exit.

3. All Auxiliary Building and Enclosure Building penetrations not capable of being closed by OPERABLE secondary containment automatic isolation dampers/valves and required to be closed during accident conditions are closed by valves, blind flanges, rupture discs or deactivated automatic dampers/valves secured in position.

b. At least once per 18 months:

1. Verifying that one standby gas treatment subsystem will draw down the secondary containment to greater than or equal to 0.25 inches of vacuum water gauge in less than or equal to 120 seconds, and

2. Operating one standby gas treatment subsystem for one hour and maintaining greater than or equal to 0.266 inches of vacuum water gauge in the secondary containment at a flow rate not exceeding 4000 CFM.

Replace with insert "A"

*When irradiated fuel is being handled in the primary or secondary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

CONTAINMENT SYSTEMS

SECONDARY CONTAINMENT AUTOMATIC ISOLATION DAMPERS/VALVES

LIMITING CONDITION FOR OPERATION

3.6.6.2 Each secondary containment ventilation system automatic isolation damper/valve shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3 and *.

ACTION:

With one or more of the secondary containment ventilation system automatic isolation dampers/valves inoperable, maintain at least one isolation damper/valve OPERABLE in each affected penetration that is open, and within 8 hours either:

a. Restore the inoperable damper/valve(s) to OPERABLE status, or

b. Isolate each affected penetration by use of at least one deactivated automatic damper/valve secured in the isolation position, or

c. Isolate each affected penetration by use of at least one closed manual valve or blind flange.

Otherwise, in OPERATIONAL CONDITION 1, 2 or 3, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

Replace with insert "B" →

Otherwise, in Operational Condition *, suspend handling of irradiated fuel in the primary or secondary containment, CORE ALTERATIONS and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.6.2 Each secondary containment ventilation system automatic isolation damper/valve shall be demonstrated OPERABLE:

a. Prior to returning the damper/valve to service after maintenance, repair or replacement work is performed on the damper/valve or its associated actuator, control or power circuit by cycling the damper/valve through at least one complete cycle of full travel and verifying the applicable isolation time.

b. During COLD SHUTDOWN or REFUELING at least once per 18 months by verifying that on a containment isolation test signal each isolation damper/valve actuates to its isolation position.

c. By verifying the isolation time to be within its limit when tested pursuant to Specification 4.0.5.

Replace with insert "A" →

*When irradiated fuel is being handled in the primary or secondary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

CONTAINMENT SYSTEMS

STANDBY GAS TREATMENT SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.6.3 Two independent standby gas treatment subsystems shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3 and *.

ACTION:

a. With one standby gas treatment subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 7 days, or:

1. In OPERATIONAL CONDITION 1, 2 or 3, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

Replace with insert "B"

2. In Operational Condition *, suspend handling of irradiated fuel in the primary or secondary containment, CORE ALTERATIONS and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

b. With both standby gas treatment subsystems inoperable in Operational Condition *, suspend handling of irradiated fuel in the primary or secondary containment, CORE ALTERATIONS or operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3. are not applicable.

Replace with insert "B".

SURVEILLANCE REQUIREMENTS

4.6.6.3 Each standby gas treatment subsystem shall be demonstrated OPERABLE:

a. At least once per 31 days by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the subsystem operates for at least 10 continuous hours with the heaters OPERABLE.

Replace with insert "A"

*When irradiated fuel is being handled in the primary or secondary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

3/4.7 PLANT SYSTEMS

3/4.7.1 SERVICE WATER SYSTEMS

STANDBY SERVICE WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.1 Each of the following independent standby service water (SSW) system subsystems shall be OPERABLE with each subsystem comprised of:

a. One OPERABLE SSW pump, and
b. An OPERABLE flow path capable of taking suction from the associated SSW cooling tower basin and transferring the water through the RHR heat exchangers and to associated plant equipment, as required, shall be OPERABLE as follows:

1. In OPERATIONAL CONDITIONS 1, 2, and 3: two subsystems; and
2. In OPERATIONAL CONDITIONS 4, 5, and *: the subsystems associated with the systems and components required to be OPERABLE by Specifications 3.4.9.2, 3.5.2, 3.8.1.2, 3.9.11.1 or 3.9.11.2.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 4, 5 and *.

ACTION:

a. In OPERATIONAL CONDITION 1, 2 or 3:

1. With one SSW subsystem inoperable, restore the inoperable subsystem 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.
2. With both SSW subsystems inoperable, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN** within the following 24 hours.

b. In OPERATIONAL CONDITION 3 or 4 with the SSW subsystem, which is associated with an RHR loop required OPERABLE by Specification 3.4.9.1 or 3.4.9.2, inoperable, declare the associated RHR loop inoperable and take the ACTION required by Specification 3.4.9.1 or 3.4.9.2, as applicable.

c. In OPERATIONAL CONDITION 4 or 5 with the SSW subsystem, which is associated with an ECCS pump required OPERABLE by Specification 3.5.2, inoperable, declare the associated ECCS pump inoperable and take the ACTION required by Specification 3.5.2.

RECENTLY IRRADIATED

* When handling ~~irradiated~~ fuel in the primary or secondary containment.

** Whenever both SSW subsystems are inoperable, if unable to attain COLD SHUTDOWN as required by this ACTION, maintain reactor coolant temperature as low as practical by use of alternate heat removal methods.

PLANT SYSTEMS

ULTIMATE HEAT SINK

LIMITING CONDITION FOR OPERATION

3.7.1.3 At least the following independent SSW cooling tower basins, each with:

a. A minimum basin water level at or above elevation 130'3" Mean Sea Level, USGS datum, equivalent to an indicated level of ≥87".

b. Two OPERABLE cooling tower fans,#

shall be OPERABLE:

a. In OPERATIONAL Condition 1, 2 and 3, two basins,##

b. In OPERATIONAL Condition 4, 5 and *, the basins## associated with systems and components required OPERABLE by Specifications 3.7.1.1 and 3.7.1.2.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 4, 5 and *.

ACTION:

a. In OPERATIONAL CONDITION 1, 2, 3, 4, 5 and * with one SSW cooling tower basin inoperable, declare the associated SSW subsystem inoperable and, if applicable, declare the HPCS service water system inoperable, and take the ACTION required by Specifications 3.7.1.1 and 3.7.1.2, as applicable.

b. In OPERATIONAL CONDITION 1, 2, 3, 4 or 5 with both SSW cooling tower basins inoperable, declare the SSW system and the HPCS service water system inoperable and take the ACTION required by Specifications 3.7.1.1 and 3.7.1.2.

c. In Operational Condition * with both SSW cooling tower basins inoperable, declare the SSW system inoperable and take the ACTION required by Specification 3.7.1.1. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.1.3 At least the above required SSW cooling tower basins shall be determined OPERABLE at least once per:

a. 24 hours by verifying basin water level to be greater than or equal to 87".

b. 31 days by starting from the control room each SSW cooling tower fan not already in operation and operating each fan for at least 15 minutes.

c. 18 months by verifying that each SSW cooling tower fan starts automatically when the associated SSW subsystem is started.

RECENTLY IRRADIATED

* When handling ~~irradiated~~ fuel in the primary or secondary containment.

The basin cooling tower fans are not required to be OPERABLE for HPCS service water system OPERABILITY.

An OPERABLE basin shall have a 30 day supply of water either self-contained or by means of an OPERABLE siphon.

PLANT SYSTEMS

3/4.7.2 CONTROL ROOM EMERGENCY FILTRATION SYSTEM

LIMITING CONDITION FOR OPERATION

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

APPLICABILITY: ~~All~~ 1, 2, 3 OPERATIONAL CONDITIONS and *. [PCOL 93/11 R2]

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~~ *: [PCOL 93/11 R2]

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 primary or 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 *.

Replace with insert "B"

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 continuous 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. [DELETED]

Replace with insert "A"

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

ELECTRICAL POWER SYSTEMS

A.C. SOURCES - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.1.2 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

a. One circuit between the offsite transmission network and the onsite Class 1E distribution system, and

b. Diesel generator 11 or 12, and diesel generator 13 when the HPCS system is required to be OPERABLE, with each diesel generator having:

1. A day tank containing a minimum of 220 gallons of fuel.

2. A fuel storage system containing a minimum of:

a) 62,000 gallons of fuel for each OPERABLE diesel generator 11 or 12.

b) 41,200 gallons of fuel for diesel generator 13.

3. A fuel transfer pump.

APPLICABILITY: OPERATIONAL CONDITIONS 4, 5 and *.

ACTION:

a. With all offsite circuits inoperable and/or with diesel generators 11 and 12 inoperable, suspend CORE ALTERATIONS, handling of ~~irradiated~~ RECENTLY IRRADIATED fuel in the primary or secondary containment, operations with a potential for draining the reactor vessel and crane operations over the spent fuel storage pool and the upper containment pool when fuel assemblies are stored therein. In addition, when in OPERATIONAL CONDITION 5 with the water level less than 22 feet 8 inches above the reactor pressure vessel flange, immediately initiate corrective action to restore the required power sources to OPERABLE status as soon as practical.

b. With diesel generator 13 inoperable, restore the inoperable diesel generator 13 to OPERABLE status within 72 hours or declare the HPCS system inoperable and take the ACTION required by Specification 3.5.2 and 3.5.3.

c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.8.1.2 At least the above required A.C. electrical power sources shall be demonstrated OPERABLE per Surveillance Requirements 4.8.1.1.1, 4.8.1.1.2 and 4.8.1.1.3, except for the requirement of 4.8.1.1.2.a.5.

*When handling ~~irradiated~~ RECENTLY IRRADIATED fuel in the primary or secondary containment.

ELECTRICAL POWER SYSTEMS

D.C. SOURCES - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.2.2 As a minimum, Division 1 or Division 2, and, when the HPCS system is required to be OPERABLE, Division 3, of the D.C. electrical power sources shall be OPERABLE with:

a. Division 1 consisting of:
   1. 125 volt battery 1A3.
   2. 125 volt full capacity charger 1A4 or 1A5.

b. Division 2 consisting of:
   1. 125 volt battery 1B3.
   2. 125 volt full capacity charger 1B4 or 1B5.

c. Division 3 consisting of:
   1. 125 volt battery 1C3.
   2. 125 volt full capacity charger 1C4.

APPLICABILITY: OPERATIONAL CONDITIONS 4, 5 and *.

ACTION:

a. With both Division 1 battery and Division 2 battery of the above required D.C. electrical power sources inoperable, suspend CORE ALTERATIONS, handling of ~~irradiated~~ RECENTLY IRRADIATED fuel in the primary or secondary containment and operations with a potential for draining the reactor vessel.

b. With Division 3 battery of the above required D.C. electrical power sources inoperable, declare the HPCS system inoperable and take the ACTION required by Specification 3.5.2 and 3.5.3.

c. With any of the above required full capacity chargers inoperable, demonstrate the OPERABILITY of its associated battery bank by performing Surveillance Requirement 4.8.2.1.a.1 within one hour and at least once per 8 hours thereafter. If any Category A limit in Table 4.8.2.1-1 is not met, declare the battery inoperable. OPERATIONAL CONDITION changes per Specification 3.0.4 are not permitted.

d. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.8.2.2 At least the above required battery and charger shall be demonstrated OPERABLE per Surveillance Requirement 4.8.2.1.

* When handling ~~irradiated~~ RECENTLY IRRADIATED fuel in the primary or secondary containment.

ELECTRICAL POWER SYSTEMS

DISTRIBUTION - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.3.2 As a minimum, the following power distribution system divisions shall be energized:

a. For A.C. power distribution, Division 1 or Division 2, and when the HPCS system is required to be OPERABLE, Division 3, with:

1. Division 1 consisting of:

a) 4160 volt A.C. bus 15AA.
b) 480 volt A.C. MCCs 15B11, 15B21, 15B31, 15B41, 15B51 and 15B61.
c) 120 volt A.C. distribution panels in 15P11, 15P21, 15P31, 15P41, 15P51 and 15P61.
d) LCCs 15BA1, 15BA2, 15BA3, 15BA4, 15BA5 and 15BA6.

2. Division 2 consisting of:

a) 4160 volt A.C. bus 16AB.
b) 480 volt A.C. MCCs 16B11, 16B21, 16B31, 16B41, 16B51 and 16B61.
c) 120 volt A.C. distribution panels in 16P11, 16P21, 16P31, 16P41, 16P51 and 16P61.
d) LCCs 16BB1, 16BB2, 16BB3, 16BB4, 16BB5 and 16BB6.

3. Division 3 consisting of:

a) 4160 volt A.C. bus 17AC.
b) 480 volt A.C. MCCs 17B01 and 17B11.
c) 120 volt A.C. distribution panels 17P11.

4. The OPERABLE load shedding and sequencing panel associated with the division(s) required to be energized.

b. For D.C. power distribution, Division 1 or Division 2, and when the HPCS system is required to be OPERABLE, Division 3, with:

1. Division 1 consisting of 125 volt D.C. distribution panel 1DA1 and 1DA2.

2. Division 2 consisting of 125 volt D.C. distribution panel 1DB1 and 1DB2.

3. Division 3 consisting of 125 volt D.C. distribution panel 1DC1.

APPLICABILITY: OPERATIONAL CONDITIONS 4, 5 and *.

* When handling ~~irradiated~~ RECENTLY IRRADIATED fuel in the primary or secondary containment.

ELECTRICAL POWER SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

ACTION:

a. For A.C. power distribution:

1. With both Division 1 and Division 2 of the above required A.C. distribution system not energized and/or with the load shedding and sequencing panel associated with the division(s) required to be energized inoperable, suspend CORE ALTERATIONS, handling of ~~irradiated~~ RECENTLY IRRADIATED fuel in the primary or secondary containment and operations with a poetnial for draining the reactor vessel. OPERATIONAL CONDITION changes per Specification 3.0.4 are not permitted.

2. With Division 3 of the above required A.C. distribution system not energized, declare the HPCS system inoperable and take the ACTION required by Specification 3.5.2 and 3.5.3.

b. For D.C. power distribution:

1. With both Division 1 and Division 2 of the above required D.C. distribution system not energized, suspend CORE ALTERATIONS, handling of ~~irradiated~~ RECENTLY IRRADIATED fuel in the primary or secondary containment and operations with a potential for draining the reactor vessel. OPERATIONAL CONDITION changes per Specification 3.0.4 are not permitted.

2. With Division 3 of the above required D.C. distribution system not energized, declare the HPCS system inoperable and take the ACTION required by Specification 3.5.2 and 3.5.3.

c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.8.3.2.1 At least the above required ...er distribution system divisions shall be determined energized at leas... ...ce per 7 days by verifying correct breaker alignment on the busses/LCs/MCCs/panels and voltage on the busses/LCs.

4.8.3.2.2 The above required load shedding and sequencing panel(s) shall be demonstrated OPERABLE at least once per 31 days by performance of a manual test and verifying response within the design criteria to the following test inputs:

a) LOCA.
b) Bus undervoltage.
c) Bus undervoltage followed by LOCA.
d) LOCA followed by bus undervoltage.

3/4.9 REFUELING OPERATIONS

BASES

3/4.9.1 REACTOR MODE SWITCH

Locking the OPERABLE reactor mode switch in the Shutdown or Refuel position, as specified, ensures that the restrictions on control rod withdrawal and refueling platform movement during the refueling operations are properly activated. These conditions reinforce the refueling procedures and reduce the probability of inadvertent criticality, damage to reactor internals or fuel assemblies, and exposure of personnel to excessive radioactivity.

3/4.9.2 INSTRUMENTATION

The OPERABILITY of at least two source range monitors ensures that redundant monitoring capability is available to detect changes in the reactivity condition of the core.

