ATTACHMENT B

PROPOSED PAGE CHANGES TO TECHNICAL SPECIFICATIONS FOR OPERATING LICENSE NPF-11 AND NPF-18

REVISED PAGES:

NPF-11		NPF-18	
3/4 3-26		3/4 3-26	
3/4 3-27		3/4 3-27	
3/4 3-30		3/4 3-30	
3/4 3-34		3/4 3-34	
3/4 5-5		3/4 5-5	
3/4 5-6		3/4 5-6	
3/4 5-7		3/4 5-7	
3/4 5-8		3/4 5-8	
3/4 5-9		3/4 5-9	
3/4 6-33		3/4 6-36	
3/4 6-34		3/4 6-37	
3/4 6-34a	New page.	3/4 6-37a	New page
3/4 8-30		3/4 8-30	
B 3/4 5-1		B 3/4 5-1	
B 3/4 5-2		B 3/4 5-2	
B 3/4 6-3a		B 3/4 6-3a	

TABLE 3.3.3-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

TRIP FUNCTION	MINIMUM OPERABLE CHANNELS PER TRIP FUNCTION[a]	APPLICABLE OPERATIONAL CONDITIONS	ACTION
C. DIVISION 3 TRIP SYSTEM			
1. HPCS SYSTEM			
a. Reactor Vessel Water Level - Low, Low, Level 2	4[b]	1, 2, 3, 4*, 5*	35
b. Drywell Pressure - High	4[b]	1, 2, 3	35
c. Reactor Vessel Water Level-High, Level 8	2[c]	1, 2, 3, 4*, 5*	32
DELETED d. Condensate Storage Tank Level-Low	2[d]	1, 2, 3, 4*, 5*	36
DELETED e. Suppression Pool Water Level-High	2[d]	1, 2, 3, 4*, 5*	36
f. Pump Discharge Pressure-High (Bypass)	1	1, 2, 3, 4*, 5*	31
g. HPCS System Flow Rate-Low (Permissive)	1	1, 2, 3, 4*, 5*	31
h. Manual Initiation	1/division	1, 2, 3, 4*, 5*	34

D. LOSS OF POWER	TOTAL NO. OF INSTRUMENTS	INSTRUMENTS TO TRIP	MINIMUM OPERABLE INSTRUMENTS[a]	APPLICABLE OPERATIONAL CONDITIONS	ACTION
1. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage)	2/bus	2/bus	2/bus	1, 2, 3, 4**, 5**	37
2. 4.16 kv Emergency Bus Undervoltage (Degraded Voltage)	2/bus	2/bus	2/bus	1, 2, 3, 4**, 5**	37

(a) A channel instrument may be placed in an inoperable status for up to 2 hours during periods of required surveillance without placing the trip system/channel/instrument in the tripped condition provided at least one other OPERABLE channel/instrument in the same trip system is monitoring that parameter.
(b) Also actuates the associated division diesel generator.
(c) Provides signal to close HPCS pump discharge valve only on 2-out-of-2 logic.
(d) Provides signal to HPCS pump suction valves only.
* Applicable when the system is required to be OPERABLE per Specification 3.5.2 or 3.5.3.
** Required when ESF equipment is required to be OPERABLE.
# Not required to be OPERABLE when reactor steam dome pressure is $\leq$ 122 psig.

TABLE 3.3.3-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

ACTION

ACTION 30 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement:

a. With one channel inoperable, place the inoperable channel in the tripped condition within one hour* or declare the associated system inoperable.

b. With more than one channel inoperable, declare the associated system inoperable.

ACTION 31 - With the number of OPERABLE channels less than required by the Minimum OPERABLE channels per Trip Function, place the inoperable channel in the tripped condition within one hour; restore the inoperable channel to OPERABLE status within 7 days or declare the associated system inoperable.

ACTION 32 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, declare the associated ADS trip system or ECCS inoperable.

ACTION 33 - With the number of OPERABLE channels less than the Minimum OPERABLE Channels per Trip Function requirement, place the inoperable channel in the tripped condition within one hour.

ACTION 34 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, restore the inoperable channel to OPERABLE status within 8 hours or declare the associated ADS trip system or ECCS inoperable.

ACTION 35 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement

a. For one trip system, place that trip system in the tripped condition within one hour* or declare the HPCS system inoperable.

b. For both trip systems, declare the HPCS system inoperable.

ACTION 36 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, place at least one inoperable channel in the tripped condition within one hour* or declare the HPCS system inoperable.

DELETED

ACTION 37 - With the number of OPERABLE instruments less than the Minimum Operable Instruments, place the inoperable instrument(s) in the tripped condition within 1 hour* or declare the associated emergency diesel generator inoperable and take the ACTION required by Specification 3.8.1.1 or 3.8.1.2 as appropriate.

*The provisions of Specification 3.0.4 are not applicable.

TABLE 3.3.3-2 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
C. DIVISION 3 TRIP SYSTEM		
1. HPCS SYSTEM		
a. Reactor Vessel Water Level - Low Low, Level 2	$\geq$ - 50 inches*	$\geq$ - 57 inches*
b. Drywell Pressure - High	$\leq$ 1.69 psig	$\leq$ 1.89 psig
c. Reactor Vessel Water Level - High, Level 8	$\leq$ 55.5 inches*	$\leq$ 56 inches*
d. Condensate Storage Tank Level - Low	$\geq$ 715'7"	$\geq$ 715'3"
e. Suppression Pool Water Level - High	$\leq$ 2 inches**	$\leq$ 3 inches**
f. Pump Discharge Pressure - High	$\geq$ 120 psig	$\geq$ 110 psig
g. HPCS System Flow Rate - Low	$\geq$ 1000 gpm	$\geq$ 900 gpm
h. Manual Intiation	NA	NA
D. LOSS OF POWER		
1. 4.16 kV Emergency Bus Undervoltage (Loss of Voltage)#		
a. 4.16 kV Basis Busses		
1) Divisions 1 and 2	2625 ± 131 volts with $\leq$ 10 seconds time delay	2625 ± 262 volts with $\leq$ 11 seconds time delay
	2496 ± 125 volts with $\geq$ 4 seconds time delay	2496 ± 250 volts with $\geq$ 3 seconds time delay
2) Division 3	2870 ± 143 volts with $\leq$ 10 seconds time delay	2870 ± 287 volts with $\leq$ 11 seconds time delay

DELETED

*See Bases Figure B 3/4 3-1.

#These are inverse time delay voltage relays or instantaneous voltage relays with a time delay. The voltages shown are the maximum that will not result in a trip. Lower voltage conditions will result in decreased trip times.

**Level is referenced to a plant elevation of 699 feet 11 inches (See Figure B 3/4.6.2-1).

TABLE 4.3.3.1-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
C. DIVISION 3 TRIP SYSTEM				
1. HPCS SYSTEM				
a. Reactor Vessel Water Level - Low Low, Level 2	NA	M	R	1, 2, 3, 4*, 5*
b. Drywell Pressure-High	NA	M	Q	1, 2, 3
c. Reactor Vessel Water Level-High Level 8	NA	M	R	1, 2, 3, 4*, 5*
d. Condensate Storage Tank Level - Low	NA	M	Q	1, 2, 3, 4*, 5*
e. Suppression Pool Water Level - High	NA	M	Q	1, 2, 3, 4*, 5*
f. Pump Discharge Pressure-High	NA	M	Q	1, 2, 3, 4*, 5*
g. HPCS System Flow Rate-Low	NA	M	Q	1, 2, 3, 4*, 5*
h. Manual Initiation	NA	R	NA	1, 2, 3, 4*, 5*
D. LOSS OF POWER				
1. 4.16 kV Emergency Bus Under-voltage (Loss of Voltage)	NA	NA	R	1, 2, 3, 4**, 5**
2. 4.16 kV Emergency Bus Under-voltage (Degraded Voltage)	NA	NA	R	1, 2, 3, 4**, 5**

DELETED

#Not required to be OPERABLE when reactor steam dome pressure is less than or equal to 122 psig.
*When the system is required to be OPERABLE after being manually realigned, as applicable, per Specification 3.5.2.
**Required when ESF equipment is required to be OPERABLE.
***The specified 18-month interval may be waived for Cycle 1 provided the surveillance is performed during Refuel 1, which is to commence no later than October 27, 1985.