3/4.9.3 CONTROL ROD POSITION

The requirement that all control rods be inserted during other CORE ALTERATIONS ensures that fuel will not be loaded into a cell without a control rod.

3/4.9.4 DECAY TIME

During the 12 day interval used in definition 1.35a for RECENTLY IRRADIATED fuel, selected ESF systems are required to limit the radiological consequences of a fuel handling accident to within regulatory limits.

24 hour

The ~~minimum~~ requirement for reactor subcriticality prior to fuel movement ensures that sufficient time has elapsed to allow the radioactive decay of the short lived fission products. ~~This~~ decay ~~time is~~ consistent with ~~the~~ assumptions used in the accident analyses.

These are times

3/4.9.5 COMMUNICATIONS

The requirement for communications capability ensures that refueling station personnel can be promptly informed of significant changes in the facility status or core reactivity condition during movement of fuel within the reactor pressure vessel.

3/4.9.6 REFUELING EQUIPMENT

The OPERABILITY requirements ensure that (1) only the main hoist of the refueling platform or the main hoist of the fuel handling platform will be used for handling fuel assemblies within the reactor pressure vessel, (2) platform hoists have sufficient load capacity for handling fuel assemblies and/or control rods, (3) the core internals and pressure vessel are protected from excessive lifting force in the event they are inadvertently engaged during lifting operations, and (4) a fuel bundle is protected from excessive lifting force in the event it becomes stuck during lifting operations.

PROPOSED CURRENT TECHNICAL SPECIFICATIONS PAGES

FUEL HANDLING ACCIDENT OPERATING CONDITIONS

(Information Only)

REACTOR PROTECTION SYSTEM RESPONSE TIME

1.35 REACTOR PROTECTION SYSTEM RESPONSE TIME shall be the time interval from when the monitored parameter exceeds its trip setpoint at the channel sensor until de-energization of the scram pilot valve solenoids. The response time may be measured by any series of sequential, overlapping or total steps such that the entire response time is measured.

RECENTLY IRRADIATED

1.35a RECENTLY IRRADIATED fuel shall be any nuclear fuel assembly that has occupied part of a critical reactor core within the previous 12 days.

REPORTABLE EVENT

1.36 A REPORTABLE EVENT shall be any of those conditions specified in Section 50.73 to 10 CFR Part 50.

ROD DENSITY

1.37 ROD DENSITY shall be the number of control rod notches inserted as a fraction of the total number of control rod notches. All rods fully inserted is equivalent to 100% ROD DENSITY.

SECONDARY CONTAINMENT INTEGRITY

1.38 SECONDARY CONTAINMENT INTEGRITY shall exist when:

a. All Auxiliary Building and Enclosure Building penetrations required to be closed during accident conditions are either:

   1. Capable of being closed by an OPERABLE secondary containment automatic isolation system, or

   2. Closed by at least one manual valve, blind flange, rupture disc or deactivated automatic valve or damper, as applicable, secured in its closed position.

b. All Auxiliary Building and Enclosure Building equipment hatches and blowout panels are closed and sealed.

c. The standby gas treatment system is in compliance with the requirements of Specification 3.6.6.3.

d. The door in each access to the Auxiliary Building and Enclosure Building is closed, except for normal entry and exit.

e. The sealing mechanism associated with each Auxiliary Building and Enclosure Building penetration, e.g., welds, bellows or O-rings, is OPERABLE.

TABLE 3.3.2-1 (Continued)
ISOLATION ACTUATION INSTRUMENTATION

ACTION

ACTION 20 - Be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.

ACTION 21 - Close the affected system isolation valve(s) within one hour or:
a. In OPERATIONAL CONDITION 1, 2, or 3, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
b. In OPERATIONAL CONDITION *, suspend handling of RECENTLY IRRADIATED fuel in the primary or secondary containment, handling of fuel assemblies within the reactor vessel when RECENTLY IRRADIATED fuel is in the reactor vessel, and operations with a potential for draining the reactor vessel.

ACTION 22 - Restore the manual initiation function to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

ACTION 23 - Be in at least STARTUP with the associated isolation valves closed within 6 hours or be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.

ACTION 24 - Be in at least STARTUP within 6 hours.

ACTION 25 - Establish SECONDARY CONTAINMENT INTEGRITY with the standby gas treatment system operating within one hour.

ACTION 26 - Restore the manual initiation function to OPERABLE status within 8 hours or close the affected system isolation valves within the next hour and declare the affected system in operable.

ACTION 27 - Close the affected system isolation valves within one hour and declare the affected system inoperable.

ACTION 28 - Within one hour lock the affected system isolation valves closed, or verify, by remote indication, that the valve is closed and electrically disarmed, or isolate the penetration(s) and declare the affected system inoperable.

ACTION 29 - Close the affected system isolation valves within one hour and declare the affected system or component inoperable.
a. In OPERATIONAL CONDITION 1, 2 or 3 be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
b. In OPERATIONAL CONDITION # suspend CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

ACTION 30 - Declare the affected SLCS pump inoperable.

ACTION 31 - Isolate the shutdown cooling common suction line within one hour if it is not needed for shutdown cooling or initiate action within one hour to establish SECONDARY CONTAINMENT INTEGRITY.

NOTES

* When handling RECENTLY IRRADIATED fuel in the primary or secondary containment, when handling fuel assemblies within the reactor vessel when RECENTLY IRRADIATED fuel is in the reactor vessel, and during operations with a potential for draining the reactor vessel.

** The low condenser vacuum MSIV closure may be manually bypassed during reactor SHUTDOWN or for reactor STARTUP when condenser vacuum is below the trip setpoint to allow opening of the MSIVs. The manual bypass shall be removed when condenser vacuum exceeds the trip setpoint.

\# During CORE ALTERATIONS and operations with a potential for draining the reactor vessel.

With any control rod withdrawn. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.

TABLE 4.3.2.1-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS IN WHICH SURVEILLANCE REQUIRED
6. RHR SYSTEM ISOLATION (Continued)				
e. Drywell Pressure - High	S	Q	R(c)	1, 2, 3
f. Manual Initiation	NA	Q(a)	NA	1, 2, 3

* When handling RECENTLY IRRADIATED fuel in the primary or secondary containment, when handling fuel assemblies within the reactor vessel when RECENTLY IRRADIATED fuel is in the reactor vessel, and during operations with a potential for draining the reactor vessel.

** The low condenser vacuum MSIV closure may be manually bypassed during reactor SHUTDOWN or for reactor STARTUP when condenser vacuum is below the trip setpoint to allow opening of the MSIVs. The manual bypass shall be removed when condenser vacuum exceeds the trip setpoint.

During CORE ALTERATION and operations with a potential for draining the reactor vessel.

With any control rod withdrawn. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.

(a) Manual initiation switches shall be tested at least once per 18 months during shutdown. All other circuitry associated with manual initiation shall receive a CHANNEL FUNCTIONAL TEST at least once per 92 days as part of circuitry required to be tested for automatic system isolation.

(b) Each train or logic channel shall be tested at least every other 92 days.

(c) Calibrate trip unit at least once per 92 days.

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TABLE 3.3.7.1-1

RADIATION MONITORING INSTRUMENTATION

INSTRUMENTATION	MINIMUM CHANNELS OPERABLE	APPLICABLE CONDITIONS	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
1. Component Cooling Water Radiation Monitor	1	At all times	$\leq 1 \times 10^5$ cpm/NA	10 to 10^6 cpm	70
2. Standby Service Water System Radiation Monitor	1/heat exchanger train	1, 2, 3, and*	$\leq 1 \times 10^5$ cpm/NA	10 to 10^6 cpm	70
3. Plant Service Water System Radiation Monitor	1	##	$\leq 1 \times 10^5$ cpm/NA	10 to 10^6 cpm	70
4. [DELETED]					
5. Carbon Bed Vault Radiation Monitor	1	1, 2	≤ 2 x full power background/NA	1 to 10^6 mR/hr	72
6. Control Room Ventilation Radiation Monitor	2/trip system(h)	1,2,3 and**	≤ 4 mR/hr/ ≤ 5 mR/hr#	10^{-2} to 10^2 mR/hr	73
7. [DELETED]					
8. [DELETED]					
9. [DELETED]					

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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	1	(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 handling RECENTLY IRRADIATED fuel in the primary or secondary containment, when handling fuel assemblies within the reactor vessel when RECENTLY IRRADIATED fuel is in the reactor vessel, and during operations with a potential for draining the reactor vessel.
\# 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.
With ADHR heat exchangers in operation.
(a) Trips system with 2 channels upscale-Hi Hi Hi, or one channel upscale Hi Hi Hi and one channel downscale or 2 channels downscale.
(b) [DELETED]
(c) [DELETED]
(d) [DELETED]
(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.
(h) Two upscale Hi Hi, one upscale Hi Hi and one downscale, or two downscale signals from the same trip system actuate the trip system and initiate isolation of the associated isolation valves. A channel may be placed in the tripped condition, provided at least one other OPERABLE channel in the same trip system is monitoring that parameter.

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INSTRUMENTATION

TABLE 3.3.7.1-1 (Continued)

RADIATION MONITORING INSTRUMENTATION

ACTION

ACTION 70 - With the required monitor inoperable, obtain and analyze at least one grab sample of the monitored parameter at least once per 24 hours.

ACTION 71 - [DELETED]

ACTION 72 - With the required monitor inoperable, perform area surveys of the monitored area with portable monitoring instrumentation at least once per 24 hours.

ACTION 73 - a. With one of the required monitors in a trip system inoperable, place the inoperable channel in the downscale tripped condition within 6 hours; restore the inoperable channel to OPERABLE status within 7 days, or, within the next 6 hours, initiate and maintain operation of at least one control room emergency filtration system in the isolation mode of operation.

b. With both of the required monitors in a trip system inoperable, initiate and maintain operation of at least one control room emergency filtration system in the isolation mode of operation within one hour.

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TABLE 4.3.7.1-1

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

	INSTRUMENTATION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
1.	Component Cooling Water Radiation Monitor	S	M	A	At all times
2.	Standby Service Water System Radiation Monitor	S	M	A	1, 2, 3, and*
3.	Plant Service Water System Radiation Monitor	S	M	A	#
4.	[DELETED]				
5.	Carbon Bed Vault Radiation Monitor	S	M	A	1, 2
6.	Control Room Ventilation Radiation Monitor	S	Q(a)	A	1, 2, 3 and**
7.	[DELETED]				
8.	[DELETED]				
9.	[DELETED]				
10.	Area Monitors				
	a. Fuel Handling Area Monitors				
	1) New Fuel Storage Vault	S	M	R	(c)
	2) Spent Fuel Storage Pool	S	M	R	(d)
	3) Dryer Storage Area	S	M	R	(e)
	b. Control Room Radiation Monitor	S	M	R	At all times

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* With RHR heat exchangers in operation.

** When handling RECENTLY IRRADIATED fuel in the primary or secondary containment, when handling fuel assemblies within the reactor vessel when RECENTLY IRRADIATED fuel is in the reactor vessel, and during operations with a potential for draining the reactor vessel.

(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) [DELETED)

(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.

\# With ADHR heat exchangers in operation.

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CONTAINMENT SYSTEMS
3/4.6.6 SECONDARY CONTAINMENT
SECONDARY CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.6.1 SECONDARY CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3 and *.

ACTION:

Without SECONDARY CONTAINMENT INTEGRITY:

a. In OPERATIONAL CONDITION 1, 2 or 3, restore SECONDARY CONTAINMENT INTEGRITY within 4 hours 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 *, suspend handling of RECENTLY IRRADIATED fuel in the primary or secondary containment, handling of fuel assemblies within the reactor vessel when RECENTLY IRRADIATED fuel is in the reactor vessel, and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.6.1 SECONDARY CONTAINMENT INTEGRITY shall be demonstrated by:

a. Verifying at least once per 31 days that:

1. All Auxiliary Building and Enclosure Building equipment hatches and blowout panels are closed and sealed.
2. The door in each access to the Auxiliary Building and Enclosure Building is closed, except for routine entry and exit.
3. All Auxiliary Building and Enclosure Building penetrations not capable of being closed by OPERABLE secondary containment automatic isolation dampers/valves and required to be closed during accident conditions are closed by valves, blind flanges, rupture discs or deactivated automatic dampers/valves secured in position.

b. At least once per 18 months:

1. Verifying that one standby gas treatment subsystem will draw down the secondary containment to greater than or equal to 0.25 inches of vacuum water gauge in less than or equal to 120 seconds, and
2. Operating one standby gas treatment subsystem for one hour and maintaining greater than or equal to 0.266 inches of vacuum water gauge in the secondary containment at a flow rate not exceeding 4000 CFM.

* When handling RECENTLY IRRADIATED fuel in the primary or secondary containment, when handling fuel assemblies within the reactor vessel when RECENTLY IRRADIATED fuel is in the reactor vessel, and during operations with a potential for draining the reactor vessel.

CONTAINMENT SYSTEMS
SECONDARY CONTAINMENT ISOLATION DAMPER/VALVES

LIMITING CONDITION FOR OPERATION

3.6.6.2 Each secondary containment ventilation system automatic isolation dampers/valve shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3 and *.
ACTION:
With one or more of the secondary containment ventilation system automatic isolation dampers/valves inoperable, maintain at least one isolation damper/ valve OPERABLE in each affected penetration that is open, and within 8 hours either:

a. Restore the inoperable damper/valve(s) to OPERABLE status, or

b. Isolate each affected penetration by use of at least one deactivated automatic damper/valve secured in the isolation position, or

c. Isolate each affected penetration by use of at least one closed manual valve or blind flange.

Otherwise, in OPERATIONAL CONDITION 1, 2 or 3, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

Otherwise, in Operational Condition *, suspend handling of RECENTLY IRRADIATED fuel in the primary or secondary containment, handling of fuel assemblies within the reactor vessel when RECENTLY IRRADIATED fuel is in the reactor vessel, and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.6.2 Each secondary containment ventilation system automatic isolation damper/valve shall be demonstrated OPERABLE:

a. Prior to returning the damper/valve to service after maintenance, repair or replacement work is performed on the damper/valve or its associated actuator, control or power circuit by cycling the damper/valve through at least one complete cycle of full travel and verifying the specified isolation time.
b. During COLD SHUTDOWN or REFUELING at least once per 18 months by verifying that on a containment isolation test signal each isolation damper/valve actuates to its isolation position.
c. By verifying the isolation time to be within its limit when tested pursuant to Specification 4.0.5.

---

* When handling RECENTLY IRRADIATED fuel in the primary or secondary containment, when handling fuel assemblies within the reactor vessel when RECENTLY IRRADIATED fuel is in the reactor vessel, and during operations with a potential for draining the reactor vessel.

CONTAINMENT SYSTEMS

STANDBY GAS TREATMENT SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.6.3 Two independent standby gas treatment subsystems shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3 and *.

ACTION:

a. With one standby gas treatment subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 7 days, or:

1. In OPERATIONAL CONDITION 1, 2 or 3, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

2. In Operational Condition *, suspend handling of RECENTLY IRRADIATED fuel in the primary or secondary containment, handling of fuel assemblies within the reactor vessel when RECENTLY IRRADIATED fuel is in the reactor vessel, and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3 are not applicable.

b. With both standby gas treatment subsystems inoperable in Operational Condition *, suspend handling of RECENTLY IRRADIATED fuel in the primary or secondary containment, handling of fuel assemblies within the reactor vessel when RECENTLY IRRADIATED fuel is in the reactor vessel, and operations with a potential for draining the reactor vessel. The provisions of Specification 3.0.3. are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.6.3 Each standby gas treatment subsystem shall be demonstrated OPERABLE:

a. At least once per 31 days by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the subsystem operates for at least 10 continuous hours with the heaters OPERABLE.

* When handling RECENTLY IRRADIATED fuel in the primary or secondary containment, when handling fuel assemblies within the reactor vessel when RECENTLY IRRADIATED fuel is in the reactor vessel, and during operations with a potential for draining the reactor vessel.

3/4.7 PLANT SYSTEMS

3/4.7.1 SERVICE WATER SYSTEMS

STANDBY SERVICE WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.1 Each of the following independent standby service water (SSW) system subsystems shall be OPERABLE with each subsystem comprised of:

a. One OPERABLE SSW pump, and
b. An OPERABLE flow path capable of taking suction from the associated SSW cooling tower basin and transferring the water through the RHR heat exchangers and to associated plant equipment, as required, shall be OPERABLE as follows:

1. In OPERATIONAL CONDITIONS 1, 2, and 3: two subsystems; and
2. In OPERATIONAL CONDITIONS 4, 5, and *: the subsystems associated with the systems and components required to be OPERABLE by Specifications 3.4.9.2, 3.5.2, 3.8.1.2, 3.9.11.1 or 3.9.11.2.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 4, 5 and *.

ACTION:

a. In OPERATIONAL CONDITION 1, 2 or 3:

1. With one SSW subsystem inoperable, restore the inoperable subsystem 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.

2. With both SSW subsystems inoperable, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN** within the following 24 hours.

b. In OPERATIONAL CONDITION 3 or 4 with the SSW subsystem, which is associated with an RHR loop required OPERABLE by Specification 3.4.9.1 or 3.4.9.2, inoperable, declare the associated RHR loop inoperable and take the ACTION required by Specification 3.4.9.1 or 3.4.9.2, as applicable.

c. In OPERATIONAL CONDITION 4 or 5 with the SSW subsystem, which is associated with an ECCS pump required OPERABLE by Specification 3.5.2, inoperable, declare the associated ECCS pump inoperable and take the ACTION required by Specification 3.5.2.

---

* When handling RECENTLY IRRADIATED fuel in the primary or secondary containment.

** Whenever both SSW subsystems are inoperable, if unable to attain COLD SHUTDOWN as required by this ACTION, maintain reactor coolant temperature as low as practical by use of alternate heat removal methods.

PLANT SYSTEMS

ULTIMATE HEAT SINK

LIMITING CONDITION FOR OPERATION

3.7.1.3 At least the following independent SSW cooling tower basins, each with:
a. A minimum basin water level at or above elevation 130'3" Mean Sea Level, USGS datum, equivalent to an indicated level of ≥87".
b. Two OPERABLE cooling tower fans,#

shall be OPERABLE:

a. In OPERATIONAL Condition 1, 2 and 3, two basins,##
b. In OPERATIONAL Condition 4, 5 and *, the basins## associated with systems and components required OPERABLE by Specifications 3.7.1.1 and 3.7.1.2.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 4, 5 and *.

ACTION:

a. In OPERATIONAL CONDITION 1, 2, 3, 4, 5 and * with one SSW cooling tower basin inoperable, declare the associated SSW subsystem inoperable and, if applicable, delcare the HPCS service water system inoperable, and take the ACTION required by Specifications 3.7.1.1 and 3.7.1.2, as applicable.
b. In OPERATIONAL CONDITION 1, 2, 3, 4 or 5 with both SSW cooling tower basins inoperable, declare the SSW system and the HPCS service water system inoperable and take the ACTION required by Specifications 3.7.1.1 and 3.7.1.2.
c. In Operational Condition * with both SSW cooling tower basins inoperable, declare the SSW system inoperable and take the ACTION required by Specification 3.7.1.1. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.1.3 At least the above required SSW cooling tower basins shall be determined OPERABLE at least once per:

a. 24 hours by verifying basin water level to be greater than or equal to 87".
b. 31 days by starting from the control room each SSW cooling tower fan not already in operation and operating each fan for at least 15 minutes.
c. 18 months by verifying that each SSW cooling tower fan starts automatically when the associated SSW subsystem is started.

* When handling RECENTLY IRRADIATED fuel in the primary or secondary containment.
\# The basin cooling tower fans are not required to be OPERABLE for HPCS service water system OPERABILITY.
\## An OPERABLE basin shall have a 30 day supply of water either self-contained or by means of an OPERABLE siphon.

PLANT SYSTEMS

3/4.7.2 CONTROL ROOM EMERGENCY FILTRATION SYSTEM

LIMITING CONDITION FOR OPERATION

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

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APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3 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.

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b. In OPERATIONAL CONDITION *:

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 handling of RECENTLY IRRADIATED fuel in the primary or secondary containment, handling of fuel assemblies within the reactor vessel when RECENTLY IRRADIATED fuel is in the reactor vessel, 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 continuous 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. [DELETED]

* When handling RECENTLY IRRADIATED fuel in the primary or secondary containment, when handling fuel assemblies within the reactor vessel when RECENTLY IRRADIATED fuel is in the reactor vessel, and during operations with a potential for draining the reactor vessel.

ELECTRICAL POWER SYSTEMS

A.C. SOURCES - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.1.2 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

a. One circuit between the offsite transmission network and the onsite Class 1E distribution system, and

b. Diesel generator 11 or 12, and diesel generator 13 when the HPCS system is required to be OPERABLE, with each diesel generator having:

1. A day tank containing a minimum of 220 gallons of fuel.

2. A fuel storage system containing a minimum of:

a) 62,000 gallons of fuel for each OPERABLE diesel generator 11 or 12.

b) 41,200 gallons of fuel for diesel generator 13.

3. A fuel transfer pump.

APPLICABILITY: OPERATIONAL CONDITIONS 4, 5 and *.

ACTION:

a. With all offsite circuits inoperable and/or with diesel generators 11 and 12 inoperable, suspend CORE ALTERATIONS, handling of RECENTLY IRRADIATED fuel in the primary or secondary containment, operations with a potential for draining the reactor vessel and crane operations over the spent fuel storage pool and the upper containment pool when fuel assemblies are stored therein. In addition, when in OPERATIONAL CONDITION 5 with the water level less than 22 feet 8 inches above the reactor pressure vessel flange, immediately initiate corrective action to restore the required power sources to OPERABLE status as soon as practical.

b. With diesel generator 13 inoperable, restore the inoperable diesel generator 13 to OPERABLE status within 72 hours or declare the HPCS system inoperable and take the ACTION required by Specification 3.5.2 and 3.5.3.

c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.8.1.2 At least the above required A.C. electrical power sources shall be demonstrated OPERABLE per Surveillance Requirements 4.8.1.1.1, 4.8.1.1.2 and 4.8.1.1.3, except for the requirement of 4.8.1.1.2.a.5.

*When handling RECENTLY IRRADIATED fuel in the primary or secondary containment.

ELECTRICAL POWER SYSTEMS

D.C. SOURCES - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.2.2 As a minimum, Division 1 or Division 2, and, when the HPCS system is required to be OPERABLE, Division 3, of the D.C. electrical power sources shall be OPERABLE with:

a. Division 1 consisting of:
   1. 125 volt battery 1A3.
   2. 125 volt full capacity charger 1A4 or 1A5.

b. Division 2 consisting of:
   1. 125 volt battery 1B3.
   2. 125 volt full capacity charger 1B4 or 1B5.

c. Division 3 consisting of:
   1. 125 volt battery 1C3.
   2. 125 volt full capacity charger 1C4.

APPLICABILITY: OPERATIONAL CONDITIONS 4, 5 and *.

ACTION:

a. With both Division 1 battery and Division 2 battery of the above required D.C. electrical power sources inoperable, suspend CORE ALTERATIONS, handling of RECENTLY IRRADIATED fuel in the primary or secondary containment and operations with a potential for draining the reactor vessel.

b. With Division 3 battery of the above required D.C. electrical power sources inoperable, declare the HPCS system inoperable and take the ACTION required by Specification 3.5.2 and 3.5.3.

c. With any of the above required full capacity chargers inoperable, demonstrate the OPERABILITY of its associated battery bank by performing Surveillance Requirement 4.8.2.1.a.1 within one hour and at least once per 8 hours thereafter. If any Category A limit in Table 4.8.2.1-1 is not met, declare the battery inoperable. OPERATIONAL CONDITION changes per Specification 3.0.4 are not permitted.

d. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.8.2.2 At least the above required battery and charger shall be demonstrated OPERABLE per Surveillance Requirement 4.8.2.1.

*When handling RECENTLY IRRADIATED fuel in the primary or secondary containment.

ELECTRICAL POWER SYSTEMS

DISTRIBUTION - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.3.2 As a minimum, the following power distribution system divisions shall be energized:

a. For A.C. power distribution, Division 1 or Division 2, and when the HPCS system is required to be OPERABLE, Division 3, with:

1. Division 1 consisting of:

a) 4160 volt A.C. bus 15AA.
b) 480 volt A.C. MCCs 15B11, 15B21, 15B31, 15B41, 15B51 and 15B61.
c) 120 volt A.C. distribution panels in 15P11, 15P21, 15P31, 15P41, 15P51 and 15P61.
d) LCCs 15BA1, 15BA2, 15BA3, 15BA4, 15BA5 and 15BA6.

2. Division 2 consisting of:

a) 4160 volt A.C. bus 16AB.
b) 480 volt A.C. MCCs 16B11, 16B21, 16B31, 16B41, 16B51 and 16B61.
c) 120 volt A.C. distribution panels in 16P11, 16P21, 16P31, 16P41, 16P51 and 16P61.
d) LCCs 16BB1, 16BB2, 16BB3, 16BB4, 16BB5 and 16BB6.

3. Division 3 consisting of:

a) 4160 volt A.C. bus 17AC.
b) 480 volt A.C. MCCs 17B01 and 17B11.
c) 120 volt A.C. distribution panels 17P11.

4. The OPERABLE load shedding and sequencing panel associated with the division(s) required to be energized.

b. For D.C. power distribution, Division 1 or Division 2, and when the HPCS system is required to be OPERABLE, Division 3, with:

1. Division 1 consisting of 125 volt D.C. distribution panel 1DA1 and 1DA2.

2. Division 2 consisting of 125 volt D.C. distribution panel 1DB1 and 1DB2.

3. Division 3 consisting of 125 volt D.C. distribution panel 1DC1.

APPLICABILITY: OPERATIONAL CONDITIONS 4, 5 and *.

*When handling RECENTLY IRRADIATED fuel in the primary or secondary containment.

ELECTRICAL POWER SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

ACTION:

a. For A.C. power distribution:

1. With both Division 1 and Division 2 of the above required A.C. distribution system not energized and/or with the load shedding and sequencing panel associated with the division(s) required to be energized inoperable, suspend CORE ALTERATIONS, handling of RECENTLY IRRADIATED fuel in the primary or secondary containment and operations with a potential for draining the reactor vessel. OPERATIONAL CONDITION changes per Specification 3.0.4 are not permitted.

2. With Division 3 of the above required A.C. distribution system not energized, declare the HPCS system inoperable and take the ACTION required by Specification 3.5.2 and 3.5.3.

b. For D.C. power distribution:

1. With both Division 1 and Division 2 of the above required D.C. distribution system not energized, suspend CORE ALTERATIONS, handling of RECENTLY IRRADIATED fuel in the primary or secondary containment and operations with a potential for draining the reactor vessel. OPERATIONAL CONDITION changes per Specification 3.0.4 are not permitted.

2. With Division 3 of the above required D.C. distribution system not energized, declare the HPCS system inoperable and take the ACTION required by Specification 3.5.2 and 3.5.3.

c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.8.3.2.1 At least the above required power distribution system divisions shall be determined energized at least once per 7 days by verifying correct breaker alignment on the busses/LCs/MCCs/panels and voltage on the busses/LCs.

4.8.3.2.2 The above required load shedding and sequencing panel(s) shall be demonstrated OPERABLE at least once per 31 days by performance of a manual test and verifying response within the design criteria to the following test inputs:

a) LOCA.
b) Bus undervoltage.
c) Bus undervoltage followed by LOCA.
d) LOCA followed by bus undervoltage.

3/4.9 REFUELING OPERATIONS

BASES

3/4.9.1 REACTOR MODE SWITCH

Locking the OPERABLE reactor mode switch in the Shutdown or Refuel position, as specified, ensures that the restrictions on control rod withdrawal and refueling platform movement during the refueling operations are properly activated. These conditions reinforce the refueling procedures and reduce the probability of inadvertent criticality, damage to reactor internals or fuel assemblies, and exposure of personnel to excessive radioactivity.

3/4.9.2 INSTRUMENTATION

The OPERABILITY of at least two source range monitors ensures that redundant monitoring capability is available to detect changes in the reactivity condition of the core.

3/4.9.3 CONTROL ROD POSITION

The requirement that all control rods be inserted during other CORE ALTERATIONS ensures that fuel will not be loaded into a cell without a control rod.

3/4.9.4 DECAY TIME

The 24 hour requirement for reactor subcriticality prior to fuel movement ensures that sufficient time has elapsed to allow the radioactive decay of the short lived fission products. During the 12 day interval used in definition 1.35a for RECENTLY IRRADIATED fuel, selected ESF systems are required to limit the radiological consequences of a fuel handling accident to within regulatory limits. These decay times are consistent with assumptions used in the accident analyses. . . .

3/4.9.5 COMMUNICATIONS

The requirement for communications capability ensures that refueling station personnel can be promptly informed of significant changes in the facility status or core reactivity condition during movement of fuel within the reactor pressure vessel.

3/4.9.6 REFUELING EQUIPMENT

The OPERABILITY requirements ensure that (1) only the main hoist of the refueling platform or the main hoist of the fuel handling platform will be used for handling fuel assemblies within the reactor pressure vessel, (2) platform hoists have sufficient load capacity for handling fuel assemblies and/or control rods, (3) the core internals and pressure vessel are protected from excessive lifting force in the event they are inadvertently engaged during lifting operations, and (4) a fuel bundle is protected from excessive lifting force in the event it becomes stuck during lifting operations.

MARKED-UP IMPROVED TECHNICAL SPECIFICATIONS PAGES

FUEL HANDLING ACCIDENT OPERATIONAL CONDITIONS

(GGNS PCOL 93/08)
(Information only)

Note: In this attachment, changes associated with this request are denoted by a circled marked-up change.

1.1 Definitions

LOGIC SYSTEM FUNCTIONAL TEST (continued)	be performed by means of any series of sequential, overlapping, or total system steps so that the entire logic system is tested.
MINIMUM CRITICAL POWER RATIO (MCPR)	The MCPR shall be the smallest critical power ratio (CPR) that exists in the core for each class of fuel. The CPR is that power in the assembly that is calculated by application of the appropriate correlation(s) to cause some point in the assembly to experience boiling transition, divided by the actual assembly operating power.
MODE	A MODE shall correspond to any one inclusive combination of mode switch position, average reactor coolant temperature, and reactor vessel head closure bolt tensioning specified in Table 1.1-1 with fuel in the reactor vessel.
OPERABLE—OPERABILITY	A system, subsystem, division, component, or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified safety function(s) and when all necessary attendant instrumentation, controls, normal or emergency electrical power, cooling and seal water, lubrication, and other auxiliary equipment that are required for the system, subsystem, division, component, or device to perform its specified safety function(s) are also capable of performing their related support function(s).
RATED THERMAL POWER (RTP)	RTP shall be a total reactor core heat transfer rate to the reactor coolant of 3833 MWt.
REACTOR PROTECTION SYSTEM (RPS) RESPONSE TIME	The RPS RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its RPS trip setpoint at the channel sensor until de-energization of the scram pilot valve solenoids. The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured.
RECENTLY IRRADIATED	RECENTLY IRRADIATED fuel shall be any nuclear fuel assembly that has occupied part of a critical reactor core within the previous 12 days.