(a) LPCS system to be $\leq$ 500 psig and $\geq$ 55 psig, respectively.

(b) LPCI subsystems to be $\leq$ 400 psig and $\geq$ 55 psig, respectively.

2) Low pressure setpoint of the HPCS system to be $\geq$ 63 psig.

b) Header delta P instrumentation and verifying the setpoint of the:

1) LPCS system and LPCI subsystems to be ± 1 psid.

2) HPCS system to be between 5 ± 2.0 psid greater than the normal indicated ΔP.

DELETED

3. Verifying that the suction for the HPCS system is automatically transferred from the condensate storage tank to the suppression chamber on a condensate storage tank low water level signal and on a suppression chamber high water level signal.

4. Visually inspecting the ECCS corner room watertight door seals and room penetration seals and verifying no abnormal degradation, damage, or obstructions.

d. For the ADS by:

1. At least once per 31 days, performing a CHANNEL FUNCTIONAL TEST of the accumulator backup compressed gas system low pressure alarm system.

2. At least once per 18 months:

a) Performing a system functional test which includes simulated automatic actuation of the system throughout its emergency operating sequence, but excluding actual valve actuation.

b) Manually opening each ADS valve and observing the expected change in the indicated valve position.

c) Performing a CHANNEL CALIBRATION of the accumulator backup compressed gas system low pressure alarm system and verifying an alarm setpoint of 500 + 40, - 0 psig on decreasing pressure.

3/4.5.2 ECCS - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.5.2 At least two of the following shall be OPERABLE:

a. The low pressure core spray (LPCS) system with a flow path capable of taking suction from the suppression chamber and transferring the water through the spray sparger to the reactor vessel.

b. Low pressure coolant injection (LPCI) subsystem "A" of the RHR system with a flow path capable of taking suction from the suppression chamber upon being manually realigned and transferring the water to the reactor vessel.

c. Low pressure coolant injection (LPCI) subsystem "B" of the RHR system with a flow path capable of taking suction from the suppression chamber upon being manually realigned and transferring the water to the reactor vessel.

d. Low pressure coolant injection (LPCI) subsystem "C" of the RHR system with a flow path capable of taking suction from the suppression chamber upon being manually realigned and transferring the water to the reactor vessel.

THE SUPPRESSION POOL

e. The high pressure core spray (HPCS) system with a flow path capable of taking suction from one of the following water sources and transferring the water through the spray sparger to the reactor vessel:

1. From the suppression chamber, or
2. When the suppression pool level is less than the limit or is drained, from the condensate storage tank containing at least 135,000 available gallons of water, equivalent to a level of 14.5 feet.

APPLICABILITY: OPERATIONAL CONDITION 4 or 5*.

ACTION:

a. With one of the above required subsystems/systems inoperable, restore at least two subsystems/systems to OPERABLE status within 4 hours or suspend all operations that have a potential for draining the reactor vessel.

b. With both of the above required subsystems/systems inoperable, suspend CORE ALTERATIONS and all operations that have a potential for draining the reactor vessel. Restore at least one subsystem/system to OPERABLE status within 4 hours or establish SECONDARY CONTAINMENT INTEGRITY within the next 8 hours.

*The ECCS is not required to be OPERABLE provided that the reactor vessel head is removed, the cavity is flooded, the spent fuel pool gates are removed, and water level is maintained within the limits of Specifications 3.9.8 and 3.9.9.

SURVEILLANCE REQUIREMENTS

4.5.2.1 At least the above required ECCS shall be demonstrated OPERABLE per Surveillance Requirement 4.5.1, except that the header delta P instrumentation is not required to be OPERABLE.

4.5.2.2 The HPCS system shall be determined OPERABLE at least once per 12 hours by verifying the condensate storage tank required volume when the condensate storage tank is required to be OPERABLE per Specification 3.5.2.e.

3/4.5.3 SUPPRESSION CHAMBER#

LIMITING CONDITION FOR OPERATION

3.5.3 The suppression chamber shall be OPERABLE:

a. In OPERATIONAL CONDITION 1, 2, or 3 with a contained water volume of at least 128,800 ft^3, equivalent to a level of -4 1/2 inches.**

b. In OPERATIONAL CONDITION 4 or 5* with a contained water volume of at least 70,000 ft^3, equivalent to a level of -12 feet 7 inches,** except that the suppression chamber level may be less than the limit or may be drained in OPERATIONAL CONDITION 4 or 5* provided that:

1. No operations are performed that have a potential for draining the reactor vessel,

2. The reactor mode switch is locked in the Shutdown or Refuel position,

3. The condensate storage tank contains at least 135,000 available gallons of water, equivalent to a level of 14.5 feet, and

4. The HPCS system is OPERABLE per Specification 3.5.2 with an OPERABLE flow path capable of taking suction from the condensate storage tank and transferring the water through the spray sparger to the reactor vessel.

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

ACTION:

a. In OPERATIONAL CONDITION 1, 2, or 3 with the suppression chamber water level less than the above limit, restore the water level to within the limit within 1 hour 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 or 5* with the suppression chamber water level less than the above limit or drained and the above required conditions not satisfied, suspend CORE ALTERATIONS and all operations that have a potential for draining the reactor vessel and lock the reactor mode switch in the Shutdown position. Establish SECONDARY CONTAINMENT INTEGRITY within 8 hours.

#See Specification 3.6.2.1 for pressure suppression requirements.
*The suppression chamber is not required to be OPERABLE provided that the reactor vessel head is removed, the cavity is flooded or being flooded from the suppression pool, the spent fuel pool gates are removed when the cavity is flooded, and the water level is maintained within the limits of Specifications 3.9.8 and 3.9.9.
**Level is referenced to a plant elevation of 699 feet 11 inches (See Figure B 3/4.6.2-1).

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

c. With one suppression chamber water level instrumentation channel inoperable, restore the inoperable channel to OPERABLE status within 7 days or verify the suppression chamber water level to be greater than or equal to -4 1/2 inches** or -12 feet 7 inches**, as applicable, at least once per 12 hours by local indication.

d. With both suppression chamber water level instrumentation channels inoperable, restore at least one inoperable channel to OPERABLE status within 8 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours and verify the suppression chamber water level to be greater than or equal to -4 1/2 inches** or -12 feet 7 inches**, as applicable, at least once per 12 hours by local indication.

SURVEILLANCE REQUIREMENTS

4.5.3.1 The suppression chamber shall be determined OPERABLE by verifying:

a. The water level to be greater than or equal to, as applicable:

1. -4 1/2 inches** at least once per 24 hours.

2. -12 feet 7 inches** at least once per 12 hours.

b. Two suppression chamber water level instrumentation channels OPERABLE by performance of a:

1. CHANNEL CHECK at least once per 24 hours,

2. CHANNEL FUNCTIONAL TEST at least once per 31 days, and

3. CHANNEL CALIBRATION at least once per 18 months,

with the low water level alarm setpoint at greater than or equal to -3 inches.**

4.5.3.2 With the suppression chamber level less than the above limit or drained in OPERATIONAL CONDITION 4 or 5*, at least once per 12 hours:

a. Verify the required conditions of Specification 3.5.3.b. to be satisfied, or

b. Verify footnote conditions* to be satisfied.

*The suppression chamber is not required to be OPERABLE provided that the reactor vessel head is removed, the cavity is flooded or being flooded from the suppression pool, the spent fuel pool gates are removed when the cavity is flooded, and the water level is maintained within the limits of Specifications 3.9.8 and 3.9.9.

**Level is referenced to a plant elevation of 699 feet 11 inches (See Figure B 3/4.6.2-1).

VALVE FUNCTION AND NUMBER

Other Isolation Valves (Continued)

4. Low Pressure Core Spray System

1E21-F005
1E21-F001(j)
1E21-F012(j)
1E21-F011(j)
1E21-F018(j)
1E21-F031(j)
1E21-F006(k)

5. High Pressure Core Spray System

1E22-F004
1E22-F015(j)
1E22-F023(j)
1E22-F012(j)
1E22-F014(j)
1E22-F005(k)

6. Reactor Core Isolation Cooling System

1E51-F013
1E51-F069
1E51-F028
1E51-F068
1E51-F040
1E51-F031(j)
1E51-F019(k)
1E51-F065(k)
1E51-F066(k)
1E51-F059(m)
1E51-F022(j)(m)
1E51-F362(n)
1E51-F363(n)

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

VALVE FUNCTION AND NUMBER

Other Isolation Valves (Continued)

7. Post LOCA Hydrogen Control

1HG001A, B
1HG002A, B
1HG005A, B
1HG006A, B

8. Standby Liquid Control System

1C41-F004A, B
1C41-F007

9. Reactor Recirculation Seal Injection***

1B33-F013A, B(j)
1B33-F017A, B(j)

10. Drywell Pneumatic System

1IN018

MOVE FOOTNOTES TO NEW PAGE 3/4 6-34a

* But > 3 seconds.
(a) See Specification 3.3.2, Table 3.3.2-1, for isolation signal(s) that operates each valve group.
(b) Not included in total sum of Type B and C tests.
(c) May be opened on an intermittent basis under administrative control.
(d) Not closed by SLCS actuation.
(e) Not closed by Trip Functions 5a, b or c, Specification 3.3.2, Table 3.3.2-1.
(f) Not closed by Trip Functions 4a, c, d, e or f of Specification 3.3.2, Table 3.3.2-1.
(g) Not subject to Type C leakage test.
(h) Opens on an isolation signal. Valves will be open during Type A test. No Type C test required.
(i) Also closed by drywell pressure-high signal.
(j) Hydraulic leak test at 43.6 psig.
(k) Not subject to Type C leakage test - leakage rate tested per Specification 4.4.3.2.2.
(l) These penetrations are provided with removable spools outboard of the outboard isolation valve. During operation, these lines will be blind flanged using a double O-ring and a type B leak test. In addition, the packing of these isolation valves will be soap-bubble tested to ensure insignificant or no leakage at the containment test pressure each refueling outage.

*** The specified 18-month interval may be waived for Cycle 1 provided the surveillance is performed during Refuel 1, which is to commence no later than October 27, 1985.

TABLE 3.6.3-1 (continued)
PRIMARY CONTAINMENT ISOLATION VALVES

TABLE NOTATIONS

Move footnotes "**" and (a) through (l) from Page 3/4 6-37 to this location.

m. If valves 1E51-F362 and 1E51-F363 are locked closed and acceptably leakage rate tested, valves 2E51-F059 and 2E51-F022 are not considered primary containment isolation valves and are not subject to the leakage rate testing requirements.

n. If valve 1E51-F059 is deactivated and locked closed with the line blind flanged downstream of the valve and acceptably leakage rate tested, valves 2E51-F362 and 2E51-F363 are not considered primary containment isolation valves and are not subject to leakage rate testing requirements.

TABLE 3.8.3.3-1 (Continued)

MOTOR OPERATED VALVES THERMAL OVERLOAD PROTECTION

	VALVE NUMBER	BYPASS DEVICE (Continuous)(Accident Conditions)	SYSTEM(S) AFFECTED
l.	1E32 - F001A	Accident Conditions	MSIV-LCS
	1E32 - F002A	Accident Conditions	
	1E32 - F003A	Accident Conditions	
	1E32 - F001E	Accident Conditions	
	1E32 - F002E	Accident Conditions	
	1E32 - F003E	Accident Conditions	
	1E32 - F001J	Accident Conditions	
	1E32 - F002J	Accident Conditions	
	1E32 - F003J	Accident Conditions	
	1E32 - F001N	Accident Conditions	
	1E32 - F002N	Accident Conditions	
	1E32 - F003N	Accident Conditions	
	1E32 - F006	Accident Conditions	
	1E32 - F007	Accident Conditions	
	1E32 - F008	Accident Conditions	
	1E32 - F009	Accident Conditions	
m.	1E22 - F001	Accident Conditions	HPCS system
	1E22 - F004	Accident Conditions	
	1E22 - F010	Accident Conditions	
	1E22 - F011	Accident Conditions	
	1E22 - F012	Accident Conditions	
	1E22 - F015	Accident Conditions	
	1E22 - F023	Accident Conditions	

BASES

3/4.5.1 and 3/4.5.2 ECCS - OPERATING and SHUTDOWN

ECCS Division 1 consists of the low pressure core spray system, low pressure coolant injection subsystem "A" of the RHR system, and the automatic depressurization system (ADS) as actuated by ADS trip system "A". ECCS Division 2 consists of low pressure coolant injection subsystems "B"and "C" of the RHR system and the automatic depressurization system as actuated by ADS trip system "B".

The low pressure core spray (LPCS) system is provided to assure that the core is adequately cooled following a loss-of-coolant accident and provides adequate core cooling capacity for all break sizes up to and including the double-ended reactor recirculation line break, and for transients or smaller breaks following depressurization by the ADS.

The LPCS is a primary source of emergency core cooling after the reactor vessel is depressurized and a source for flooding of the core in case of accidental draining.

The surveillance requirements provide adequate assurance that the LPCS system will be OPERABLE when required. Although all active components are testable and full flow can be demonstrated by recirculation through a test loop during reactor operation, a complete functional test requires reactor shutdown. The pump discharge piping is maintained full to prevent water hammer damage to piping and to start cooling at the earliest moment.

The low pressure coolant injection (LPCI) mode of the RHR system is provided to assure that the core is adequately cooled following a loss-of-coolant accident. Three subsystems, each with one pump, provide adequate core flooding for all break sizes up to and including the double-ended reactor recirculation line break, and for transients or small breaks following depressurization by the ADS.

The surveillance requirements provide adequate assurance that the LPCI system will be OPERABLE when required. Although all active components are testable and full flow can be demonstrated by recirculation through a test loop during reactor operation, a complete functional test requires reactor shutdown. The pump discharge piping is maintained full to prevent water hammer damage to piping and to start cooling at the earliest moment.

ECCS Division 3 consists of the high pressure core spray system. The high pressure core spray (HPCS) system is provided to assure that the reactor core is adequately cooled to limit fuel clad temperature in the event of a small break in the reactor coolant system and loss of coolant which does not result in rapid depressurization of the reactor vessel. The HPCS system permits the reactor to be shut down while maintaining sufficient reactor vessel water level inventory until the vessel is depressurized. The HPCS system operates over a range of 1160 psid, differential pressure between reactor vessel and HPCS suction source, to 0 psid.

The capacity of the HPCS system is selected to provide the required core cooling. The HPCS pump is designed to deliver greater than or equal to 516/1550/6200 gpm at differential pressures of 1160/1130/200 psid. Initially, water from the condensate storage tank is used instead of injecting water from

WATER IS TAKEN FROM THE SUPPRESSION POOL AND INJECTED INTO THE REACTOR

ECCS-OPERATING and SHUTDOWN (Continued)

the suppression pool into the reactor, but no credit is taken in the hazards analyses for the condensate storage tank water.