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
J. (continued)	J.3.1 Initiate action to restore secondary containment to OPERABLE status. AND	Immediately
	J.3.2 Initiate action to restore one standby gas treatment (SGT) subsystem to OPERABLE status. AND	Immediately
	J.3.3 Initiate action to restore isolation capability in each required secondary containment penetration flow path not isolated.	Immediately
K. As required by Required Action C.1 and referenced in Table 3.3.6.1-1.	K.1 Isolate the affected penetration flow path(s). OR	Immediately
	K.2.1 ~~Suspend CORE ALTERATIONS.~~ ~~AND~~	~~Immediately~~
RECENTLY	~~K.2.2~~ Suspend movement of irradiated fuel assemblies in the primary and secondary containment. AND	Immediately
		(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
K. (continued)	K.2.2 Initiate action to suspend operations with a potential for draining the reactor vessel.	Immediately

Table 3.3.6.1-1 (page 2 of 5)
Primary Containment and Drywell Isolation Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	CONDITIONS REFERENCED FROM REQUIRED ACTION C.1	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
2. Primary Containment and Drywell Isolation (continued)					
b. Drywell Pressure – High	1,2,3	2[(b)]	H	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 1.43 psig
c. Reactor Vessel Water Level – Low Low Low, Level 1 (ECCS Divisions 1 and 2)	1,2,3	2[(b)]	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≥ -152.5 inches
d. Drywell Pressure – High (ECCS Divisions 1 and 2)	1,2,3	2	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 1.44 psig
e. Reactor Vessel Water Level – Low Low, Level 2 (HPCS)	1,2,3	4	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≥ -43.8 inches
f. Drywell Pressure – High (HPCS)	1,2,3	4	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.3 SR 3.3.6.1.6 SR 3.3.6.1.7	≤ 1.44 psig
g. Containment and Drywell Ventilation Exhaust Radiation – High	1,2,3	2[(b)]	F	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.7	≤ 4.0 mR/hr
	(c)	2	K	SR 3.3.6.1.1 SR 3.3.6.1.2 SR 3.3.6.1.5 SR 3.3.6.1.7	≤ 4.0 mR/hr
h. Manual Initiation	1,2,3	2[(b)]	G	SR 3.3.6.1.7	NA
	(c)	2	G	SR 3.3.6.1.7	NA

(continued)

(b) Also required to initiate the associated drywell isolation function.

(c) During ~~CORE ALTERATIONS~~, movement of irradiated fuel assemblies in primary or secondary containment and operations with a potential for draining the reactor vessel.

RECENTLY

Table 3.3.6.2-1 (page 1 of 1)
Secondary Containment Isolation Instrumentation

FUNCTION	APPLICABLE MODES AND OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Reactor Vessel Water Level – Low Low, Level 2	1,2,3,(a)	2	SR 3.3.6.2.1 SR 3.3.6.2.2 SR 3.3.6.2.3 SR 3.3.6.2.5 SR 3.3.6.2.6	≥ -43.8 inches
2. Drywell Pressure – High	1,2,3	2	SR 3.3.6.2.1 SR 3.3.6.2.2 SR 3.3.6.2.3 SR 3.3.6.2.5 SR 3.3.6.2.6	≤ 1.43 psig
3. Fuel Handling Area Ventilation Exhaust Radiation – High High	1,2,3, (a),(b)	2	SR 3.3.6.2.1 SR 3.3.6.2.2 SR 3.3.6.2.4 SR 3.3.6.2.6 SR 3.3.6.2.7	≤ 4.0 mR/hr
4. Fuel Handling Area Pool Sweep Exhaust Radiation – High High	1,2,3, (a),(b)	2	SR 3.3.6.2.1 SR 3.3.6.2.2 SR 3.3.6.2.4 SR 3.3.6.2.6 SR 3.3.6.2.7	≤ 35 mR/hr
5. Manual Initiation	1,2,3, (a),(b)	2	SR 3.3.6.2.6	NA

(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.

RECENTLY

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 (a)	2	B	SR 3.3.7.1.1 SR 3.3.7.1.2 SR 3.3.7.1.3 SR 3.3.7.1.5 SR 3.3.7.1.6	≥ -43.8 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 3.3.7.1.5 SR 3.3.7.1.6	≤ 1.43 psig
3.	Control Room Ventilation Radiation Monitors	1,2,3 (a),(b)	2	D	SR 3.3.7.1.1 SR 3.3.7.1.2 SR 3.3.7.1.4 SR 3.3.7.1.6	≤ 5 mR/hr
4.	Manual Initiation	1,2,3 (a),(b)	2	B	SR 3.3.7.1.6	NA

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

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

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
D. (continued)	D.3	Perform SR 3.6.1.3.5 for the resilient seal purge valves closed to comply with Required Action D.1.	Once per 92 days
E. Required Action and associated Completion Time of Condition A, B, C, or D not met in MODE 1, 2, or 3.	E.1 AND	Be in MODE 3.	12 hours
	E.2	Be in MODE 4.	36 hours
F. Required Action and associated Completion Time of Condition A, B, C, or D not met for PCIV(s) required to be OPERABLE during movement of irradiated fuel assemblies in the primary or secondary containment.	F.1	--------NOTE-------- LCO 3.0.3 is not applicable. ---------- Suspend movement of irradiated fuel assemblies in primary and secondary containment.	Immediately
G. Required Action and associated Completion Time of Condition A, B, C, or D not met for PCIV(s) required to be OPERABLE during CORE ALTERATIONS.	G.1	Suspend CORE ALTERATIONS.	Immediately

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
H. Required Action and associated Completion Time of Condition A, B, C, or D not met for PCIV(s) required to be OPERABLE during MODE 4 or 5 or during operations with a potential for draining the reactor vessel (OPDRVs).	H.1 Initiate action to suspend OPDRVs. OR H.2 Initiate action to restore valve(s) to OPERABLE status.	Immediately Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.1.3.1 ----------NOTES---------- 1. Only required to be met in MODES 1, 2, and 3. 2. Not required to be met when the 20 inch primary containment purge valves are open for pressure control, ALARA, or air quality considerations for personnel entry. Also, not required to be met during Surveillances or special testing on the purge system that requires the valves to be open. The 20 inch primary containment purge valves shall not be open with the 6 inch primary containment purge or the drywell vent and purge supply and exhaust lines open. ---------- Verify each 20 inch primary containment purge valve is closed.	31 days

(continued)

3.6 CONTAINMENT SYSTEMS

3.6.4.1 Secondary Containment

LCO 3.6.4.1 The secondary containment shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
During movement of ~~irradiated~~ RECENTLY fuel assemblies in the primary or secondary containment,
~~During CORE ALTERATIONS~~,
During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Secondary containment inoperable in MODE 1, 2, or 3.	A.1	Restore secondary containment to OPERABLE status.	4 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1	Be in MODE 3.	12 hours
	AND		
	B.2	Be in MODE 4.	36 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Secondary containment inoperable during movement of ~~irradiated~~ fuel assemblies in the primary or secondary containment, ~~during CORE ALTERATIONS,~~ or during OPDRVs.	C.1 --------NOTE-------- LCO 3.0.3 is not applicable. ---------- Suspend movement of ~~irradiated~~ fuel assemblies in the primary and secondary containment.	Immediately
	AND	
	C.2 ~~Suspend CORE ALTERATIONS.~~	~~Immediately~~
	~~AND~~	
	~~C.3~~ Initiate action to suspend OPDRVs.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.1	Verify all auxiliary building and enclosure building equipment hatches and blowout panels are closed and sealed.	31 days
SR 3.6.4.1.2	Verify each auxiliary building and enclosure building access door is closed, except when the access opening is being used for entry and exit.	31 days

(continued)

3.6 CONTAINMENT SYSTEMS

3.6.4.2 Secondary Containment Isolation Valves (SCIVs)

LCO 3.6.4.2 Each SCIV shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
During movement of recently irradiated fuel assemblies in the primary or secondary containment,
~~During CORE ALTERATIONS,~~
During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

----------NOTES----------

1. Penetration flow paths may be unisolated intermittently under administrative controls.
2. Separate Condition entry is allowed for each penetration flow path.
3. Enter applicable Conditions and Required Actions for systems made inoperable by SCIVs.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more penetration flow paths with one SCIV inoperable.	A.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve or damper, closed manual valve or damper, or blind flange. AND	8 hours (continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time of Condition A or B not met during movement of ~~irradiated~~ fuel assemblies in the primary or secondary containment, ~~during CORE ALTERATIONS,~~ or during OPDRVs.	D.1 --------NOTE-------- LCO 3.0.3 is not applicable. ---------- Suspend movement of ~~irradiated~~ fuel assemblies in the primary and secondary containment. AND	Immediately
	D.2 ~~Suspend CORE ALTERATIONS.~~ AND	~~Immediately~~
	~~D.3~~ Initiate action to suspend OPDRVs.	Immediately

3.6 CONTAINMENT SYSTEMS

3.6.4.3 Standby Gas Treatment (SGT) System

LCO 3.6.4.3 Two SGT subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
During movement of recently irradiated fuel assemblies in the primary or secondary containment.
~~During CORE ALTERATIONS.~~
During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One SGT subsystem inoperable.	A.1 Restore SGT subsystem to OPERABLE status.	7 days
B. Required Action and associated Completion Time of Condition A not met in MODE 1, 2, or 3.	B.1 Be in MODE 3. AND B.2 Be in MODE 4.	12 hours 36 hours
C. Required Action and associated Completion Time of Condition A not met during movement of recently irradiated fuel assemblies in the primary or secondary containment, ~~during CORE ALTERATIONS, or during OPDRVs.~~	----------NOTE---------- LCO 3.0.3 is not applicable. ---------- C.1 Place OPERABLE SGT subsystem in operation. OR	Immediately

(continued)

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.2.1 Suspend movement of ~~irradiated~~ fuel assemblies in the primary and secondary containment.	Immediately
	AND	
	C.2.2 ~~Suspend CORE ALTERATIONS.~~	~~Immediately~~
	~~AND~~	
	~~C.2.3~~ Initiate action to suspend OPDRVs.	Immediately
D. Two SGT subsystems inoperable in MODE 1, 2, or 3.	D.1 Enter LCO 3.0.3.	Immediately
E. Two SGT subsystems inoperable during movement of ~~irradiated~~ fuel assemblies in the primary or secondary containment ~~during CORE ALTERATIONS~~ or during OPDRVs.	E.1 Suspend movement of ~~irradiated~~ fuel assemblies in the primary and secondary containment.	Immediately
	AND	
	E.2 ~~Suspend CORE ALTERATIONS~~	~~Immediately~~
	~~AND~~	
	~~E.3~~ Initiate action to suspend OPDRVs.	Immediately

3.7 PLANT SYSTEM

3.7.3 Control Room Fresh Air (CRFA) System

LCO 3.7.3 Two CRFA subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
During movement of ~~irradiated~~ RECENTLY fuel assemblies in the primary or secondary containment.
~~During CORE ALTERATIONS.~~
During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One CRFA subsystem inoperable.	A.1	Restore CRFA subsystem to OPERABLE status.	7 days
B. Required Action and associated Completion Time of Condition A not met in MODE 1, 2, or 3.	B.1	Be in MODE 3.	12 hours
	AND		
	B.2	Be in MODE 4.	36 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Required Action and associated Completion Time of Condition A not met during movement of irradiated fuel assemblies in the primary or secondary containment, during CORE ALTERATIONS, or during OPDRVs.	----------NOTE---------- LCO 3.0.3 is not applicable. ---------- C.1 Place OPERABLE CRFA subsystem in isolation mode. OR C.2.1 Suspend movement of irradiated fuel assemblies in the primary and secondary containment. AND C.2.2 Suspend CORE ALTERATIONS. AND C.2.3 Initiate action to suspend OPDRVs.	Immediately Immediately Immediately Immediately
D. Two CRFA subsystems inoperable in MODE 1, 2, or 3.	D.1 Enter LCO 3.0.3.	Immediately

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Two CRFA subsystems inoperable during movement of ~~irradiated~~ fuel assemblies in the primary or secondary containment ~~during CORE ALTERATIONS~~, or during OPDRVs.	E.1 Suspend movement of ~~irradiated~~ fuel assemblies in the primary and secondary containment.	Immediately
	AND	
	E.2 ~~Suspend CORE ALTERATIONS.~~	~~Immediately~~
	~~AND~~	
	~~E.3~~ Initiate action to suspend OPDRVs.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.3.1	Operate each CRFA subsystem for ≥ 10 continuous hours with the heaters operating.	31 days
SR 3.7.3.2	Perform required CRFA filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.3.3	Verify each CRFA subsystem actuates on an actual or simulated initiation signal.	18 months

3.7 PLANT SYSTEMS

3.7.4 Control Room Air Conditioning (AC) System

LCO 3.7.4 Two control room AC subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
During movement of ~~irradiated~~ RECENTLY fuel assemblies in the primary or secondary containment.
~~During CORE ALTERATIONS.~~
During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One control room AC subsystem inoperable.	A.1	Restore control room AC subsystem to OPERABLE status.	30 days
B. Two control room AC subsystems inoperable.	B.1	Verify control room area temperature ≤ 90°F.	Once per 4 hours
	AND		
	B.2	Restore one control room AC subsystem to OPERABLE status.	7 days
C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, or 3.	C.1	Be in MODE 3.	12 hours
	AND		
	C.2	Be in MODE 4.	36 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time of Condition A not met during movement of ~~irradiated~~ fuel assemblies in the primary or secondary containment, ~~during CORE ALTERATIONS, or during OPDRVs.~~	----------NOTE---------- LCO 3.0.3 is not applicable. ----------	
	D.1 Place OPERABLE control room AC subsystem in operation.	Immediately
	OR	
	D.2.1 Suspend movement of ~~irradiated~~ fuel assemblies in the primary and secondary containment.	Immediately
	AND	
	D.2.2 ~~Suspend CORE ALTERATIONS.~~	~~Immediately~~
	AND	
	~~D.2.3~~ Initiate action to suspend OPDRVs.	Immediately

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Required Action and associated Completion Time of Condition B not met during movement of ~~irradiated~~ fuel assemblies in the primary or secondary containment ~~during CORE ALTERATIONS~~ or during OPDRVs.	----------NOTE---------- LCO 3.0.3 is not applicable. ----------	
	E.1 Suspend movement of ~~irradiated~~ fuel assemblies in the primary and secondary containment.	Immediately
	AND	
	E.2 ~~Suspend CORE ALTERATIONS.~~	~~Immediately~~
	~~AND~~ ~~E.3~~ Initiate action to suspend OPDRVs.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.4.1	Verify each control room AC subsystem has the capability to remove the assumed heat load.	18 months

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 3.8.8, "Distribution Systems—Shutdown"; and

b. One diesel generator (DG) capable of supplying one division of the Division 1 or 2 onsite Class 1E AC electrical power distribution subsystem(s) required by LCO 3.8.8; and

c. One qualified circuit, other than the circuit in LCO 3.8.2.a, between the offsite transmission network and the Division 3 onsite Class 1E electrical power distribution subsystem, or the Division 3 DG capable of supplying the Division 3 onsite Class 1E AC electrical power distribution subsystem, when the Division 3 onsite Class 1E electrical power distribution subsystem is required by LCO 3.8.8.