With the HPCS system inoperable, adequate core cooling is assured by the OPERABILITY of the redundant and diversified automatic depressurization system and both the LPCS and LPCI systems. In addition, the reactor core isolation cooling (RCIC) system, a system for which no credit is taken in the hazards analysis, will automatically provide makeup at reactor operating pressures on a reactor low water level condition. The HPCS out-of-service period of 14 days is based on the demonstrated OPERABILITY of redundant and diversified low pressure core cooling systems.

The surveillance requirements provide adequate assurance that the HPCS system will be OPERABLE when required. Although all active components are testable and full flow can be demonstrated by recirculation through a test loop during reactor operation, a complete functional test with reactor vessel injection requires reactor shutdown. The pump discharge piping is maintained full to prevent water hammer damage and to provide cooling at the earliest moment.

Upon failure of the HPCS system to function properly, if required, the automatic depressurization system (ADS) automatically causes selected safety-relief valves to open, depressurizing the reactor so that flow from the low pressure core cooling systems can enter the core in time to limit fuel cladding temperature to less than 2200°F. ADS is conservatively required to be OPERABLE whenever reactor vessel pressure exceeds 122 psig even though low pressure core cooling systems provide adequate core cooling up to 350 psig.

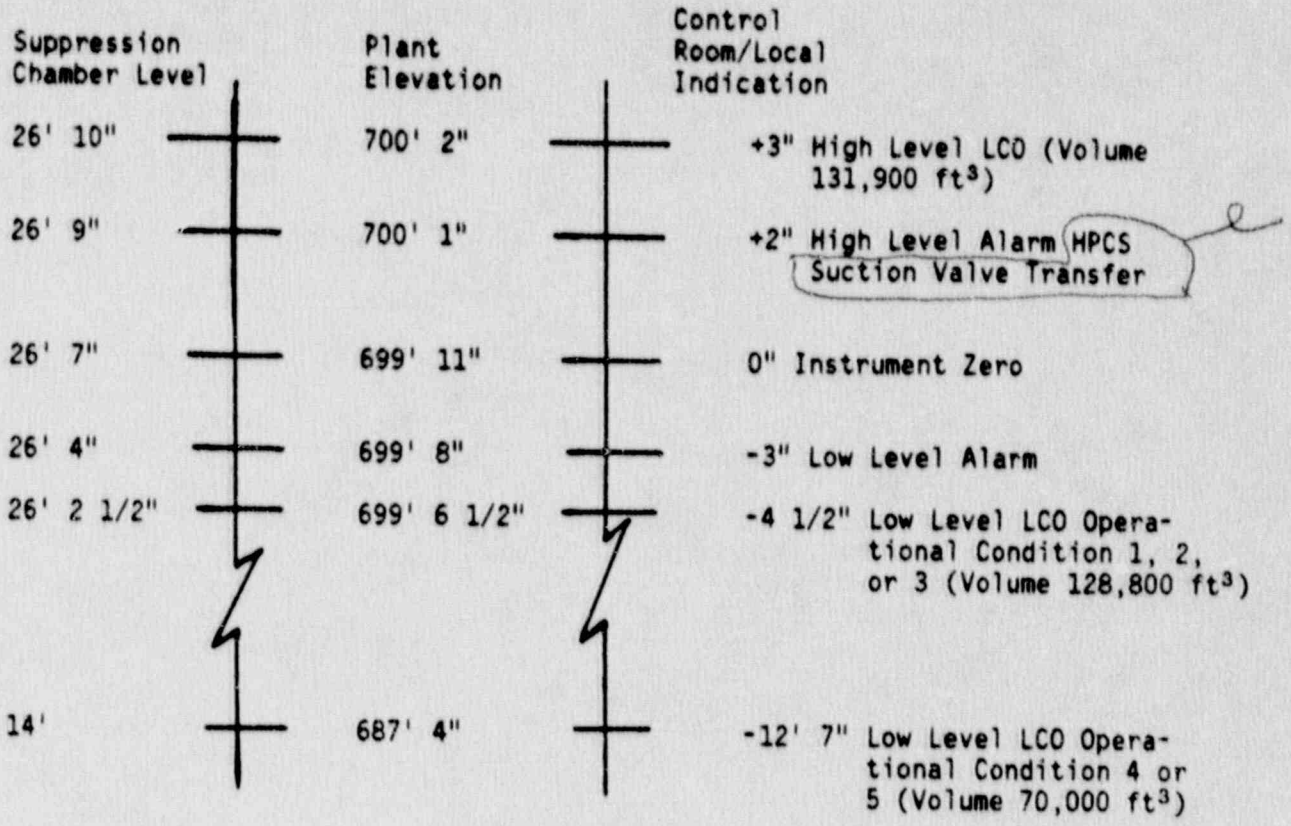
ADS automatically controls seven selected safety-relief valves. Six valves are required to be OPERABLE since the LOCA analysis assumes 6 ADS valves in addition to a single failure. It is therefore appropriate to permit one of the required valves to be out-of-service for up to 14 days without materially reducing system reliability.

3/4.5.3 SUPPRESSION CHAMBER

The suppression chamber is also required to be OPERABLE as part of the ECCS to ensure that a sufficient supply of water is available to the HPCS, LPCS and LPCI systems in the event of a LOCA. This limit on suppression chamber minimum water volume ensures that sufficient water is available to permit recirculation cooling flow to the core (See Figure B 3/4.6.2-1). The OPERABILITY of the suppression chamber in OPERATIONAL CONDITIONS 1, 2 or 3 is required by Specification 3.6.2.1.

Repair work might require making the suppression chamber inoperable. This specification will permit those repairs to be made and at the same time give assurance that the irradiated fuel has an adequate cooling water supply when the suppression chamber must be made inoperable, including draining, in OPERATIONAL CONDITION 4 or 5.

In OPERATIONAL CONDITION 4 and 5 the suppression chamber minimum required water volume is reduced because the reactor coolant is maintained at or below 200°F. Since pressure suppression is not required below 212°F, the minimum water volume is based on NPSH, recirculation volume, vortex prevention plus a 2'-4" safety margin for conservatism.



SUPPRESSION POOL LEVEL SETPOINTS

BASES FIGURE B 3/4.6.2-1

TABLE 3.3.3-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

TRIP FUNCTION	MINIMUM OPERABLE CHANNELS PER TRIP FUNCTION[a]	APPLICABLE OPERATIONAL CONDITIONS	ACTION
C. DIVISION 3 TRIP SYSTEM			
1. HPCS SYSTEM			
a. Reactor Vessel Water Level - Low, Low, Level 2	4[b]	1, 2, 3, 4*, 5*	35
b. Drywell Pressure - High	4[b]	1, 2, 3	35
c. Reactor Vessel Water Level-High, Level 8	2[c]	1, 2, 3, 4*, 5*	32
d. Condensate Storage Tank Level-Low	2[d]	1, 2, 3, 4*, 5*	36
e. Suppression Pool Water Level-High	2[d]	1, 2, 3, 4*, 5*	36
f. Pump Discharge Pressure-High (Bypass)	1	1, 2, 3, 4*, 5*	31
g. HPCS System Flow Rate-Low (Permissive)	1	1, 2, 3, 4*, 5*	31
h. Manual Initiation	1/division	1, 2, 3, 4*, 5*	34

DELETED

D. LOSS OF POWER	TOTAL NO. OF INSTRU-MENTS	INSTRU-MENTS TO TRIP	MINIMUM OPERABLE INSTRU-MENTS(a)	APPLICABLE OPERATIONAL CONDITIONS	ACTION
1. 4.16 kV Emergency Bus Undervoltage (Loss of Voltage)	2/bus	2/bus	2/bus	1, 2, 3, 4**, 5**	37
2. 4.16 kV Emergency Bus Undervoltage (Degraded Voltage)	2/bus	2/bus	2/bus	1, 2, 3, 4**, 5**	37

TABLE NOTATION

(a) A channel/instrument may be placed in an inoperable status for up to 2 hours during periods of required surveillance without placing the trip system/channel/instrument in the tripped condition provided at least one other OPERABLE channel/instrument in the same trip system is monitoring that parameter.
(b) Also actuates the associated division diesel generator.
(c) Provides signal to close HPCS pump discharge valve only on 2-out-of-2 logic.
(d) Provides signal to HPCS pump suction valves only.
* Applicable when the system is required to be OPERABLE per Specification 3.5.2 or 3.5.3.
** Required when ESF equipment is required to be OPERABLE.
# Not required to be OPERABLE when reactor steam dome pressure is < 122 psig.

TABLE 3.3.3-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

ACTION

ACTION 30 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement:

a. With one channel inoperable, place the inoperable channel in the tripped condition within one hour* or declare the associated system inoperable.

b. With more than one channel inoperable, declare the associated system inoperable.

ACTION 31 - With the number of OPERABLE channels less than required by the Minimum OPERABLE channels per Trip Function, place the inoperable channel in the tripped condition within one hour; restore the inoperable channel to OPERABLE status within 7 days or declare the associated system inoperable.

ACTION 32 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, declare the associated ADS trip system or ECCS inoperable.

ACTION 33 - With the number of OPERABLE channels less than the Minimum OPERABLE Channels per Trip Function requirement, place the inoperable channel in the tripped condition within one hour.

ACTION 34 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, restore the inoperable channel to OPERABLE status within 8 hours or declare the associated ADS trip system or ECCS inoperable.

ACTION 35 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement

a. For one trip system, place that trip system in the tripped condition within one hour* or declare the HPCS system inoperable.

b. For both trip systems, declare the HPCS system inoperable.

DELETED

ACTION 36 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip Function requirement, place at least one inoperable channel in the tripped condition within one hour* or declare the HPCS system inoperable.

ACTION 37 - With the number of OPERABLE instruments less than the Minimum OPERABLE INSTRUMENTS, place the inoperable instrument(s) in the tripped condition within 1 hour* or declare the associated emergency diesel generator inoperable and take the ACTION required by Specification 3.8.1.1 or 3.8.1.2 as appropriate.

*The provisions of Specification 3.0.4 are not applicable.

TABLE 3.3.3-2 (Continued)
EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
C. DIVISION 3 TRIP SYSTEM		
1. HPCS SYSTEM		
a. Reactor Vessel Water Level - Low Low, Level 2	$\geq$ - 50 inches*	$\geq$ - 57 inches*
b. Drywell Pressure - High	$\leq$ 1.69 psig	$\leq$ 1.89 psig
c. Reactor Vessel Water Level - High, Level 8	$\leq$ 55.5 inches*	$\leq$ 56 inches*
d. Condensate Storage Tank Level - Low	$\geq$ 715'7"	$\geq$ 715'3"
e. Suppression Pool Water Level - High	$\leq$ 2 inches**	$\leq$ 3 inches**
f. Pump Discharge Pressure - High	$\geq$ 120 psig	$\geq$ 110 psig
g. HPCS System Flow Rate - Low	$\geq$ 1000 gpm	$\geq$ 900 gpm
h. Manual Intiation	N.A.	N.A.
D. LOSS OF POWER		
1. 4.16 kV Emergency Bus Undervoltage (Loss of Voltage)#		
a. 4.16 kV Basis		
1) Divisions 1 and 2	2625 ± 131 volts with $\leq$ 10 second time delay	2625 ± 262 volts with $\leq$ 11 second time delay
	2496 ± 125 volts with $\geq$ 4 second time delay	2496 ± 250 volts with $\geq$ 3 second time delay
2) Division 3	2870 ± 143 volts with $\leq$ 10 second time delay	2870 ± 287 volts with $\leq$ 11 second time delay

DELETED

TABLE NOTATIONS

*See Bases Figure B 3/4 3-1.
#These are inverse time delay voltage relays or instantaneous voltage relays with a time delay. The voltages shown are the maximum that will not result in a trip. Lower voltage conditions will result in decreased trip times.
N.A. Not Applicable
**Level is referenced to a plant elevation of 699 feet 11 inches (See Figure B 3/4.6.2-1).

TABLE 4.3.3.1-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
C. DIVISION 3 TRIP SYSTEM				
1. HPCS SYSTEM				
a. Reactor Vessel Water Level - Low Low, Level 2	NA	M	R	1, 2, 3, 4*, 5*
b. Drywell Pressure-High	NA	M	Q	1, 2, 3
c. Reactor Vessel Water Level-High Level 8	NA	M	R	1, 2, 3, 4*, 5*
d. Condensate Storage Tank Level - Low	NA	M	Q	1, 2, 3, 4*, 5*
e. Suppression Pool Water Level - High	NA	M	Q	1, 2, 3, 4*, 5*
f. Pump Discharge Pressure-High	NA	M	Q	1, 2, 3, 4*, 5*
g. HPCS System Flow Rate-Low	NA	M	Q	1, 2, 3, 4*, 5*
h. Manual Initiation	NA	R	NA	1, 2, 3, 4*, 5*
D. LOSS OF POWER				
1. 4.16 kV Emergency Bus Under-voltage (Loss of Voltage)	NA	NA	R	1, 2, 3, 4**, 5**
2. 4.16 kV Emergency Bus Under-voltage (Degraded Voltage)	NA	NA	R	1, 2, 3, 4**, 5**

DELETED

TABLE NOTATIONS

#Not required to be OPERABLE when reactor steam dome pressure is less than or equal to 122 psig.

*When the system is required to be OPERABLE after being manually realigned, as applicable, per Specification 3.5.2.

**Required when ESF equipment is required to be OPERABLE.

SURVEILLANCE REQUIREMENTS (Continued)

2. Performing a CHANNEL CALIBRATION of the:

   a) Discharge line "keep filled" pressure alarm instrumentation and verifying the:

      1) High pressure setpoint and the low pressure setpoint of the:

         (a) LPCS system to be $\leq$ 500 psig and $\geq$ 55 psig, respectively.

         (b) LPCI subsystems to be $\leq$ 400 psig and $\geq$ 55 psig, respectively.

      2) Low pressure setpoint of the HPCS system to be $\geq$ 63 psig.

   b) Header delta P instrumentation and verifying the setpoint of the:

      1) LPCS system and LPCI subsystems to be ± 1 psid.

      2) HPCS system to be 5 ± 2.0 psid greater than the normal indicated ΔP.

DELETED

3. Verifying that the suction for the HPCS system is automatically transferred from the condensate storage tank to the suppression chamber on a condensate storage tank low water level signal and on a suppression chamber high water level signal.

4. Visually inspecting the ECCS corner room watertight door seals and room penetration seals and verifying no abnormal degradation, damage, or obstructions.

d. For the ADS by:

   1. At least once per 31 days, performing a CHANNEL FUNCTIONAL TEST of the accumulator backup compressed gas system low pressure alarm system.

   2. At least once per 18 months:

      a) Performing a system functional test which includes simulated automatic actuation of the system throughout its emergency operating sequence, but excluding actual valve actuation.

      b) Manually opening each ADS valve and observing the expected change in the indicated valve position.

      c) Performing a CHANNEL CALIBRATION of the accumulator backup compressed gas system low pressure alarm system and verifying an alarm setpoint of 500 + 40, - 0 psig on decreasing pressure.