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

RECENTLY

ACTIONS

---NOTE---

LCO 3.0.3 is not applicable.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. LCO Item a not met.	---NOTE--- Enter applicable Condition and Required Actions of LCO 3.8.8, when any required division is de-energized as a result of Condition A.	
	A.1 Declare affected required feature(s) with no offsite power available from a required circuit inoperable.	Immediately
	OR	
	A.2.1 Suspend CORE ALTERATIONS.	Immediately
	AND	
	A.2.2 Suspend movement of irradiated fuel assemblies in the primary and secondary containment.	Immediately
	AND	
	A.2.3 Initiate action to suspend operations with a potential for draining the reactor vessel (OPDRVs).	Immediately
	AND	
		(continued)

RECENTLY

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. (continued)	A.2.4	Initiate action to restore required offsite power circuit to OPERABLE status.	Immediately
B. LCO Item b not met.	B.1	Suspend CORE ALTERATIONS.	Immediately
	AND		
	B.2	Suspend movement of irradiated fuel assemblies in primary and secondary containment., .	Immediately
	AND		
	B.3	Initiate action to suspend OPDRVs.	Immediately
	AND		
	B.4	Initiate action to restore required DG to OPERABLE status.	Immediately
C. LCO Item c not met.	C.1	Declare High Pressure Core Spray System inoperable.	72 hours

RECENTLY

3.8 ELECTRICAL POWER SYSTEMS

3.8.5 DC Sources—Shutdown

LCO 3.8.5 The following shall be OPERABLE:

a. One Class 1E DC electrical power subsystem capable of supplying one division of the Division 1 or 2 onsite Class 1E DC electrical power distribution subsystem(s) required by LCO 3.8.8, "Distribution Systems - Shutdown";

b. One Class 1E battery or battery charger, other than the DC electrical power subsystem in LCO 3.8.5.a, capable of supplying the remaining Division 1 or 2 onsite Class 1E DC electrical power distribution subsystem(s) when required by LCO 3.8.8; and

c. The Division 3 DC electrical power subsystem capable of supplying the Division 3 onsite Class 1E DC electrical power distribution subsystem, when the Division 3 onsite Class 1E DC electrical power distribution subsystem is required by LCO 3.8.8.

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

RECENTLY

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.2.2 Suspend movement of ~~irradiated~~ RECENTLY fuel assemblies in the primary and secondary containment.	Immediately
	AND	
	C.2.3 Initiate action to suspend operations with a potential for draining the reactor vessel.	Immediately
	AND	
	C.2.4 Initiate action to restore required DC electrical power subsystems to OPERABLE status.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.5.1	----------NOTE---------- The following SRs are not required to be performed: SR 3.8.4.4, SR 3.8.4.6, SR 3.8.4.7, and SR 3.8.4.8. ----------	
	For DC sources required to be OPERABLE, the following SRs are applicable: SR 3.8.4.1 SR 3.8.4.4 SR 3.8.4.7 SR 3.8.4.2 SR 3.8.4.5 SR 3.8.4.8. SR 3.8.4.3 SR 3.8.4.6	In accordance with applicable SRs

3.8 ELECTRICAL POWER SYSTEMS

3 3.8 Distribution Systems—Shutdown

LCO 3.8.8 The necessary portions of the Division 1, Division 2, and Division 3 AC and DC electrical power distribution subsystems shall be OPERABLE to support equipment required to be OPERABLE.

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

RECENTLY

ACTIONS

NOTE
LCO 3.0.3 is not applicable.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required AC or DC electrical power distribution subsystems inoperable.	A.1 Declare associated supported required feature(s) inoperable.	Immediately
	OR	
	A.2.1 Suspend CORE ALTERATIONS.	Immediately
	AND	
RECENTLY →	A.2.2 Suspend movement of irradiated fuel assemblies in the primary and secondary containment.	Immediately
	AND	
		(continued)

BASES

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY

2.g. Containment and Drywell Ventilation Exhaust Radiation—High (continued)

Four channels of Containment and Drywell Ventilation Exhaust—High Function are available and are required to be OPERABLE to ensure that no single instrument failure can preclude the isolation function.

The Allowable Values are chosen to promptly detect gross failure of the fuel cladding and to ensure offsite doses remain below 10 CFR 20 and 10 CFR 100 limits.

to isolate primary containment

The Function is required to be OPERABLE during ~~CORE ALTERATIONS,~~ operations with a potential for draining the reactor vessel (OPDRVs) and movement of ~~irradiated~~ fuel RECENTLY assemblies in the primary or secondary containment because the capability of detecting radiation releases due to fuel failures (due to fuel uncovery or dropped fuel assemblies) must be provided to ensure offsite dose limits are not exceeded.

Insert B33-148A

These Functions isolate the Group 7 valves.

2.h. Manual Initiation

The Manual Initiation push button channels introduce signals into the primary containment and drywell isolation logic that are redundant to the automatic protective instrumentation and provide manual isolation capability. There is no specific UFSAR safety analysis that takes credit for this Function. It is retained for the isolation function as required by the NRC in the plant licensing basis.

There are four push buttons for the logic, two manual initiation push buttons per trip system. There is no Allowable Value for this Function since the channels are mechanically actuated based solely on the position of the push buttons.

Four channels of the Manual Initiation Function are available and are required to be OPERABLE.

(continued)

INSERT B 3.3-148A

Due to reduced source terms in non-RECENTLY IRRADIATED fuel, this Function is only required to isolate primary containment during fuel handling accidents involving handling RECENTLY IRRADIATED fuel.

BASES

ACTIONS

J.1, J.2, J.3.1, J.3.2, and J.3.3 (continued

or other acceptable administrative controls to assure isolation capability) in each secondary containment penetration flow path not isolated that is assumed to be isolated to mitigate radioactivity releases. This may be performed as an administrative check, by examining logs or other information, to determine if the components are out of service for maintenance or other reasons. It is not necessary to perform the Surveillances needed to demonstrate the OPERABILITY of the components. If, however, any required component is inoperable, then it must be restored to OPERABLE status. In this case, the Surveillances may need to be performed to restore the component to OPERABLE status. Actions must continue until all required components are OPERABLE.

and

K.1, K.2.1, K.2.2 ~~and K.2.3~~

If the channel is not restored to OPERABLE status or placed in trip within the allowed Completion Time, the associated penetration flow path(s) should be isolated (Required Action K.1). Isolating the affected penetration flow path(s) accomplishes the safety function of the inoperable instrumentation. Alternately, the plant must be placed in a condition in which the LCO does not apply. If applicable, ~~CORE ALTERATIONS and~~ movement of irradiated fuel assemblies must be immediately suspended. Suspension of these (RECENTLY) activities shall not preclude completion of movement of a component to a safe condition. Also, if applicable, action must be immediately initiated to suspend OPDRVs to minimize the probability of a vessel draindown and subsequent potential for fission production release. Actions must continue until OPDRVs are suspended.

SURVEILLANCE REQUIREMENTS

As noted at the beginning of the SRs, the SRs for each Isolation Instrumentation Function are found in the SRs column of Table 3.3.6.1-1.

The Surveillances are also modified by a Note to indicate that when a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to 6 hours provided the associated Function maintains

(continued)

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY

3, 4. Fuel Handling Area Ventilation and Pool Sweep Exhaust Radiation—High High (continued)

channels of Fuel Handling Area Ventilation Exhaust Radiation—High High Function and four channels of Fuel Handling Area Pool Sweep Exhaust Radiation—High High Function are available and are required to be OPERABLE to ensure that no single instrument failure can preclude the isolation function.

The Allowable Values are chosen to promptly detect gross failure of the fuel cladding.

The Exhaust Radiation—High High Functions are required to be OPERABLE in MODES 1, 2, and 3 where considerable energy exists; thus, there is a probability of pipe breaks resulting in significant releases of radioactive steam and gas. In MODES 4 and 5, the probability and consequences of these events are low due to the RCS pressure and temperature limitations of these MODES; thus, these Functions are not required. In addition, the Functions are required to be OPERABLE during ~~CORE ALTERATIONS~~, OPDRVs, and movement of irradiated fuel assemblies in the primary or secondary containment because the capability of detecting radiation releases due to fuel failures (due to fuel uncovery or dropped fuel assemblies) must be provided to ensure that offsite dose limits are not exceeded.

RECENTLY

Insert B 3.3-177A

5. Manual Initiation

The Manual Initiation push button channels introduce signals into the secondary containment isolation logic that are redundant to the automatic protective instrumentation channels, and provide manual isolation capability. There is no specific UFSAR safety analysis that takes credit for this Function. It is retained for the secondary containment isolation instrumentation as required by the NRC approved licensing basis.

There are four push buttons for the logic, two manual initiation push buttons per trip system. There is no Allowable Value for this Function since the channels are mechanically actuated based solely on the position of the push buttons.

(continued)

INSERT B 3.3-177A

Due to reduced source terms in non-RECENTLY IRRADIATED fuel, this Function is only required to isolate secondary containment during fuel handling accidents involving handling RECENTLY IRRADIATED fuel.

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY

5. Manual Initiation (continued)

Four channels of the Manual Initiation Function are available and are required to be OPERABLE in MODES 1, 2, and 3 and during ~~CORE ALTERATIONS~~, OPDRVs, and movement of irradiated fuel assemblies in the secondary containment, since these are the MODES and other specified conditions in which the Secondary Containment Isolation automatic Functions are required to be OPERABLE.

RECENTLY

ACTIONS

A Note has been provided to modify the ACTIONS related to secondary containment isolation instrumentation channels. Section 1.3, Completion Times, specifies that once a Condition has been entered, subsequent divisions, subsystems, components, or variables expressed in the Condition discovered to be inoperable or not within limits will not result in separate entry into the Condition. Section 1.3 also specifies that Required Actions of the Condition continue to apply for each additional failure, with Completion Times based on initial entry into the Condition. However, the Required Actions for inoperable secondary containment isolation instrumentation channels provide appropriate compensatory measures for separate inoperable channels. As such, a Note has been provided that allows separate Condition entry for each inoperable secondary containment isolation instrumentation channel.

A.1

Because of the diversity of sensors available to provide isolation signals and the redundancy of the isolation design, an allowable out of service time of 12 hours or 24 hours, depending on the Function, has been shown to be acceptable (Refs. 3 and 4) to permit restoration of any inoperable channel to OPERABLE status. Functions that share common instrumentation with the RPS have a 12 hour allowed out of service time consistent with the time provided for the associated RPS instrumentation channels. This out of service time is only acceptable provided the associated Function is still maintaining isolation capability (refer to Required Action B.1 Bases). 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 A.1. Placing the

(continued)

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY

2. Drywell Pressure—High (continued)

(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 Ventilation Radiation Monitors

The Control Room 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 Ventilation Radiation Monitors Function consists of four independent monitors. Four channels of Control Room 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 Ventilation Radiation Monitors Function is required to be OPERABLE in MODES 1, 2, and 3, and during ~~CORE ALTERATIONS~~, OPDRVs, and movement of irradiated fuel in the 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.

RECENTLY

OPDRVs

Insert
B 3.3-217A

(continued)

INSERT B 3.3-217A

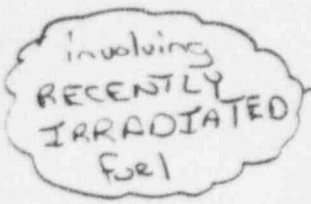
Due to reduced source terms in non-RECENTLY IRRADIATED fuel, this Function is only required to initiate the CRFA System during fuel handling accidents involving handling RECENTLY IRRADIATED fuel.

BASES (continued)

APPLICABLE SAFETY ANALYSES

The PCIVs LCO was derived from the assumptions related to minimizing the loss of reactor coolant inventory, and establishing the primary containment boundary during major accidents. As part of the primary containment boundary, PCIV OPERABILITY supports leak tightness of primary containment. Therefore, the safety analysis of any event requiring isolation of primary containment is applicable to this LCO.

The DBAs that result in a release of radioactive material for which the consequences are mitigated by PCIVs are a loss of coolant accident (LOCA), a main steam line break (MSLB), and a fuel handling accident inside primary containment (Refs. 1 and 2). In the analysis for each of these accidents, it is assumed that PCIVs are either closed or function to close within the required isolation time following event initiation. This ensures that potential paths to the environment through PCIVs are minimized. Of the events analyzed in Reference 1, the LOCA is the most limiting event due to radiological consequences. An analysis of the affect of the purge valves being open at the initiation of a LOCA has been performed. This condition was found to result in dose contributions of a small fraction of 10 CFR 100. It is assumed that the primary containment is isolated such that release of fission products to the environment is controlled.



PCIVs satisfy Criterion 3 of the NRC Policy Statement.

LCO

PCIVs form a part of the primary containment boundary and some also form a part of the RCPB. The PCIV safety function is related to minimizing the loss of reactor coolant inventory, and establishing the primary containment boundary during a DBA.

The power operated isolation valves are required to have isolation times within limits. Additionally, power operated automatic valves are required to actuate on an automatic isolation signal.

The normally closed PCIVs are considered OPERABLE when, as applicable, manual valves are closed or open in accordance with appropriate administrative controls, automatic valves are de-activated and secured in their closed position, or blind flanges are in place. The valves covered by this LCO

(continued)

LCO (continued)

are listed with their associated stroke times in the applicable plant procedures. Purge valves with resilient seals, MSIVs, and hydrostatically tested valves must meet additional leakage rate requirements. Other PCIV leakage rates are addressed by LCO 3.6.1.1, "Primary Containment," as Type B or C testing.

This LCO provides assurance that the PCIVs will perform their designed safety functions to minimize the loss of reactor coolant inventory, and establish the primary containment boundary during accidents.

APPLICABILITY

In MODES 1, 2, and 3, a DBA could cause a release of radioactive material to primary containment. In MODES 4 and 5, the probability and consequences of these events are reduced due to the pressure and temperature limitations of these MODES. Therefore, most PCIVs are not required to be OPERABLE. Certain valves are required to be OPERABLE, however, to prevent a potential flow path (the RHR Shutdown Cooling System suction from the reactor vessel) from lowering reactor vessel level to the top of the fuel. These valves are those whose associated isolation instrumentation is required to be OPERABLE according to LCO 3.3.6.1, "Primary Containment and Drywell Isolation Instrumentation," Function 5.b. Additional valves are required to be OPERABLE to prevent release of radioactive material during a postulated fuel handling accident involving RECENTLY IRRADIATED fuel. These valves are those whose associated isolation instrumentation is required to be OPERABLE according to LCO 3.3.6.1, "Function 2.g." (This does not include the valves that isolate the associated instrumentation.)

ACTIONS

The ACTIONS are modified by a Note allowing penetration flow path(s) to be unisolated intermittently under administrative controls. These controls consist of stationing a dedicated operator at the controls of the valve, who is in continuous communication with the control room. In this way, the penetration can be rapidly isolated when a need for primary containment isolation is indicated.

A second Note has been added to provide clarification that, for the purpose of this LCO, separate Condition entry is allowed for each penetration flow path. This is acceptable, since the Required Actions for each Condition provide

(continued)

ACTIONS

D.1, D.2, and D.3 (continued)

verification that those isolation devices outside primary containment and potentially capable of being mispositioned are in the correct position. For the isolation devices inside primary containment, the time period specified as "prior to entering MODE 2 or 3, from MODE 4 if not performed within the previous 92 days" is based on engineering judgment and is considered reasonable in view of administrative controls that will ensure that isolation device misalignment is an unlikely possibility.