EMERGENCY CORE COOLING SYSTEMS

3/4.5.2 ECCS - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.5.2 At least two of the following shall be OPERABLE:

a. The low pressure core spray (LPCS) system with a flow path capable of taking suction from the suppression chamber and transferring the water through the spray sparger to the reactor vessel.

b. Low pressure coolant injection (LPCI) subsystem "A" of the RHR system with a flow path capable of taking suction from the suppression chamber upon being manually realigned and transferring the water to the reactor vessel.

c. Low pressure coolant injection (LPCI) subsystem "B" of the RHR system with a flow path capable of taking suction from the suppression chamber upon being manually realigned and transferring the water to the reactor vessel.

d. Low pressure coolant injection (LPCI) subsystem "C" of the RHR system with a flow path capable of taking suction from the suppression chamber upon being manually realigned and transferring the water to the reactor vessel.

e. The high pressure core spray (HPCS) system with a flow path capable of taking suction from one of the following water sources and transferring the water through the spray sparger to the reactor vessel:

1. From the suppression chamber, or

2. When the suppression pool level is less than the limit or is drained, from the condensate storage tank containing at least 135,000 available gallons of water, equivalent to a level of 14.5 feet.

THE SUPPRESSION POOL

APPLICABILITY: OPERATIONAL CONDITION 4 or 5*.

ACTION:

a. With one of the above required subsystems/systems inoperable, restore at least two subsystems/systems to OPERABLE status within 4 hours or suspend all operations that have a potential for draining the reactor vessel.

b. With both of the above required subsystems/systems inoperable, suspend CORE ALTERATIONS and all operations that have a potential for draining the reactor vessel. Restore at least one subsystem/system to OPERABLE status within 4 hours or establish SECONDARY CONTAINMENT INTEGRITY within the next 8 hours.

*The ECCS is not required to be OPERABLE provided that the reactor vessel head is removed, the cavity is flooded, the spent fuel pool gates are removed, and water level is maintained within the limits of Specifications 3.9.8 and 3.9.9.

SURVEILLANCE REQUIREMENTS

4.5.2.1 At least the above required ECCS shall be demonstrated OPERABLE per Surveillance Requirement 4.5.1, except that the header delta P instrumentation is not required to be OPERABLE.

4.5.2.2 The HPCS system shall be determined OPERABLE at least once per 12 hours by verifying the condensate storage tank required volume when the condensate storage tank is required to be OPERABLE per Specification 3.5.2.e.

EMERGENCY CORE COOLING SYSTEMS

3/4.5.3 SUPPRESSION CHAMBER#

LIMITING CONDITION FOR OPERATION

3.5.3 The suppression chamber shall be OPERABLE:

a. In OPERATIONAL CONDITION 1, 2, or 3 with a contained water volume of at least 128,800 ft^3, equivalent to a level of -4 1/2 inches.**

b. In OPERATIONAL CONDITION 4 or 5* with a contained water volume of at least 70,000 ft^3, equivalent to a level of -12 feet 7 inches**, except that the suppression chamber level may be less than the limit or may be drained in OPERATIONAL CONDITION 4 or 5* provided that:

1. No operations are performed that have a potential for draining the reactor vessel,

2. The reactor mode switch is locked in the Shutdown or Refuel position,

3. The condensate storage tank contains at least 135,000 available gallons of water, equivalent to a level of 14.5 feet, and

4. The HPCS system is OPERABLE per Specification 3.5.2 with an OPERABLE flow path capable of taking suction from the condensate storage tank and transferring the water through the spray sparger to the reactor vessel.

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

ACTION:

a. In OPERATIONAL CONDITION 1, 2, or 3 with the suppression chamber water level less than the above limit, restore the water level to within the limit within 1 hour 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 or 5* with the suppression chamber water level less than the above limit or drained and the above required conditions not satisfied, suspend CORE ALTERATIONS and all operations that have a potential for draining the reactor vessel and lock the reactor mode switch in the Shutdown position. Establish SECONDARY CONTAINMENT INTEGRITY within 8 hours.

#See Specification 3.6.2.1 for pressure suppression requirements.
*The suppression chamber is not required to be OPERABLE provided that the reactor vessel head is removed, the cavity is flooded or being flooded from the suppression pool, the spent fuel pool gates are removed when the cavity is flooded, and the water level is maintained within the limits of Specifications 3.9.8 and 3.9.9.
**Level is referenced to a plant elevation of 699 feet 11 inches (see Figure B 3/4.6.2-1).

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

c. With one suppression chamber water level instrumentation channel inoperable, restore the inoperable channel to OPERABLE status within 7 days or verify the suppression chamber water level to be greater than or equal to -4 1/2 inches** or -12 feet 7 inches**, as applicable, at least once per 12 hours by local indication.

d. With both suppression chamber water level instrumentation channels inoperable, restore at least one inoperable channel to OPERABLE status within 8 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours and verify the suppression chamber water level to be greater than or equal to -4 1/2 inches** or -12 feet 7 inches**, as applicable, at least once per 12 hours by local indication.

SURVEILLANCE REQUIREMENTS

4.5.3.1 The suppression chamber shall be determined OPERABLE by verifying:

a. The water level to be greater than or equal to, as applicable:

1. -4 1/2 inches** at least once per 24 hours.

2. -12 feet 7 inches** at least once per 12 hours.

b. Two suppression chamber water level instrumentation channels OPERABLE by performance of a:

1. CHANNEL CHECK at least once per 24 hours,

2. CHANNEL FUNCTIONAL TEST at least once per 31 days, and

3. CHANNEL CALIBRATION at least once per 18 months,

with the low water level alarm setpoint at greater than or equal to -3 inches.**

4.5.3.2 With the suppression chamber level less than the above limit or drained in OPERATIONAL CONDITION 4 or 5*, at least once per 12 hours:

a. Verify the required conditions of Specification 3.5.3.b. to be satisfied, or

b. Verify footnote conditions* to be satisfied.

*The suppression chamber is not required to be OPERABLE provided that the reactor vessel head is removed, the cavity is flooded or being flooded from the suppression pool, the spent fuel pool gates are removed when the cavity is flooded, and the water level is maintained within the limits of Specifications 3.9.8 and 3.9.9.

**Level is referenced to a plant elevation of 699 feet 11 inches (See Figure B 3/4.6.2-1).

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

VALVE FUNCTION AND NUMBER

Other Isolation Valves (Continued)

4. Low Pressure Core Spray System

2E21-F005
2E21-F001(j)
2E21-F012(j)
2E21-F011(j)
2E21-F018(j)
2E21-F031(j)
2E21-F006(k)

5. High Pressure Core Spray System

2E22-F004
2E22-F015(j)
2E22-F023(j)
2E22-F012(j)
2E22-F014(j)
2E22-F005(k)

6. Reactor Core Isolation Cooling System

2E51-F013
2E51-F069
2E51-F028
2E51-F068
2E51-F040
2E51-F031(j)
2E51-F019(k)
2E51-F065(k)
2E51-F066(k)
2E51-F059(m)
2E51-F022(j)(m)
2E51-F362(n)
2E51-F363(n)

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

VALVE FUNCTION AND NUMBER

Other Isolation Valves (Continued)

7. Post LOCA Hydrogen Control

2HG001A, B
2HG002A, B
2HG005A, B
2HG006A, B

8. Standby Liquid Control System

2C41-F004A, B
2C41-F007.

9. Reactor Recirculation Seal Injection

2B33-F013A, B(j)
2B33-F017A, B(j)

10. Drywell Pneumatic Valves

2IN018

MOVE FOOTNOTES TO NEW PAGE 3/4 6-37a

TABLE NOTATIONS

*But > 3 seconds.
(a) See Specification 3.3.2, Table 3.3.2-1, for isolation signal(s) that operates each valve group.
(b) Not included in total sum of Type B and C tests.
(c) May be opened on an intermittent basis under administrative control.
(d) Not closed by SLCS actuation.
(e) Not closed by Trip Functions 5a, b, or c, Specification 3.3.2, Table 3.3.2-1.
(f) Not closed by Trip Functions 4a, c, d, e, or f of Specification 3.3.2, Table 3.3.2-1.
(g) Not subject to Type C leakage test.
(h) Opens on an isolation signal. Valves will be open during Type A test. No Type C test required.
(i) Also closed by drywell pressure-high signal.
(j) Hydraulic leak test at 43.6 psig.
(k) Not subject to Type C leakage test - leakage rate tested per Specification 4.4.3.2.2.
(l) These penetrations are provided with removable spools outboard of the outboard isolation valve. During operation, these lines will be blind flanged using a double O-ring and a type B leak test. In addition, the packing of these isolation valves will be soap-bubble tested to ensure insignificant or no leakage at the containment test pressure each refueling outage.

TABLE 3.6.3-1 (continued)
PRIMARY CONTAINMENT ISOLATION VALVES

TABLE NOTATIONS

Move footnotes "**" and (a) through (l)
from Page 3/4 6-34 to this location.

m. If valves 2E51-F362 and 2E51-F363 are locked closed and acceptably leakage rate tested, valves 1E51-F059 and 1E51-F022 are not considered primary containment isolation valves and are not subject to the leakage rate testing requirements.

n. If valve 2E51-F059 is deactivated and locked closed with the line blind flanged downstream of the valve and acceptably leakage rate tested, valves 1E51-F362 and 1E51-F363 are not considered primary containment isolation valves and are not subject to leakage rate testing requirements.

TABLE 3.8.3.3-1 (Continued)

MOTOR OPERATED VALVES THERMAL OVERLOAD PROTECTION

	VALVE NUMBER	BYPASS DEVICE (Continuous)(Accident Conditions)	SYSTEM(S) AFFECTED
	2E32 - F003N	Accident Conditions	
	2E32 - F006	Accident Conditions	
	2E32 - F007	Accident Conditions	
	2E32 - F008	Accident Conditions	
	2E32 - F009	Accident Conditions	
m.	2E22 - F001	Accident Conditions e	HPCS system
	2E22 - F004	Accident Conditions	
	2E22 - F010	Accident Conditions e	
	2E22 - F011	Accident Conditions	
	2E22 - F012	Accident Conditions	
	2E22 - F015	Accident Conditions	
	2E22 - F023	Accident Conditions	

BASES

3/4.5.1 and 3/4.5.2 ECCS - OPERATING and SHUTDOWN

ECCS Division 1 consists of the low pressure core spray system, low pressure coolant injection subsystem "A" of the RHR system, and the automatic depressurization system (ADS) as actuated by ADS trip system "A". ECCS Division 2 consists of low pressure coolant injection subsystems "B"and "C" of the RHR system and the automatic depressurization system as actuated by ADS trip system "B".

The low pressure core spray (LPCS) system is provided to assure that the core is adequately cooled following a loss-of-coolant accident and provides adequate core cooling capacity for all break sizes up to and including the double-ended reactor recirculation line break, and for transients or smaller breaks following depressurization by the ADS.

The LPCS is a primary source of emergency core cooling after the reactor vessel is depressurized and a source for flooding of the core in case of accidental draining.

The surveillance requirements provide adequate assurance that the LPCS system will be OPERABLE when required. Although all active components are testable and full flow can be demonstrated by recirculation through a test loop during reactor operation, a complete functional test requires reactor shutdown. The pump discharge piping is maintained full to prevent water hammer damage to piping and to start cooling at the earliest moment.

The low pressure coolant injection (LPCI) mode of the RHR system is provided to assure that the core is adequately cooled following a loss-of-coolant accident. Three subsystems, each with one pump, provide adequate core flooding for all break sizes up to and including the double-ended reactor recirculation line break, and for transients or small breaks following depressurization by the ADS.

The surveillance requirements provide adequate assurance that the LPCI system will be OPERABLE when required. Although all active components are testable and full flow can be demonstrated by recirculation through a test loop during reactor operation, a complete functional test requires reactor shutdown. The pump discharge piping is maintained full to prevent water hammer damage to piping and to start cooling at the earliest moment.

ECCS Division 3 consists of the high pressure core spray system. The high pressure core spray (HPCS) system is provided to assure that the reactor core is adequately cooled to limit fuel clad temperature in the event of a small break in the reactor coolant system and loss of coolant which does not result in rapid depressurization of the reactor vessel. The HPCS system permits the reactor to be shut down while maintaining sufficient reactor vessel water level inventory until the vessel is depressurized. The HPCS system operates over a range of 1160 psid, differential pressure between reactor vessel and HPCS suction source, to 0 psid.

The capacity of the HPCS system is selected to provide the required core cooling. The HPCS pump is designed to deliver greater than or equal to 516/1550/6200 gpm at differential pressures of 1160/1130/200 psid. Initially, water from the condensate storage tank is used instead of injecting water from

WATER IS TAKEN FROM THE SUPPRESSION POOL AND INJECTED INTO THE REACTOR

ECCS-OPERATING and SHUTDOWN (Continued)

the suppression pool into the reactor, but no credit is taken in the hazards analyses for the condensate storage tank water.

With the HPCS system inoperable, adequate core cooling is assured by the OPERABILITY of the redundant and diversified automatic depressurization system and both the LPCS and LPCI systems. In addition, the reactor core isolation cooling (RCIC) system, a system for which no credit is taken in the hazards analysis, will automatically provide makeup at reactor operating pressures on a reactor low water level condition. The HPCS out-of-service period of 14 days is based on the demonstrated OPERABILITY of redundant and diversified low pressure core cooling systems.

The surveillance requirements provide adequate assurance that the HPCS system will be OPERABLE when required. Although all active components are testable and full flow can be demonstrated by recirculation through a test loop during reactor operation, a complete functional test with reactor vessel injection requires reactor shutdown. The pump discharge piping is maintained full to prevent water hammer damage and to provide cooling at the earliest moment.

Upon failure of the HPCS system to function properly, if required, the automatic depressurization system (ADS) automatically causes selected safety-relief valves to open, depressurizing the reactor so that flow from the low pressure core cooling systems can enter the core in time to limit fuel cladding temperature to less than 2200°F. ADS is conservatively required to be OPERABLE whenever reactor vessel pressure exceeds 122 psig even though low pressure core cooling systems provide adequate core cooling up to 350 psig.