For the primary containment purge valve with resilient seal that is isolated in accordance with Required Action D.1, SR 3.6.1.3.5 must be performed at least once every 92 days. This provides assurance that degradation of the resilient seal is detected and confirms that the leakage rate of the primary containment purge valve does not increase during the time the penetration is isolated. The normal Frequency for SR 3.6.1.3.5 is 184 days. Since more reliance is placed on a single valve while in this Condition, it is prudent to perform the SR more often. Therefore, a Frequency of once per 92 days was chosen and has been shown acceptable based on operating experience.

E.1 and E.2

If any Required Action and associated Completion Time cannot be met in MODE 1, 2, or 3, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

F.1, G.1, H.1, and H.2

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. If applicable, ~~CORE ALTERATIONS and~~ movement of ~~irradiated~~ RECENTLY fuel assemblies in the primary and

(continued)

BASES

ACTIONS

F.1, G.1, ~~H.1,~~ and ~~H.2~~ (continued)

secondary containment must be immediately suspended. Suspension of these activities shall not preclude completion of movement of a component to a safe condition. Also, if applicable, action must be immediately initiated to suspend operations with a potential for draining the reactor vessel (OPDRVs) to minimize the probability of a vessel draindown and subsequent potential for fission product release. Actions must continue until OPDRVs are suspended. If suspending the OPDRVs would result in closing the residual heat removal (RHR) shutdown cooling isolation valves, an alternative Required Action is provided to immediately initiate action to restore the valves to OPERABLE status. This allows RHR to remain in service while actions are being taken to restore the valve.

SURVEILLANCE REQUIREMENTS

SR 3.6.1.3.1

This SR verifies that the 20 inch primary containment purge valves are closed as required or, if open, open for an allowable reason. If a purge valve is open in violation of this SR, the valve is considered inoperable. If the inoperable valve is not otherwise known to have excessive leakage when closed, it is not considered to have leakage outside of the limits.

The SR is also modified by a Note (Note 1) stating that primary containment purge valves are only required to be closed in MODES 1, 2, and 3. At times other than MODE 1, 2, or 3 when the purge valves are required to be capable of closing (e.g., during movement of ~~irradiated~~ RECENTLY fuel assemblies) pressurization concerns are not present and the purge valves are allowed to be open (automatic isolation capability would be required by SR 3.6.1.3.4 and SR 3.6.1.3.7).

The SR is modified by a Note (Note 2) stating that the SR is not required to be met when the purge valves are open for the stated reasons. The Note states that these valves may be opened for pressure control, ALARA, or air quality considerations for personnel entry, or for Surveillances, or special testing of the purge system that require the valves to be open (e.g., testing of the containment and drywell ventilation radiation monitors). These primary containment

(continued)

SURVEILLANCE REQUIREMENTS

SR 3.6.1.3.5 (continued)

primary containment and the environment), a Frequency of 184 days was established. Additionally, this SR must be performed within 92 days after opening the valve. The 92 day Frequency was chosen recognizing that cycling the valve could introduce additional seal degradation (beyond that which occurs to a valve that has not been opened). Thus, decreasing the interval (from 184 days) is a prudent measure after a valve has been opened.

The SR is modified by a Note stating that the primary containment purge valves are only required to meet leakage rate testing requirements in MODES 1, 2, and 3. If a LOCA inside primary containment occurs in these MODES, purge valve leakage must be minimized to ensure offsite radiological release is within limits. At other times when the purge valves are required to be capable of closing (e.g., during handling of irradiated fuel), pressurization concerns are not present and the purge valves are not required to meet any specific leakage criteria.

RECENTLY

SR 3.6.1.3.6

Verifying that the full closure isolation time of each MSIV is within the specified limits is required to demonstrate OPERABILITY. The full closure isolation time test ensures that the MSIV will isolate in a time period that does not exceed the times assumed in the DBA analyses. The Frequency of this SR is in accordance with the Inservice Testing Program.

SR 3.6.1.3.7

Automatic PCIVs close on a primary containment isolation signal to prevent leakage of radioactive material from primary containment following a DBA. This SR ensures that each automatic PCIV will actuate to its isolation position on a primary containment isolation signal. The LOGIC SYSTEM FUNCTIONAL TEST in SR 3.3.6.1.7 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

(continued)

B 3.6 CONTAINMENT SYSTEMS

B 3.6.4.1 Secondary Containment

BASES

BACKGROUND

The function of the secondary containment is to contain, dilute, and hold up fission products that may leak from primary containment following a Design Basis Accident (DBA). In conjunction with operation of the Standby Gas Treatment (SGT) System and closure of certain valves whose lines penetrate the secondary containment, the secondary containment is designed to reduce the activity level of the fission products prior to release to the environment and to isolate and contain fission products that are released during certain operations that take place inside primary containment (e.g., during operations with a potential for draining the reactor vessel (OPDRVs), ~~during CORE ALTERATIONS~~, or during movement of ~~irradiated~~ RECENTLY fuel assemblies in the primary or secondary containment), when primary containment is not required to be OPERABLE, or that take place outside primary containment.

The secondary containment is a structure that completely encloses the primary containment and those components that may be postulated to contain primary system fluid. This structure forms a control volume that serves to hold up and dilute the fission products. It is possible for the pressure in the control volume to rise relative to the environmental pressure (e.g., due to pump/motor heat load additions). To prevent ground level exfiltration while allowing the secondary containment to be designed as a conventional structure, the secondary containment requires support systems to maintain the control volume pressure at less than the external pressure.

The isolation devices for the penetrations in the secondary containment boundary are a part of the secondary containment barrier. To maintain this barrier:

a. All secondary containment penetrations required to be closed during accident conditions are either:

   1. capable of being closed by an OPERABLE secondary containment automatic isolation system, or

(continued)

BASES

BACKGROUND (continued)

2. closed by a manual valve, blind flange, rupture disk, or de-activated automatic valve or damper secured in a closed position, except as provided in LCO 3.6.4.2, "Secondary Containment Isolation Valves (SCIVs)";

b. All auxiliary building and enclosure building equipment hatches and blowout panels are closed and sealed;

c. The door in each access to the auxiliary building and enclosure building is closed, except for normal entry and exit;

d. The sealing mechanism, e.g., welds, bellows, or O-rings, associated with each secondary containment penetration is OPERABLE; and

e. The standby gas treatment system is OPERABLE, except as provided in LCO 3.6.4.3, "Standby Gas Treatment System."

APPLICABLE SAFETY ANALYSES

There are three principal accidents for which credit is taken for secondary containment OPERABILITY. These are a LOCA (Ref. 1), a fuel handling accident involving recently irradiated fuel inside primary containment (Ref. 2), and a fuel handling accident in the auxiliary building (Ref. 3). The secondary containment performs no active function in response to each of these limiting events; however, its leak tightness is required to ensure that the release of radioactive materials from the primary containment is restricted to those leakage paths and associated leakage rates assumed in the accident analysis, and that fission products entrapped within the secondary containment structure will be treated by the SGT System prior to discharge to the environment.

Secondary containment satisfies Criterion 3 of the NRC Policy Statement.

LCO

An OPERABLE secondary containment provides a control volume into which fission products that bypass or leak from primary containment, or are released from the reactor coolant pressure boundary components located in secondary containment, can be diluted and processed prior to release

(continued)

BASES

LCO (continued)

to the environment. For the secondary containment to be considered OPERABLE, it must have adequate leak tightness to ensure that the required vacuum can be established and maintained.

APPLICABILITY

In MODES 1, 2, and 3, a LOCA could lead to a fission product release to primary containment that leaks to secondary containment. Therefore, secondary containment OPERABILITY is required during the same operating conditions that require primary containment OPERABILITY.

In MODES 4 and 5, the probability and consequences of the LOCA are reduced due to the pressure and temperature limitations in these MODES. Therefore, maintaining secondary containment OPERABLE is not required in MODE 4 or 5 to ensure a control volume, except for other situations for which significant releases of radioactive material can be postulated, such as during operations with a potential for draining the reactor vessel (OPDRVs), during CORE ALTERATIONS, or during movement of irradiated fuel assemblies in the primary or secondary containment. (RECENTLY) Insert B 3.6-84A

ACTIONS

A.1

If secondary containment is inoperable, it must be restored to OPERABLE status within 4 hours. The 4 hour Completion Time provides a period of time to correct the problem that is commensurate with the importance of maintaining secondary containment during MODES 1, 2, and 3. This time period also ensures that the probability of an accident (requiring secondary containment OPERABILITY) occurring during periods where secondary containment is inoperable is minimal.

B.1 and B.2

If the secondary containment cannot be restored to OPERABLE status within the required Completion Time, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

(continued)

INSERT B 3.6-84A

Due to reduced source terms in non-RECENTLY IRRADIATED fuel, Secondary containment is only required during fuel handling accidents involving handling RECENTLY IRRADIATED fuel.

BASES

ACTIONS (continued)

C.1, C.2, ~~and C.3~~

Movement of irradiated fuel assemblies in the primary or secondary containment, ~~CORE ALTERATIONS~~, and OPDRVs can be postulated to cause fission product release to the secondary containment. In such cases, the secondary containment is the only barrier to release of fission products to the environment. CORE ALTERATIONS and movement of irradiated fuel assemblies must be immediately suspended if the secondary containment is inoperable.

Suspension of these activities shall not preclude completing an action that involves moving a component to a safe position. Also, action must be immediately initiated to suspend OPDRVs to minimize the probability of a vessel draindown and subsequent potential for fission product release. Actions must continue until OPDRVs are suspended.

Required Action C.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 3.6.4.1.1 and SR 3.6.4.1.2

Verifying that Auxiliary Building and Enclosure Building equipment hatches, blowout panels, 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. 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)

BACKGROUND (continued)

Analyses have shown that in addition to building leakage paths, the Standby Gas Treatment System (SGTS) has the capacity to maintain secondary containment negative pressure assuming the failure of all nonqualified lines 2 inches and smaller or with the failure of a single nonisolated line as large as 4 inches. As a result, the following lines which penetrate the secondary containment and terminate there (i.e., they do not continue through the secondary containment and also penetrate the primary containment) are provided with a single isolation valve, rather than two, at the secondary penetration:

a. 4-inch makeup water supply line

b. 3-inch domestic water supply line

c. 4-inch RHR backwash line

d. 3-inch backwash transfer pump discharge line

e. 3-inch floor and equipment drain line

The single isolation valve for each of the above lines is an air-operated valve which fails closed; in addition, each operator is provided with redundant solenoid valves which receive actuation signals from redundant sources. In this manner, it is ensured that, given any single failure, only one of the above lines will be nonisolated, which as stated above is within the capacity of the SGTS.

APPLICABLE SAFETY ANALYSES

The SCIVs must be OPERABLE to ensure the secondary containment barrier to fission product releases is established. The principal accidents for which the secondary containment boundary is required are a loss of coolant accident (Ref. 1), a fuel handling accident involving RECENTLY IRRADIATED FUEL inside primary containment (Ref. 3), and a fuel handling accident in the auxiliary building (Ref. 4). The secondary containment performs no active function in response to each of these limiting events, but the boundary established by SCIVs is required to ensure that leakage from the primary containment is processed by the Standby Gas Treatment (SGT) System before being released to the environment.

(continued)

BASES

APPLICABLE SAFETY ANALYSES (continued)

Maintaining SCIVs OPERABLE with isolation times within limits ensures that fission products will remain trapped inside secondary containment so that they can be treated by the SGT System prior to discharge to the environment.

SCIVs satisfy Criterion 3 of the NRC Policy Statement.

LCO

SCIVs form a part of the secondary containment boundary. The SCIV safety function is related to control of offsite radiation releases resulting from DBAs.

The power operated isolation dampers and valves are considered OPERABLE when their isolation times are within limits. Additionally, power operated automatic dampers and valves are required to actuate on an automatic isolation signal.

The normally closed isolation dampers and valves, rupture disks, or blind flanges are considered OPERABLE when manual dampers and valves are closed or open in accordance with appropriate administrative controls, automatic dampers and valves are de-activated and secured in their closed position, rupture disks or blind flanges are in place. The SCIVs covered by this LCO, along with their associated stroke times, if applicable, are listed in the applicable plant procedures.

APPLICABILITY

In MODES 1, 2, and 3, a DBA could lead to a fission product release to the primary containment that leaks to the secondary containment. Therefore, OPERABILITY of SCIVs is required.

In MODES 4 and 5, the probability and consequences of these events are reduced due to pressure and temperature limitations in these MODES. Therefore, maintaining SCIVs OPERABLE is not required in MODE 4 or 5, except for other situations under which significant releases of radioactive material can be postulated, such as during operations with a potential for draining the reactor vessel (OPDRVs), ~~during CORE ALTERATIONS,~~ or during movement of irradiated fuel assemblies. Moving irradiated fuel assemblies in the primary or secondary containment may also occur in MODES 1, 2, and 3.

RECENTLY

Insert B 3.6-89A

(continued)

INSERT B 3.6-89A

Due to reduced source terms in non-RECENTLY IRRADIATED fuel, the SCIVs are only required during fuel handling accidents involving handling RECENTLY IRRADIATED fuel.

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.

and

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. If applicable, ~~CORE ALTERATIONS and~~ the movement of irradiated fuel assemblies in the primary and secondary containment must be immediately suspended. Suspension of these activities shall not preclude completion of movement of a component to a safe position. Also, if applicable, action must be immediately initiated to suspend OPDRVs in order to minimize the probability of a vessel draindown and the subsequent potential for fission product release. Actions must continue until OPDRVs are suspended.

RECENTLY

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.

RECENTLY

SURVEILLANCE REQUIREMENTS

SR 3.6.4.2.1

This SR verifies each secondary containment isolation manual valve, damper, rupture disk, 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 SCIV manipulation. Rather, it involves verification that those SCIVs in secondary containment that are capable of being mispositioned are in the correct position.

Since these SCIVs are readily accessible to personnel during normal unit operation and verification of their position is

(continued)

BASES

BACKGROUND (continued)

humidity of the airstream to less than 70% (Ref. 2). The prefilter removes large particulate matter, while the HEPA filter is provided to remove fine particulate matter and protect the charcoal from fouling. The charcoal adsorber removes gaseous elemental iodine and organic iodides, and the final HEPA filter is provided to collect any carbon fines exhausted from the charcoal adsorber.

The SGT System automatically starts and operates in response to actuation signals indicative of conditions or an accident that could require operation of the system. Following initiation, both enclosure building recirculation fans and both charcoal filter train fans start. SGT System flows are controlled by modulating inlet vanes installed on the charcoal filter train exhaust fans and two position volume control dampers installed in branch ducts to individual regions of the secondary containment.

APPLICABLE SAFETY ANALYSES

The design basis for the SGT System is to mitigate the consequences of a loss of coolant accident and fuel handling accidents involving recently irradiated fuel (Ref. 2). For all events analyzed, the SGT System is shown to be automatically initiated to reduce, via filtration and adsorption, the radioactive material released to the environment.

The SGT System satisfies Criterion 3 of the NRC Policy Statement.

LCO

Following a DBA, a minimum of one SGT subsystem is required to maintain the secondary containment at a negative pressure with respect to the environment and to process gaseous releases. Meeting the LCO requirements for two operable subsystems ensures operation of at least one SGT subsystem in the event of a single active failure.

APPLICABILITY

In MODES 1, 2, and 3, a DBA could lead to a fission product release to primary containment that leaks to secondary containment. Therefore, SGT System OPERABILITY is required during these MODES.

(continued)

BASES

APPLICABILITY (continued)

In MODES 4 and 5, the probability and consequences of these events are reduced due to the pressure and temperature limitations in these MODES. Therefore, maintaining the SGT System OPERABLE is not required in MODE 4 or 5, except for other situations under which significant releases of radioactive material can be postulated, such as during operations with a potential for draining the reactor vessel (OPDRVs) ~~during CORE ALTERATIONS, or during~~ movement of ~~irradiated~~ fuel assemblies in the primary or secondary containment.

RECENTLY

Insert B 3.6-97A

ACTIONS

A.1

With one SGT subsystem inoperable, the inoperable subsystem must be restored to OPERABLE status within 7 days. In this Condition, the remaining OPERABLE SGT subsystem is adequate to perform the required radioactivity release control function. However, the overall system reliability is reduced because a single failure in the OPERABLE subsystem could result in the radioactivity release control function not being adequately performed. The 7 day Completion Time is based on consideration of such factors as the availability of the OPERABLE redundant SGT subsystem and the low probability of a DBA occurring during this period.

B.1 and B.2

If the SGT subsystem cannot be restored to OPERABLE status within the required Completion Time in MODE 1, 2, or 3, the plant must be brought to a MODE in which the LCO does not apply. To achieve this status, the plant must be brought to at least MODE 3 within 12 hours and to MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required plant conditions from full power conditions in an orderly manner and without challenging plant systems.

and

C.1, C.2.1, C.2.2, ~~and C.2.3~~

RECENTLY

During movement of ~~irradiated~~ fuel assemblies in the primary or secondary containment, ~~during CORE ALTERATIONS,~~ or during OPDRVs, when Required Action A.1 cannot be completed within the required Completion Time, the OPERABLE SGT subsystem

(continued)

INSERT B 3.6-97A

Due to reduced source terms in non-RECENTLY IRRADIATED fuel, the SGT System is only required during fuel handling accidents involving handling RECENTLY IRRADIATED fuel.

ACTIONS C.1, C.2.1, C.2.2, ~~and C.2.3~~ (continued)

should be immediately placed in operation. This Required Action ensures that the remaining subsystem is OPERABLE, that no failures that could prevent automatic actuation have occurred, and that any other failure would be readily detected.

An alternative to Required Action C.1 is to immediately suspend activities that represent a potential for releasing radioactive material to the secondary containment, thus placing the unit in a Condition that minimizes risk. If applicable, ~~CORE ALTERATIONS and~~ movement of irradiated fuel assemblies must be immediately suspended. Suspension of these activities shall not preclude completion of movement of a component to a safe position. Also, if applicable, action must be immediately initiated to suspend OPDRVs to minimize the probability of a vessel draindown and subsequent potential for fission product release. This action should be chosen if the OPDRVs could be impacted by a loss of offsite power. Action must continue until OPDRVs are suspended.

The Required Actions of Condition C have 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.

D.1

If both SGT subsystems are inoperable in MODE 1, 2, or 3, the SGT System may not be capable of supporting the required radioactivity release control function. Therefore, LCO 3.0.3 must be entered immediately.

E.1, E.2, ~~and E.3~~

When two SGT subsystems are inoperable, if applicable, ~~CORE ALTERATIONS and~~ movement of irradiated fuel assemblies in the primary and secondary containment must be immediately

(continued)

BASES

ACTIONS

E.1 and E.2 ~~and E.3~~ (continued)

suspended. Suspension of these activities shall not preclude completion of movement of a component to a safe position. Also, if applicable, actions must be immediately initiated to suspend OPDRVs to minimize the probability of a vessel draindown and subsequent potential for fission product release. Action must continue until OPDRVs are suspended.

SURVEILLANCE REQUIREMENTS

SR 3.6.4.3.1

Operating each SGT subsystem for ≥ 10 continuous hours ensures that both subsystems are OPERABLE and that all associated controls are functioning properly. It also ensures that blockage, fan or motor failure, or excessive vibration can be detected for corrective action. Operation with the heaters on (automatic heater cycling to maintain temperature) for ≥ 10 continuous hours every 31 days eliminates moisture on the adsorbers and HEPA filters. The 31 day Frequency was developed in consideration of the known reliability of fan motors and controls and the redundancy available in the system.

SR 3.6.4.3.2

This SR verifies that the required SGT filter testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The SGT System filter tests are in accordance with Regulatory Guide 1.52 (Ref. 3). The VFTP includes testing HEPA filter performance, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specified test frequencies and additional information are discussed in detail in the VFTP.

SR 3.6.4.3.3

This SR requires verification that each SGT subsystem starts upon receipt of an actual or simulated initiation signal.

(continued)

BASES

involving RECENTLY IRRADIATED fuel

APPLICABLE SAFETY ANALYSES (continued)

is assumed to operate following a loss of coolant accident, main steam line break, fuel handling accident, and control rod drop accident. The radiological doses to control room personnel as a result of the various DBAs are summarized in Reference 4. No single active or passive failure will cause the loss of outside or recirculated air from the control room.

The CRFA System satisfies Criterion 3 of the NRC Policy Statement.

LCO

Two redundant subsystems of the CRFA System are required to be OPERABLE to ensure that at least one is available, assuming a single failure disables the other subsystem. Total system failure could result in a failure to meet the dose requirements of GDC 19 in the event of a DBA.

The CRFA System is considered OPERABLE when the individual components necessary to control operator exposure are OPERABLE in both subsystems. A subsystem is considered OPERABLE when its associated:

a. Fan is OPERABLE;

b. HEPA filter and charcoal adsorber are not excessively restricting flow and are capable of performing their filtration functions; and

c. Heater, demister, ductwork, valves, and dampers are OPERABLE, and air circulation can be maintained.

In addition, the control room boundary must be maintained, including the integrity of the walls, floors, ceilings, ductwork, and access doors.

APPLICABILITY

In MODES 1, 2, and 3, the CRFA System must be OPERABLE to control operator exposure during and following a DBA, since the DBA could lead to a fission product release.

In MODES 4 and 5, the probability and consequences of a DBA are reduced due to the pressure and temperature limitations in these MODES. Therefore, maintaining the CRFA System

(continued)

BASES

APPLICABILITY (continued)

OPERABLE is not required in MODE 4 or 5, except for the following situations under which significant radioactive releases can be postulated:

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

~~b. During CORE ALTERATIONS; and~~ RECENTLY

b. During movement of irradiated fuel assemblies in the primary or secondary containment. ← INSERT B 3.7-13A

ACTIONS

A.1

With one CRFA subsystem inoperable, the inoperable CRFA subsystem must be restored to OPERABLE status within 7 days. With the unit in this condition, the remaining OPERABLE CRFA subsystem is adequate to perform control room radiation protection. However, the overall reliability is reduced because a single failure in the OPERABLE subsystem could result in loss of CRFA System function. The 7 day Completion Time is based on the low probability of a DBA occurring during this time period, and that the remaining subsystem can provide the required capabilities.

B.1 and B.2

In MODE 1, 2, or 3, if the inoperable CRFA subsystem cannot be restored to OPERABLE status within the associated Completion Time, the unit must be placed in a MODE that minimizes risk. To achieve this status, the unit must be placed in at least MODE 3 within 12 hours and in MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

and

C.1, C.2.1, C.2.2 ~~, and C.2.3~~

RECENTLY

The Required Actions of Condition C are modified by a Note indicating that LCO 3.0.3 does not apply. If moving irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations.

(continued)

INSERT B 3.7-13A

Due to reduced source terms in non-RECENTLY IRRADIATED fuel, the CRFA System is only required during fuel handling accidents involving handling RECENTLY IRRADIATED fuel.

BASES

ACTIONS

C.1, C.2.1, C.2.2, ~~and C.2.3~~ (continued)

Therefore, inability to suspend movement of irradiated fuel assemblies is not sufficient reason to require a reactor shutdown.

During movement of irradiated fuel assemblies in the primary or secondary containment, ~~during CORE ALTERATIONS,~~ or during OPDRVs, if the inoperable CRFA subsystem cannot be restored to OPERABLE status within the required Completion Time, the OPERABLE CRFA subsystem may be placed in the isolation mode. This action ensures that the remaining subsystem is OPERABLE, that no failures that would prevent automatic actuation will occur, and that any active failure will be readily detected.

An alternative to Required Action C.1 is to immediately suspend activities that present a potential for releasing radioactivity that might require isolation of the control room. This places the unit in a condition that minimizes risk.

If applicable, ~~CORE ALTERATIONS and~~ movement of irradiated fuel assemblies in the primary and secondary containment must be suspended immediately. Suspension of these activities shall not preclude completion of movement of a component to a safe position. Also, if applicable, actions must be initiated immediately to suspend OPDRVs to minimize the probability of a vessel draindown and subsequent potential for fission product release. Actions must continue until the OPDRVs are suspended.

D.1

If both CRFA subsystems are inoperable in MODE 1, 2, or 3, the CRFA System may not be capable of performing the intended function and the unit is in a condition outside of the accident analyses. Therefore, LCO 3.0.3 must be entered immediately.

E.1, E.2, ~~and E.3~~

During movement of irradiated fuel assemblies in the primary or secondary containment, ~~during CORE ALTERATIONS,~~ or during

(continued)

BASES

ACTIONS

E.1, E.2, and E.3 (continued)

OPDRVs, with two CRFA subsystems inoperable, action must be taken immediately to suspend activities that present a potential for releasing radioactivity that might require isolation of the control room. This places the unit in a condition that minimizes risk.

If applicable, ~~CORE ALTERATIONS and~~ movement of recently irradiated fuel assemblies in the primary and secondary containment must be suspended immediately. Suspension of these activities shall not preclude completion of movement of a component to a safe position. If applicable, actions must be initiated immediately to suspend OPDRVs to minimize the probability of a vessel draindown and subsequent potential for fission product release. Actions must continue until the OPDRVs are suspended.

SURVEILLANCE REQUIREMENTS

SR 3.7.3.1

This SR verifies that a subsystem in a standby mode starts on demand and continues to operate. Standby systems should be checked periodically to ensure that they start and function properly. As the environmental and normal operating conditions of this system are not severe, testing each subsystem once every month provides an adequate check on this system. Monthly heater operation dries out any moisture accumulated in the charcoal from humidity in the ambient air. Systems with heaters must be operated for $\geq$ 10 continuous hours with the heaters energized. Furthermore, the 31 day Frequency is based on the known reliability of the equipment and the two subsystem redundancy available.

SR 3.7.3.2

This SR verifies that the required CRFA testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The CRFA filter tests are in accordance with Regulatory Guide 1.52 (Ref. 5). The VFTP includes testing HEPA filter performance, charcoal adsorber efficiency, minimum system flow rate, and the physical properties of the activated charcoal (general use and following specific operations). Specific test frequencies and additional information are discussed in detail in the VFTP.

(continued)

BASES (continued)

LCO

Two independent and redundant subsystems of the Control Room AC System are required to be OPERABLE to ensure that at least one is available, assuming a single failure disables the other subsystem. Total system failure could result in the equipment operating temperature exceeding limits.

The Control Room AC System is considered OPERABLE when the individual components necessary to maintain the control room temperature are OPERABLE in both subsystems. These components include the cooling coils, fans, chillers, compressors, ductwork, dampers, and associated instrumentation and controls. The heating coils are not required for Control Room AC System OPERABILITY.

APPLICABILITY

In MODE 1, 2, or 3, the Control Room AC System must be OPERABLE to ensure that the control room temperature will not exceed equipment OPERABILITY limits.

In MODES 4 and 5, the probability and consequences of a Design Basis Accident are reduced due to the pressure and temperature limitations in these MODES. Therefore, maintaining the Control Room AC System OPERABLE is not required in MODE 4 or 5, except for the following situations under which significant radioactive releases can be postulated:

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

~~b. During CORE ALTERATIONS; and~~ RECENTLY

c. During movement of irradiated fuel assemblies in the primary or secondary containment. INSERT B 3.7-18A

ACTIONS

A.1

With one control room AC subsystem inoperable, the inoperable control room AC subsystem must be restored to OPERABLE status within 30 days. With the unit in this condition, the remaining OPERABLE control room AC subsystem is adequate to perform the control room air conditioning function. However, the overall reliability is reduced because a single failure in the OPERABLE subsystem could result in loss of the control room air conditioning

(continued)

INSERT B 3.7-18A

Due to reduced source terms in non-RECENTLY IRRADIATED fuel, the Cotrol Room AC System is only required during fuel handling accidents involving handling RECENTLY IRRADIATED fuel. (Reference 3).

BASES

ACTIONS

A.1 (continued)

function. The 30 day Completion Time is based on the low probability of an event occurring requiring control room isolation, the consideration that the remaining subsystem can provide the required protection, and the availability of alternate cooling methods.

B.1 and B.2

If both control room AC subsystems are inoperable, the Control Room AC System may not be capable of performing its intended function. Therefore, the control room area temperature is required to be monitored to ensure that temperature is being maintained low enough that equipment in the control room is not adversely affected. With the control room temperature being maintained within the temperature limit, 7 days is allowed to restore a control room AC subsystem to OPERABLE status. This Completion Time is reasonable considering that the control room temperature is being maintained within limits, the low probability of an event occurring requiring control room isolation, and the availability of alternate cooling methods.

C.1 and C.2

In MODE 1, 2, or 3, if the control room area temperature cannot be maintained less than or equal to 90°F or if the inoperable control room AC subsystem cannot be restored to OPERABLE status within the associated Completion Time, the unit must be placed in a MODE that minimizes risk. To achieve this status the unit must be placed in at least MODE 3 within 12 hours and in MODE 4 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

and

D.1, D.2.1, D.2.2, ~~and D.2.3~~

The Required Actions of Condition D are modified by a Note indicating that LCO 3.0.3 does not apply.

(continued)

BASES

ACTIONS D.1, D.2.1, D.2.2, and D.2.3 (continued)

If moving irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, inability to suspend movement of irradiated fuel assemblies is not sufficient reason to require a reactor shutdown.

During movement of irradiated fuel assemblies in the primary or secondary containment, during CORE ALTERATIONS, or during OPDRVs, if Required Action A.1 cannot be completed within the required Completion Time, the OPERABLE control room AC subsystem may be placed immediately in operation. This action ensures that the remaining subsystem is OPERABLE, that no failures that would prevent actuation will occur, and that any active failure will be readily detected.

An alternative to Required Action D.1 is to immediately suspend activities that present a potential for releasing radioactivity that might require isolation of the control room. This places the unit in a condition that minimizes risk.

If applicable, CORE ALTERATIONS and movement of irradiated fuel assemblies in the primary and secondary containment must be suspended immediately. Suspension of these activities shall not preclude completion of movement of a component to a safe position. Also, if applicable, actions must be initiated immediately to suspend OPDRVs to minimize the probability of a vessel draindown and subsequent potential for fission product release. Actions must continue until the OPDRVs are suspended.

E.1, E.2, and E.3

The Required Actions of Condition E.1 are modified by a Note indicating that LCO 3.0.3 does not apply. If moving irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, inability to suspend movement of irradiated fuel assemblies is not sufficient reason to require a reactor shutdown.

(continued)

BASES

ACTIONS

E.1, E.2, and E.3 (continued)

During movement of irradiated fuel assemblies in the primary or secondary containment, during CORE ALTERATIONS, or during OPDRVs if the Required Action and associated Completion Time of Condition B is not met, action must be taken to immediately suspend activities that present a potential for releasing radioactivity that might require isolation of the control room. This places the unit in a condition that minimizes risk.