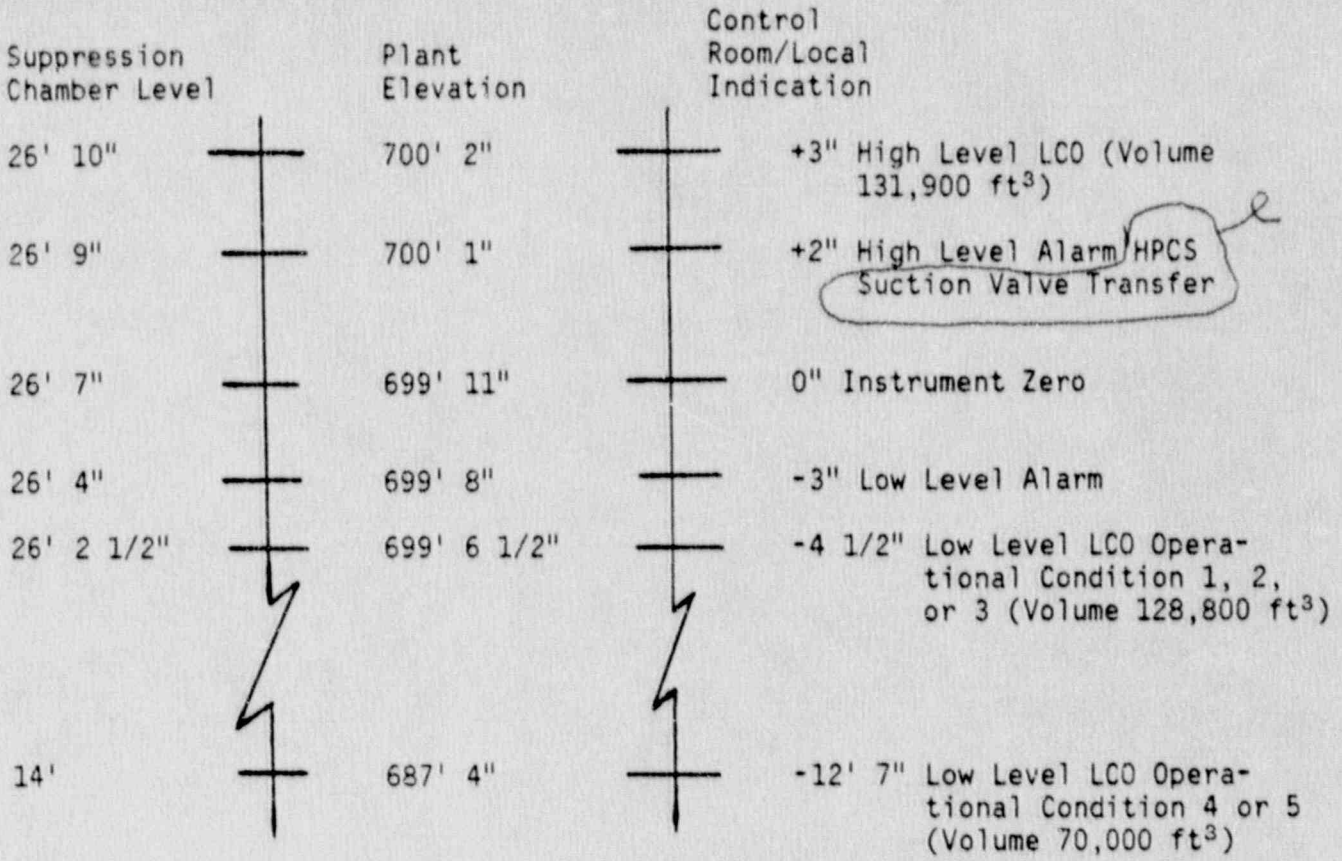
ADS automatically controls seven selected safety-relief valves. Six valves are required to be OPERABLE since the LOCA analysis assumes 6 ADS valves in addition to a single failure. It is therefore appropriate to permit one of the required valves to be out-of-service for up to 14 days without materially reducing system reliability.

3/4.5.3 SUPPRESSION CHAMBER

The suppression chamber is also required to be OPERABLE as part of the ECCS to ensure that a sufficient supply of water is available to the HPCS, LPCS and LPCI systems in the event of a LOCA. This limit on suppression chamber minimum water volume ensures that sufficient water is available to permit recirculation cooling flow to the core (See Figure B 3/4.6.2-1). The OPERABILITY of the suppression chamber in OPERATIONAL CONDITIONS 1, 2 or 3 is required by Specification 3.6.2.1.

Repair work might require making the suppression chamber inoperable. This specification will permit those repairs to be made and at the same time give assurance that the irradiated fuel has an adequate cooling water supply when the suppression chamber must be made inoperable, including draining, in OPERATIONAL CONDITION 4 or 5.

In OPERATIONAL CONDITION 4 and 5 the suppression chamber minimum required water volume is reduced because the reactor coolant is maintained at or below 200°F. Since pressure suppression is not required below 212°F, the minimum water volume is based on NPSH, recirculation volume, vortex prevention plus a 2'-4" safety margin for conservatism.



SUPPRESSION POOL LEVEL SETPOINTS

BASES FIGURE B 3/4.6.2-1

ATTACHMENT C

SIGNIFICANT HAZARDS CONSIDERATION

Commonwealth Edison has evaluated the proposed Technical Specification Amendment and determined that it does not represent a significant hazards consideration. Based on the criteria for defining a significant hazards consideration established in 10 CFR 50.92, operation of LaSalle County Station Units 1 and 2 in accordance with the proposed amendment will not:

1) Involve a significant increase in the probability or consequences of an accident previously evaluated because:

The cycled condensate system, including the CST, is not a seismically designed system (UFSAR Table 3.2-1) and is not required to function in any plant condition except normal operating conditions. As a result the cycled condensate system has no safety design basis (UFSAR Section 9.2.7.1.1) and eliminating the capability of the HPCS system to access the water volume in the CST has no impact on the plant accident analysis. The amendment proposal deletes from the technical specifications all references to the HPCS system automatic suction transfer and to the related instrumentation. The capability to transfer the HPCS system suction from the CST to the suppression pool was originally required to ensure that an uninterrupted supply of water was available to the HPCS system under accident conditions. Since, the HPCS system will be permanently aligned to the suppression pool, the technical specifications related to the automatic suction transfer capability are no longer required.

During the next refuel outage for each unit the reactor core isolation cooling (RCIC) system will be modified to allow a full flow test capability to the suppression pool. The new full flow test line with its isolation valves will penetrate the primary containment making necessary the application of technical specification controls to ensure that primary containment integrity is maintained. The controls placed on the new installation in the proposed amendment are consistent with controls and testing requirements applicable to other existing containment isolation valves. The overall primary containment leakage rate limits are not affected by this change.

Additionally, the equipment of concern is not an initiator for any accidents and therefore, will not affect the probability of a significant increase or consequences of an accident previously evaluated.

2) Create the possibility of a new or different kind of accident from any accident previously evaluated because:

The HPCS system will be permanently isolated from the CST and aligned to the suppression pool. Since, the CST does not have a safety design bases, deletion of the HPCS pump suction automatic transfer requirements from the technical specifications will not create the possibility of a new or different kind of accident.

The extension of existing technical specification controls to the new RCIC system full flow test line helps to ensure that primary containment integrity is maintained. The proposed amendment does not relax or alter any requirements such that the possibility of a new or different kind of accident is created.

ATTACHMENT C

SIGNIFICANT HAZARDS CONSIDERATION

3) Involve a significant reduction in the margin of safety because:

No credit has been taken for the CST water volume in the UFSAR, therefore, any impact on safety will be minimal. Permanently aligning the HPCS system to the suppression pool removes the need to have an automatic suction transfer capability. This will have a positive affect on the margin of safety because the risk of losing the HPCS system during accident conditions due to a suction transfer failure will be eliminated. Any impact on safety will be minimal.

The technical specification changes that add the new RCIC system valves with the full flow test line to the suppression pool have no affect on the margin of safety. This is because the controls being applied to the new valves are consistent with those placed on other primary containment isolation valves. The primary containment leakage rate limits will not be changed therefore no reduction in the margin of safety is postulated.

Guidance has been provided in "Final Procedures and Standards on No Significant Hazards Considerations," Final Rule, 51 FR 7744, for the application of standards to license change requests for determination of the existence of significant hazards considerations. This document provides examples of amendments which are and are not considered likely to involve significant hazards considerations. The proposed amendments most closely resemble Example I.C.2.e.i, a purely administrative change. This proposed amendment does not involve a significant relaxation of the criteria used to establish safety limits, a significant relaxation of the bases for the limiting safety system settings or a significant relaxation of the bases for the limiting conditions for operations. Therefore, based on the guidance provided in the Federal Register and the criteria established in 10CFR50.92(e), the proposed change does not constitute a significant hazards consideration.