If applicable, CORE ALTERATIONS and handling of irradiated fuel in the primary and secondary containment must be suspended immediately. Suspension of these activities shall not preclude completion of movement of a component to a safe position. Also, if applicable, actions must be initiated immediately to suspend OPDRVs to minimize the probability of a vessel draindown and subsequent potential for fission product release. Actions must continue until the OPDRVs are suspended.

SURVEILLANCE REQUIREMENTS

SR 3.7.4.1

This SR verifies that the heat removal capability of the system is sufficient to remove the control room heat load assumed in the safety analysis. The SR consists of a combination of testing and calculation. The 18 month Frequency is appropriate since significant degradation of the Control Room AC System is not expected over this time period.

REFERENCES

1. UFSAR, Section 6.4.
2. UFSAR, Section 9.4.1.
3. UFSAR, Chapter 15.

B 3.8 ELECTRICAL POWER SYSTEMS

B 3.8.2 AC Sources—Shutdown

BASES

BACKGROUND

A description of the AC sources is provided in the Bases for LCO 3.8.1, "AC Sources—Operating."

APPLICABLE SAFETY ANALYSES

The OPERABILITY of the minimum AC sources during MODES 4 and 5 and during movement of irradiated fuel assemblies in the primary or secondary containment ensures that: RECENTLY

a. The unit can be maintained in the shutdown or refueling condition for extended periods;

b. Sufficient instrumentation and control capability is available for monitoring and maintaining the unit status; and

c. Adequate AC electrical power is provided to mitigate events postulated during shutdown, such as an inadvertent draindown of the vessel or a fuel handling accident.

In general, when the unit is shut down the Technical Specifications (TS) requirements ensure that the unit has the capability to mitigate the consequences of postulated accidents. However, assuming a single failure and concurrent loss of all offsite or loss of all onsite power is not required. The rationale for this is based on the fact that many Design Basis Accidents (DBAs), which are analyzed in MODES 1, 2, and 3, have no specific analyses in MODES 4 and 5. Worst case bounding events are deemed not credible in MODES 4 and 5 because the energy contained within the reactor pressure boundary, reactor coolant temperature and pressure, and the corresponding stresses result in the probabilities of occurrence significantly reduced or eliminated, and minimal consequences. These deviations from DBA analysis assumptions and design requirements during shutdown conditions are allowed by the LCOs for required systems.

During MODES 1, 2, and 3, various deviations from the analysis assumptions and design requirements are allowed within the ACTIONS. This allowance is in recognition that

(continued)

BASES

LCO (continued)

an integral part of offsite circuit and DG OPERABILITY since its inoperability impacts the ability to start and maintain energized loads required OPERABLE by LCO 3.8.8.

It is acceptable for divisions to be cross tied during shutdown conditions, permitting a single offsite power circuit to supply all required AC electrical power distribution subsystems.

As described in Applicable Safety Analyses, in the event of an accident during shutdown, the TS are designed to maintain the plant in a condition such that, even with a single failure, the plant will not be in immediate difficulty.

APPLICABILITY

The AC sources required to be OPERABLE in MODES 4 and 5 and during movement of recently irradiated fuel assemblies in the primary or secondary containment provide assurance that:

a. Systems to provide adequate coolant inventory makeup are available for the irradiated fuel in the core in case of an inadvertent draindown of the reactor vessel;

b. Systems needed to mitigate a fuel handling accident involving recently irradiated fuel are available;

c. Systems necessary to mitigate the effects of events that can lead to core damage during shutdown are available; and

d. Instrumentation and control capability is available for monitoring and maintaining the unit in a cold shutdown condition or refueling condition.

The AC power requirements for MODES 1, 2, and 3 are covered in LCO 3.8.1.

ACTIONS

The ACTIONS are modified by a Note indicating that LCO 3.0.3 does not apply. If moving recently irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, inability to suspend movement of recently irradiated fuel assemblies is not sufficient reason to require a reactor shutdown.

(continued)

BASES

ACTIONS (continued)

A.1

An offsite circuit is considered inoperable if it is not available to one required ESF division. If two or more ESF 4.16 kV buses are required per LCO 3.8.8, division(s) with offsite power available may be capable of supporting sufficient required features to allow continuation of CORE ALTERATIONS, fuel movement, and operations with a potential for draining the reactor vessel. By the allowance of the option to declare required features inoperable with no offsite power available, appropriate restrictions can be implemented in accordance with the affected required feature(s) LCOs' ACTIONS.

A.2.1, A.2.2, A.2.3, A.2.4, B.1, B.2, B.3, and B.4

With the offsite circuit not available to all required divisions, the option still exists to declare all required features inoperable. Since this option may involve undesired administrative efforts, the allowance for sufficiently conservative actions is made. With the required DG inoperable, the minimum required diversity of AC power sources is not available. It is, therefore, required to suspend CORE ALTERATIONS, movement of irradiated fuel assemblies in the primary and secondary containment, and activities that could potentially result in inadvertent draining of the reactor vessel. RECENTLY

Suspension of these activities shall not preclude completion of actions to establish a safe conservative condition. These actions minimize probability of the occurrence of postulated events. It is further required to initiate action immediately to restore the required AC sources and to continue this action until restoration is accomplished in order to provide the necessary AC power to the plant safety systems.

The Completion Time of immediately is consistent with the required times for actions requiring prompt attention. The restoration of the required AC electrical power sources should be completed as quickly as possible in order to minimize the time during which the plant safety systems may be without sufficient power.

(continued)

B 3.8 ELECTRICAL POWER SYSTEMS

B 3.8.5 DC Sources—Shutdown

BASES

BACKGROUND

A description of the DC sources is provided in the Bases for LCO 3.8.4, "DC Sources—Operating."

APPLICABLE SAFETY ANALYSES

The initial conditions of Design Basis Accident and transient analyses in the UFSAR, Chapter 6 (Ref. 1) and Chapter 15 (Ref. 2), assume that Engineered Safety Feature systems are OPERABLE. The DC electrical power system provides normal and emergency DC electrical power for the diesel generators, emergency auxiliaries, and control and switching during all MODES of operation.

The OPERABILITY of the DC subsystems is consistent with the initial assumptions of the accident analyses and the requirements for the supported systems' OPERABILITY.

The OPERABILITY of the minimum DC electrical power sources during MODES 4 and 5 and during movement of irradiated fuel assemblies in the primary or secondary containment ensures that:

RECENTLY

a. The facility can be maintained in the shutdown or refueling condition for extended periods;

b. Sufficient instrumentation and control capability is available for monitoring and maintaining the unit status; and

including RECENTLY IRRADIATED fuel

c. Adequate DC electrical power is provided to mitigate events postulated during shutdown, such as an inadvertent draindown of the vessel or a fuel handling accident.

The DC sources satisfy Criterion 3 of the NRC Policy Statement.

LCO

One DC electrical power subsystem consisting of one battery, one battery charger, and the corresponding control equipment and interconnecting cabling supplying power to the associated bus within the division, associated with Division

(continued)

BASES

LCO (continued)

1 or 2 onsite Class 1E DC electrical power distribution subsystem(s) required by LCO 3.8.8, "Distribution Systems - Shutdown" is required to be OPERABLE. Similarly, when the High Pressure Core Spray (HPCS) System is required to be OPERABLE, the Division 3 DC electrical power subsystem associated with the Division 3 onsite Class 1E DC electrical power distribution subsystem required to be OPERABLE by LCO 3.8.8 is required to be OPERABLE. In addition to the preceding subsystems required to be OPERABLE, a Class 1E battery or battery charger and the associated control equipment and interconnecting cabling capable of supplying power to the remaining Division 1 or 2 onsite Class 1E DC electrical power distribution subsystem(s), when portions of both Division 1 and 2 DC electrical power distribution subsystem are required to be OPERABLE by LCO 3.8.8. This ensures the availability of sufficient DC electrical power sources to operate the unit in a safe manner and to mitigate the consequences of postulated events during shutdown (e.g., fuel handling accidents and inadvertent reactor vessel draindown).

involving RECENTLY IRRADIATED FUEL

APPLICABILITY

The DC electrical power sources required to be OPERABLE in MODES 4 and 5 and during movement of irradiated fuel assemblies in the primary or secondary containment provide assurance that:

RECENTLY

a. Required features to provide adequate coolant inventory makeup are available for the irradiated fuel assemblies in the core in case of an inadvertent draindown of the reactor vessel;

involving RECENTLY IRRADIATED FUEL

b. Required features needed to mitigate a fuel handling accident are available;

c. Required features necessary to mitigate the effects of events that can lead to core damage during shutdown are available; and

d. Instrumentation and control capability is available for monitoring and maintaining the unit in a cold shutdown condition or refueling condition.

The DC electrical power requirements for MODES 1, 2, and 3 are covered in LCO 3.8.4.

(continued)

BASES

ACTIONS (continued)

C.1, C.2.1, C.2.2, C.2.3, and C.2.4

If more than one DC distribution subsystem is required according to LCO 3.8.8, the DC subsystems remaining OPERABLE with one or more DC power sources inoperable for reasons other than an inoperable battery charger may be capable of supporting sufficient required features to allow continuation of CORE ALTERATIONS, fuel movement, and operations with a potential for draining the reactor vessel. By allowing the option to declare required features inoperable with associated DC power source(s) inoperable, appropriate restrictions are implemented in accordance with the affected system LCOs' ACTIONS. In many instances this option may involve undesired administrative efforts. Therefore, the allowance for sufficiently conservative actions is made (i.e., to suspend CORE ALTERATIONS, movement of RECENTLY irradiated fuel assemblies, and any activities that could result in inadvertent draining of the reactor vessel).

Suspension of these activities shall not preclude completion of actions to establish a safe conservative condition. These actions minimize the probability of the occurrence of postulated events. It is further required to immediately initiate action to restore the required DC electrical power subsystems and to continue this action until restoration is accomplished in order to provide the necessary DC electrical power to the plant safety systems.

The Completion Time of immediately is consistent with the required times for actions requiring prompt attention. The restoration of the required DC electrical power subsystems should be completed as quickly as possible in order to minimize the time during which the plant safety systems may be without sufficient power.

SURVEILLANCE REQUIREMENTS

SR 3.8.5.1

SR 3.8.5.1 requires performance of all Surveillances required by SR 3.8.4.1 through SR 3.8.4.8. Therefore, see the corresponding Bases for LCO 3.8.4 for a discussion of each SR.

This SR is modified by a Note. The reason for the Note is to preclude requiring the OPERABLE DC sources from being discharged below their capability to provide the required

(continued)

B 3.8 ELECTRICAL POWER SYSTEMS

B 3.8.8 Distribution Systems—Shutdown

BASES

BACKGROUND

A description of the AC and DC electrical power distribution systems is provided in the Bases for LCO 3.8.7, "Distribution Systems—Operating."

APPLICABLE SAFETY ANALYSES

The initial conditions of Design Basis Accident and transient analyses in the UFSAR, Chapter 6 (Ref. 1) and Chapter 15 (Ref. 2), assume Engineered Safety Feature (ESF) systems are OPERABLE. The AC and DC electrical power distribution systems are designed to provide sufficient capacity, capability, redundancy, and reliability to ensure the availability of necessary power to ESF systems so that the fuel, Reactor Coolant System, and containment design limits are not exceeded.

The OPERABILITY of the AC and DC electrical power distribution system is consistent with the initial assumptions of the accident analyses and the requirements for the supported systems' OPERABILITY.

The OPERABILITY of the minimum AC and DC electrical power sources and associated power distribution subsystems during MODES 4 and 5 and during movement of irradiated fuel assemblies in the primary or secondary containment ensures that: RECENTLY

a. The facility can be maintained in the shutdown or refueling condition for extended periods;

b. Sufficient instrumentation and control capability is available for monitoring and maintaining the unit status; and

c. Adequate power is provided to mitigate events postulated during shutdown, such as an inadvertent draindown of the vessel or a fuel handling accident.

involving RECENTLY IRRADIATED fuel

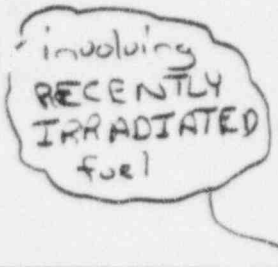
The AC and DC electrical power distribution systems satisfy Criterion 3 of the NRC Policy Statement.

(continued)

BASES (continued)

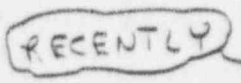
LCO

Various combinations of subsystems, equipment, and components are required OPERABLE by other LCOs, depending on the specific plant condition. Implicit in those requirements is the required OPERABILITY of necessary support required features. This LCO explicitly requires energization of the portions of the electrical distribution system necessary to support OPERABILITY of Technical Specifications' required systems, equipment, and components—both specifically addressed by their own LCOs, and implicitly required by the definition of OPERABILITY.



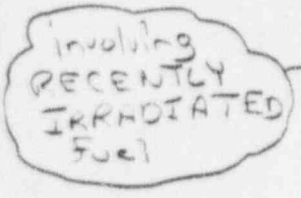
Maintaining these portions of the distribution system energized ensures the availability of sufficient power to operate the plant in a safe manner to mitigate the consequences of postulated events during shutdown (e.g., fuel handling accidents and inadvertent reactor vessel draindown).

APPLICABILITY



The AC and DC electrical power distribution subsystems required to be OPERABLE in MODES 4 and 5 and during movement of irradiated fuel assemblies in the primary or secondary containment provide assurance that:

a. Systems to provide adequate coolant inventory makeup are available for the irradiated fuel in the core in case of an inadvertent draindown of the reactor vessel;



b. Systems needed to mitigate a fuel handling accident are available;

c. Systems necessary to mitigate the effects of events that can lead to core damage during shutdown are available; and

d. Instrumentation and control capability is available for monitoring and maintaining the unit in a cold shutdown or refueling condition.

The AC and DC electrical power distribution subsystem requirements for MODES 1, 2, and 3 are covered in LCO 3.8.7.

(continued)

BASES (continued)

ACTIONS

The ACTIONS are modified by a Note indicating that LCO 3.0.3 does not apply. If moving irradiated fuel assemblies while in MODE 1, 2, or 3, the fuel movement is independent of reactor operations. Therefore, inability to suspend movement of irradiated fuel assemblies is not sufficient reason to require a reactor shutdown.

A.1, A.2.1, A.2.2, A.2.3, A.2.4, and A.2.5

Although redundant required features may require redundant divisions of electrical power distribution subsystems to be OPERABLE, one OPERABLE distribution subsystem division may be capable of supporting sufficient required features to allow continuation of CORE ALTERATIONS, fuel movement, and operations with a potential for draining the reactor vessel. By allowing the option to declare required features associated with an inoperable distribution subsystem inoperable, appropriate restrictions are implemented in accordance with the affected distribution subsystem LCO's Required Actions. In many instances, this option may involve undesired administrative efforts. Therefore, the allowance for sufficiently conservative actions is made (i.e., to suspend CORE ALTERATIONS, movement of irradiated fuel assemblies in the primary and secondary containment and any activities that could result in inadvertent draining of the reactor vessel). RECENTLY

Suspension of these activities shall not preclude completion of actions to establish a safe conservative condition. These actions minimize the probability of the occurrence of postulated events. It is further required to immediately initiate action to restore the required AC and DC electrical power distribution subsystems and to continue this action until restoration is accomplished in order to provide the necessary power to the plant safety systems.

Notwithstanding performance of the above conservative Required Actions, a required residual heat removal—shutdown cooling (RHR-SDC) subsystem may be inoperable. In this case, Required Actions A.2.1 through A.2.4 do not adequately address the concerns relating to coolant circulation and heat removal. Pursuant to LCO 3.0.6, the RHR-SDC ACTIONS

(continued)